

BEFORE THE HEARINGS PANEL

IN THE MATTER Private Plan Change
Request 84 to the Kapiti
District Plan

AND Submissions by **Coastlands
Shoppingtown Limited,
Alpha Corporation
Limited, Sheffield Property
Limited, Ngahina
Development Limited and
Mr Richard Mansell**

**BRIEF OF EVIDENCE OF MARK GRANT GEORGESON
(TRAFFIC)
ON BEHALF OF COASTLANDS SHOPPINGTOWN LIMITED, ALPHA CORPORATION
LIMITED, SHEFFIELD PROPERTY LIMITED, NGAHINA DEVELOPMENT LIMITED AND
MR RICHARD MANSELL ON PRIVATE PLAN CHANGE 84**

Dated: 3 February 2017

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ON BEHALF OF COASTLANDS SHOPPINGTOWN LIMITED, ALPHA CORPORATION
LIMITED, SHEFFIELD PROPERTY LIMITED, NGAHINA DEVELOPMENT LIMITED
AND MR RICHARD MANSELL**

1. INTRODUCTION

Qualifications

1.1. My full name is Mark Grant Georgeson. I am a Chartered Professional Engineer and hold a Bachelor of Civil Engineering degree from the University of Auckland (BE(Hons) CPEng, MIPENZ IntPE(NZ)). I am:

- (a) a Member of the Institution of Professional Engineers NZ and its specialist Transportation Group;
- (b) an International Professional Engineer;
- (c) a Member of the Institute of Transportation Engineers USA;
- (d) a Member of the Institute of Public Works Engineering Australia;
- (e) a Member of the NZ Parking Association; and
- (f) an Associate Member of the NZ Planning Institute.

Experience

1.2. For the last 25 years, I have worked as a traffic engineer with Traffic Design Group Limited, practising as a traffic engineering specialist throughout New Zealand.

1.3. I am very familiar with the location, having lived in the Wellington region for the same 25 years, and having been a routine visitor to the Kapiti region. My familiarity of the town centre comes from a similarly long record of involvement with the submitters and also with a number of land developments through the period of the last two decades, being part of my firm's team providing transportation advice and design.

Background

- 1.4. My firm was directly involved in contributing to a submission on Private Plan Change 84 ("PPC84") on behalf of a number of submitters which included Coastlands Shoppingtown Limited; Ngahina Developments Limited; Sheffield Properties Limited, Alpha Corporation Limited; and Mr Richard Mansell. I will refer to these parties as "the submitters," unless there is a specific need to identify them individually.
- 1.5. I was involved in the recent Kapiti Coast Proposed District Plan ("PDP") hearings, providing evidence on behalf of the submitters, and am well familiar with both the area and the history of the District, including the Airport site.
- 1.6. My evidence covers general transportation, traffic and network effects arising from PPC84 and also considers direct effects on Coastlands Shoppingtown, Ngahina Developments Limited and Sheffield Properties Limited.

2. CODE OF CONDUCT

- 2.1. Although not necessary in respect of council hearings, I confirm I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note. I have complied with the Code of Conduct in preparing this evidence and I agree to comply with it while giving oral evidence before the hearing committee. Except where I state that I am relying on the evidence of another person, this written 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 expressed in this evidence.

3. EXECUTIVE SUMMARY

- 3.1. This evidence is in response to the PPC84 relating to proposed changes to activity status for development within the Airport Mixed Use Precinct ("AMUP"), as sought by Kapiti Coast Airport Holdings Limited ("KCAHL").
- 3.2. The current Operative District Plan ("ODP") prohibits certain activity types such as department stores and supermarkets from being developed within the AMUP. The prohibited activity status was established through the Private Plan Change 73 ("PPC73"), informed by detailed traffic modelling to determine the quantum of traffic that the surrounding road network could feasibly accommodate.
- 3.3. The assessment undertaken for PPC73 showed that even with low traffic generating activities developed within the AMUP, significant roading infrastructure was required to mitigate the effects on the network. This serves to illustrate the sensitivity of the Kapiti Road corridor.
- 3.4. The removal of prohibited activity status proposed under PPC84 would make it be feasible to establish higher traffic generating activities such as supermarkets and a department store within the AMUP. Such a change in development activity composition would give rise to an associated **increase in traffic generation of two to three times** that anticipated under the ODP.
- 3.5. KCAHL have provided no detailed traffic assessment or modelling of the effects arising from this significant uplift in traffic enabled by PPC84. I have reviewed the modelling undertaken by Council's traffic expert Mr Wignall and am satisfied that I can rely on its conclusions, which show a significant drop in Level of Service ("LoS") on the network from LoS C/D to LoS E/F in response to the higher traffic generating scenario of PPC84.

- 3.6. I note the traffic analysis and associated modelling undertaken both historically and more recently take account of 'primary' development trips only. In the event that both primary and secondary (pass-by and linked diverted) trips were modelled, then I consider the analysis would show an even greater reduction in performance on the network.
- 3.7. Whilst some significant roading projects are currently programmed and due for completion in the short term (i.e. Kapiti Expressway and SH1 Revocation), these do not in the opinion of Council's traffic expert and myself present a game-changer that would remove the need for mitigation measures to be introduced, in order to facilitate growth at the AMUP. The significant increase in traffic generation at the AMUP under PPC84 would logically necessitate even higher levels of roading mitigation, than the already substantial requirements tied to the current ODP (i.e. Western Link Road, Ihakara Street extension).
- 3.8. Such a large addition of new vehicle trips on the Kapiti road network will have significant effects on the performance of intersections downstream, including as shown at the Expressway. Increased delay will also extend into the Paraparaumu town centre, reducing available capacity at Rimu Road and adjacent intersections.
- 3.9. This eroding of intersection capacity will have direct effects on town centre development, frustrating consented future development (such as Coastlands Square Stage 1), by reducing amenity for those travelling to and from the Paraparaumu town centre. It will additionally result in other future development (such as Stage 2 of Coastlands Square) having to potentially provide greater roading mitigation improvements than would have otherwise been required, to off-set effects from additional PPC84 traffic.
- 3.10. To summarise, in my view there is considerable risk that PPC84 and its intentions of enabling higher traffic generating activities at the AMUP, will create significant effects in reducing LoS on both Kapiti Road in the vicinity of the site, and will exert similar loss of performance within

the town centre. I believe the recommended changes included in the s.42A Report will not enable adequate provision to ensure the performance of the network can be protected (as provided for in the ODP), both with regard to effects on Kapiti Road and the Expressway, and in terms of accessibility and convenience for traffic travelling to and from the town centre, and its established and consented activities.

4. SCOPE AND STRUCTURE OF EVIDENCE

4.1. My evidence will present:

- (a) an overview of the District traffic environment;
- (b) a summary of PPC73 and the ODP provisions;
- (c) details of the provisions sought by PPC84;
- (d) commentary on the supporting Traffic Assessment (undertaken by Mr Kelly) provided by the Applicant;
- (e) some context of the supporting information with respect to other recent Plan Changes in the District;
- (f) wider planning context adopted within Kapiti, and its bearing on PPC84;
- (g) an overview of the initial submission points and further submission points and relief sought by the submitters, as well those of NZTA;
- (h) comments on Council's Traffic Expert's (Mr Wignall) analysis and conclusions;
- (i) a review of the s.42A Report assessment and recommendations;
and
- (j) my assessment of effects.

5. KAPITI DISTRICT TRAFFIC ENVIRONMENT

- 5.1. There are a number of substantial programmed roading projects, both under construction and proposed, within the Kapiti District due to be completed in the next few years. Completion of the MacKays to Peka Peka Expressway (“Expressway”) in June 2017 will bring about significant changes to existing traffic patterns across the Kapiti District road network. In particular, a significant proportion of traffic currently using the existing SH1 corridor will re-route onto the Expressway.
- 5.2. In response to the subsequent reduction in traffic volumes anticipated on the current SH1 alignment, post opening of the Expressway, a design is currently being progressed for revocation of this route, to better align with its future (non-highway) function. Traffic modelling undertaken to date shows traffic volumes on Rimu Road increasing as a result of this revocation, which in turn presents access and circulation impacts for the Paraparaumu Town Centre until such time as other roading interventions can be implemented.
- 5.3. Council’s Long Term Plan provides for development of such relief in the form of a Town Centre Link Road, connecting between Ihakara Street and Kapiti Road. The new road will be essentially parallel to Rimu Road and enable Rimu Road to function and operate as a town centre street, in line with Council’s aspirations set out in the Town Centres and Connectors Transformation Project (“TCCTP”). However, as yet no definitive date for construction has been confirmed, although there was some suggestion in the PDP process that funding was allocated for this project from 2022-2025.
- 5.4. Traffic flows in and around Paraparaumu Town Centre, and along Kapiti Road in particular will be subject to significant changes arising firstly from the opening of the Expressway, secondly from the Revocation project, and later in response to the Town Centre Link Road (when this is constructed).

- 5.5. In addition to these transport infrastructure changes, new retail development within the Wharemauku Precinct (Coastlands Square), which has recently been consented, will add to the levels of traffic on the adjacent network.
- 5.6. As such, there are a number of considerations that need to be taken account of when determining changes to the ODP zoning and provisions, to ensure both consented development and public infrastructure (roading) projects are not put at risk through introducing new traffic patterns that have not been anticipated by the programmed roading works I have described.

6. PRIVATE PLAN CHANGE 73 AND OPERATIVE DISTRICT PLAN

- 6.1. PPC73 was lodged in 2007, and sought to allow development within the 127 hectare Airport Zone across four distinct Precincts (Airport Core Precinct; Airport Mixed Use Precinct'; Airport Buffer Precinct'; and the Aviation Heritage Precinct'). It became operative in January 2010.
- 6.2. Section C.19 of the ODP sets out the Objectives and Policies for the Airport Zone, which seek to manage the scale and nature of development within it. Those Policies and Objectives relevant to PPC84 include:

Objective 1 – To achieve significant sustainable aviation, business and employment opportunities by enabling the efficient utilisation of the land for aviation and associated activities, while avoiding, remedying or mitigating adverse effects.

▪ ***Policy 2: Uses***

A range of activities in the 'Airport Mixed Use Precinct' will be permitted to support aviation activities and provide for non-aviation, commercial and other employment opportunities.

Explanation: The 'Airport Mixed Use Precinct' permits aviation to grow beyond the 'Airport Core Precinct'. Non-aviation business and commercial activity and development is permitted to support the sustainability of the Airport Core Precinct activities. Certain specified activities are non-complying... to enable Council to manage adverse effect. Supermarkets,

Department Stores and more than one small scale retail grocery outlet are prohibited activities.

Objective 2 – To protect the amenities of areas surrounding the airport from adverse environmental effects from Airport use and development

▪ **Policy 2: Commercial Activity**

It is desirable that specifically identified retail and commercial activities are permitted, subject to specified threshold standards, so that the nature and scale of such activities does not undermine the role and function of the Paraparaumu Town Centre and is linked to development within the Airport Mixed Use Precinct.

▪ **Policy 5: Traffic Effects**

Development within the Airport Zone shall ensure that traffic effects are avoided, remedied and mitigated through restrictions on the timing of development.

Explanation: To ensure that development within the Zone does not outstrip the capacity of the road network, certain “floorspace thresholds” controls have been set. These controls specify certain roading improvements to be undertaken in parallel with increasing areas of gross floor area.

- 6.3. The adopted Rules for development within the Airport Zone are set out at Section D.9 of the ODP. Rule D9.1.6 deals specifically with the Prohibited Activities referenced in Objective 1: Policy 2 above, providing the following detail:

Rule D.9.1.6 ‘Prohibited Activities’

- Noise sensitive activities not specifically provided for as a permitted activity.
- Department Stores
- Supermarkets
- More than one store of between 151m² and 1,500m² gross floor area than retails groceries or non-specified food lines.

- 6.4. Comprehensive traffic modelling of the effects associated with staged development at the Airport Zone, at the time of PPC73, showed that the network was sensitive to new traffic travelling to/from the site, leading to a significant degradation in the performance of

the Kapiti Road corridor (which was already under pressure) and the adjoining district network.

- 6.5. In order to address these traffic impact concerns of development within the AMUP, safeguards were identified and incorporated into the provisions of the ODP, which capped development levels by requiring specific transport infrastructure to be constructed, prior to development floor area progressing beyond identified thresholds of 43,050m² GFA and 62,500m² GFA. Beyond these levels, a fresh comprehensive Traffic Impact Assessment is required after development reaches 102,900m² GFA.
- 6.6. Whilst it is not completely clear to me as to how these GFA thresholds were arrived at, I understand they considered the quantum of additional traffic that development floor area of Large Format Retail activity within the AMUP would generate. Critically, these GFA's considered that only the lower traffic generating activities permissible under the AMUP Rules could be developed, and not the high level of traffic generated by department stores, supermarkets and the like as these are prohibited under Rule D9.1.6.
- 6.7. The recent (undated) 'Modelling Method' paper produced by Council's traffic expert includes reference to the associated development traffic generation volumes used in the PPC73 modelling assessment to help determine the development floor area thresholds, which were subsequently included in the ODP. These are provided in Table 1 of that memorandum, which I repeat below.

Development Threshold (m ² , GFA)	Generated Vehicle Trips (vehicle movements/hour, weekday PM)
43,050	670
62,500	1,130
102,900	1,600

Table 1: Modelled Traffic Volumes for Development Thresholds

- 6.8. These GFA thresholds represent the 'design peak hour' 'primary trip' traffic generation levels for those permissible activity types under PPC73 (i.e. not prohibited) at the site, and effectively enable staged increases of around 500vph, before either specific roading infrastructure (at 43,050m² and 62,500m²) or a comprehensive TIA (at 102,900m²) is required.
- 6.9. From Table 1, with some 43,050m² GFA development generating a total of 670 vehicles per hour ("vph"), these activities would be very low traffic generators, averaging 1.55vph per 100m² GFA overall.
- 6.10. As above, from reviewing the information provided by Council¹, I understand the traffic volumes in Table 1 are representative of 'primary' development trips only, i.e. they do not include pass-by or linked diverted trips that are already on the road network. In this manner, and adopting the general 'rule of thumb' that primary trips for retail activities constitute around one-third to one-half of all vehicle movements to and from developments, with secondary trips (pass-by and link diverted) accounting for the remainder, it can be expected that an overall trip generation for the 43,050m² GFA could be equivalent to around 2,000vph (670vph x3).
- 6.11. In my view, there are risks in adopting an approach whereby only primary trips are considered when assessing the effects of land developments on the road network, as it only shows part of the picture. Generally network performance will deteriorate further when 'secondary trips' (pass-by and link diverted trips) are properly included. As such, the 'trigger points' for new roading infrastructure associated with the stages of development identified in Table 1, in the ODP can, even without PPC84, in reality be expected to occur ahead of the GFA thresholds identified.

¹ Referred to in Mr Wanty's Peer Review memorandum of the Airport SIDRA Model.

6.12. By way of providing some context to demonstrate how low the ODP thresholds are, I have made a trip generation comparison against the industry-recognised 85th percentile peak hour trip rates² published in the NZTA Research Report 453 ("RR453") for the following activities:

- Warehousing (Industrial use): 1.0vph/100m² GFA;
- Bulk Retail (i.e. Department store): **5.6vph**/100m² GFA;
- Shopping centre (large): **9.9vph**/100m² GFA.
- Supermarket **17.9vph**/100m² GFA.

6.13. The range of trip rates generated by these examples are significant, and many times larger than the average rate of just 1.55vph per 100m² GFA calculated in relation to the current ODP provisions. The thresholds in the rule were set out on this basis. Higher traffic generating activities (such as supermarkets and department stores) that would quickly exceed the identified thresholds, were accordingly 'prohibited'.

6.14. As an example, development of a 5,000m² GFA supermarket within the AMUP would generate some 895vph³, which equates to nearly half (as per calculation in paragraph 6.10 above) of all anticipated vehicle trips generated by the entire 43,050m² GFA development within the AMUP.

6.15. I will provide a more detailed interpretation of the outcomes of adopting PPC84 with respect to effects on the transport network later in my evidence, but for now I wish to highlight what I consider to be the three critical factors associated with the PPC73 provisions as they now exist in the ODP:

- first, the development GFA thresholds anticipate activities within the Airport Zone that generate low traffic volumes. These are shown to be much lower than typical traffic

² Table C.1 '85%' percentile Peak Hour Trips.

³ Using the 85th percentile trip generation rates from RR453.

generation rates associated with supermarkets, shopping centres and department stores;

- secondly, determination of the GFA thresholds has been informed using traffic modelling that included only primary development trips, rather than full (primary and secondary) development traffic movements; and
- thirdly, the comprehensive traffic modelling undertaken for PPC73 indicated that even with new development generating such low levels of additional vehicles on the network, significant roading infrastructure improvements (including commencement of the Western Link Road stages and completion of the Ihakara Street East extension) were required to maintain an acceptable level of performance.

6.16. As such, any proposed changes to the Airport Zone rules that influence the level of traffic generated at the site, in my opinion, represents a significant risk to the future operation of the road network in both the short and long term, as a number of significant local and strategic road network changes (which have not anticipated the proposed PPC84 effects) come online. Significant also is that KCAHL has not sought any proposed changes to the AMUP development thresholds under PPC84, suggesting that the (unchanged) rules will be ill placed to control the effects of higher traffic generating activities such as a department store or a supermarket.

7. PPC84 PROPOSAL

7.1. The notified PPC84 included a number of specific amendments to the ODP opposed by submitters, including:

- The activity status of one supermarket being changed to discretionary activity, and the activity of more than one supermarket being changed to non-complying activity;
- The activity status of one Department Store being changed to non-complying (although I note that there is some confusion as

to what is being sought between the application and subsequent notification); and

- The activity status of more than one store of between 151m² and 1,500m² gross floor retailing groceries or non-specific food lines being changed to discretionary activity.

7.2. I note that since PPC84 was publically notified for submissions on 24 February 2016, there have been some changes to the original provisions being sought, through discussions between Council and the Applicant to better align them with the formal request. These are set out in the s.42A Report (at Paragraph 3.9).

7.3. Whilst I am aware that PPC84 is concerned only with alterations to the ODP, I note that the current ODP review process is well progressed, meaning the PDP could conceivably (depending on appeals) become operational in the next 18 months. In the event that PPC84 changes to the ODP are adopted, they will only remain operative until the PDP comes into effect. It seems reasonable to me that KCAHL has proceeded with PPC84 because it wishes to apply for resource consents almost immediately within this period (otherwise I expect the PPC84 request would be purposeless).

7.4. As I have discussed, the next 18 months is a period of significant change and uncertainty in respect of the traffic network. This timeframe is important because it overlaps with a period where:

- traffic conditions on Rimu and Kapiti Roads are expected to worsen; and
- no significant upgrades or infrastructure is planned to resolve these concerns.

7.5. This will present very real difficulties for Council with respect to being able to adequately assess not only the effects of the de-restricted higher traffic generating development type activities (as proposed), but also from a transport infrastructure perspective as to whether or not it is feasible to achieve any requisite roading improvements

necessary to mitigate the development effects, within this very short timeframe.

- 7.6. The PPC84 application included a Transportation Impact Assessment ("TIA") dated 14 May 2015 prepared by KCAHL's Traffic Expert, Mr Kelly. This two-page letter mentions that the changes being sought through PPC84 (i.e. to remove the 'prohibited' activity status from the ODP Airport Zone) would not by themselves enable any new development to occur as of right i.e. no 'Permitted Activity' would be enabled by the Plan Change. Mr Kelly goes on to state that assessment of the traffic effects for new activities would then be addressed at the Resource Consent stage.
- 7.7. In response to the initial PPC84 application, Council made a number of comments and specific information requests to KCAHL, in respect of traffic and transportation matters, as follows:

'In its current form, the private plan generates uncertainty about the nature and mix of development at the site, creating difficulties in planning infrastructure for the network surrounding the airport as well as with potential impacts on infrastructure planning in Paraparaumu Town Centre, due to the development of new activities, the relocation of existing activities and/or the non-implementation of planned activities. No information of any substance on these topics has been included in the private plan change request material. The following information is required:

- (a) *technical assessment of potential development effects on the local road network (post expressway) with and without the plan change provisions, based on a number of scenarios involving mixes of the proposed activities, including a 'worst-case' scenario.*
- (b) *information on the supporting transport infrastructure, and its capacity to accommodate retail and other activities of the nature envisaged by the plan change, with and without the sought private plan provisions.'*

- 7.8. In his subsequent 'Response to Further Information Request' (dated 30 October 2015), Mr Kelly again reiterates that PPC84 "would not in itself enable any additional development and so would not directly give rise to effects upon the operation of the transport network".

- 7.9. Whilst Mr Kelly continues to make the argument that any consent applications for new activities within the AMUP will need to be supported by an Integrated Traffic Assessment (“ITA”), the provisions within the ODP are less straight forward in this case with regard to the need for comprehensive ITA’s to be provided, as the development thresholds established under PPC73 are the mechanism for managing the level of development within the AMUP, and its associated effects.
- 7.10. By way of providing an example of the comparable traffic generation levels between those currently permissible under the ODP, against those that would subsequently be enabled through PPC84, Mr Kelly draws on information provided within the report prepared by Mr Colegrave of Insight Economics. Importantly, this provides an indicative mix of development type and floor area that ‘could’ occur at the AMUP constituting the next 20,000m² GFA (i.e. from roughly 23,000m² of built or ‘consented but not constructed’ development today, to the next development threshold at 43,050m² GFA). I reproduce the table below.

Activity Type	Estimated GFA (m ²)	
	Without PPC84	With PPC84
Clothing, Footwear and Personal Accessories retailing	0	1000
Department Stores	0	6000
Electrical and Electronic Goods Retailing	3000	2000
Food and Liquor retailing	0	2000
Food and Beverage Services (cafes/restuarants/bars)	2000	1500
Furniture, Floor Coverings, Houseware and Textile Goods Retailing	3000	2000
Hardware, Building and Garden Supplies Retailing	4000	2500
Pharmacuetical and Other Store-Based Retailing	0	1000
Recreational Goods Retailing	3000	2000
Other (e.g marine / automotive retail)	5000	0
TOTAL	20000	20000

Table 2: Activity Types Without and With PPC84

- 7.11. As shown, the types of activities anticipated under the ODP (i.e. without PPC84) comprise mainly large warehouse type premises and attract a smaller number of visitors/customers per m² GFA, as compared to much higher traffic generation levels associated with supermarkets and department stores.

- 7.12. By comparison, the 'with PPC84' development scenario envisages a 6,000m² department store, along with a 2,000m² food and liquor retail activity, both of which replace the slower 'trade marine and automotive' retail component of the ODP scenario. I note that by Mr Colegrave's own admission, this provides an indicative development scenario only and does not represent a 'worst-case' scheme, which could potentially include both a department store of any size and a full scale supermarket, likely to be in excess of 5,000m² GFA.
- 7.13. Mr Kelly then uses these activity types to forecast the resultant trip generation levels of the 'without PPC84' versus 'with PPC84'. I reproduce his table below.

Activity Type	Estimated GFA (m ²)	
	Without PPC84	With PPC84
Clothing, Footwear and Personal Accessories retailing	0	50
Department Stores	0	300
Electrical and Electronic Goods Retailing	72	48
Food and Liquor retailing	0	100
Food and Beverage Services (cafes/restuarants/bars)	21	16
Furniture, Floor Coverings, Houseware and Textile Goods Retailing	72	48
Hardware, Building and Garden Supplies Retailing	19	12
Pharmacuetical and Other Store-Based Retailing	0	50
Recreational Goods Retailing	72	48
Other (e.g marine / automotive retail)	53	0
TOTAL	309	672

Table 3: Traffic Generation Without and With PPC84

- 7.14. As shown, Mr Kelly forecasts that traffic generation associated with the 20,000m² GFA development at the AMUP using Mr Colegrave's activity types, amounts to some 672 'additional' vehicles either entering or exiting the development during the PM peak hour, in addition to those traffic movements associated with the consented 23,000m² GFA within the AMUP. I note again that these forecast trip generation rates adopted by Mr Kelly in his calculations relate to 'primary trips' only.

7.15. By way of comparison, I have undertaken my own assessment of trip generation associated with what I consider to be a 'worst-case' scenario (i.e. as specifically requested in the Council's RFI) of the potential traffic generation at the AMUP for the next 20,000m² GFA that includes a department store and a supermarket; a realistic scenario under the amendments sought by PPC84. The trip generation has been calculated on the same basis as Mr Kelly's earlier forecast, in the table below.

District Plan Provisions	Development Scenario	Peak Hour Vehicle Trips
Without PPC84	Scenario A: KCAHL Scenario for operative District Plan	309
With PPC84	Scenario B: KCAHL Scenario incl Dept Store	672
	Scenario C: incl Dept store + Supermarket	800-900

Table 4: PPC84 Trip Generation Assessment with Supermarket⁴

7.16. As shown, development permissible under the ODP provides a forecast traffic generation of some 309vph during the Weekday PM peak. With the adoption of PPC84, the quantum of traffic associated with this next stage of development under Scenario C above (comprising a department store and a supermarket), is expected to increase almost three-fold in generating up to 900vph. I again note these scenarios include 'primary trips' only. If secondary (pass-by and linked diverted) trips were taken account of within the modelling, then overall traffic additions of around 1,500⁵ vph at the AMUP accesses could be expected with the adoption of PPC84, over and above those that would otherwise be present under the development scenario permissible by the ODP.

7.17. It is not difficult therefore to appreciate that such a scale of traffic activity increase will have significant effects on the network, and this is clearly represented in modelling analysis undertaken by Council which I will discuss later.

⁴ For the next 20,000m² GFA at AMUP (i.e. 23,000m² - 43,050m²).

⁵ Development scenario including a department store and supermarket.

- 7.18. In assessing the potential effects of the change in activity types that would be permissible within the AMUP, Mr Kelly notes that *"On its own, the traffic increases identified above could adversely affect conditions on Kapiti Road, especially between the Airport and the town centre"*. I interpret this as suggestive that Mr Kelly is aware that effects will arise..
- 7.19. Mr Kelly concludes by stating that *"the level of detailed assessment and certainty requested by KCDC cannot be provided at this stage – an attempt to undertake such an assessment without the necessary information would be reliant on a range of assumptions and would not be sufficiently robust to inform decision making"*.
- 7.20. I do not agree with this. The nature of traffic modelling and assessment is such that it can feasibly be undertaken for any development proposal on any network, whether there are programmed improvement or alteration works to the existing infrastructure or not, albeit potentially with some assumptions. To me, it appears the applicant has purposely shied away from undertaking a full assessment, perhaps because it would show significant adverse effects on the network, just as identified by Council.
- 7.21. In this regard, I draw comparison with two local examples of recent Plan Change applications adopted into the ODP, and the relative information provided in support of them, as follows:
- **Private Plan Change 82**, which occupies land that abuts the eastern boundary of the AMUP, provided for the rezoning of land from Open Space to a mixture of Residential and Industrial/Service, which was subsequently adopted into the ODP in March 2011. The Plan Change required to be informed by extensive traffic modelling of the Kapiti Road corridor in order to determine the impacts of development traffic on the network, and to assist in identifying road improvement mitigation works on Kapiti Road, that included the signalisation of Milne Drive and Te Roto Drive; and

- **Wharemauku Precinct Private Plan Change 72A**, involved detailed assessment of traffic effects of the enabled site development at the Plan Change stage, rather than deferring all of this to the RC stage, which resulted in specific site traffic threshold triggers being incorporated into the Zone Rules. Resource consent has recently been granted for an initial phase of this Coastlands Square development, which comprises approximately 10,500m² GFA. However, as a condition of consent, a second detailed traffic modelling analysis of the road network is required prior to any further development at the site. In this regard I note there is potential for an escalation of development at the AMUP to have traffic network effects which would result in Stage 2 of Coastlands Square being stalled until significant roading upgrades are completed.

7.22. As identified, these two Proposed Plan Change applications provided detailed traffic modelling of the effects arising from the proposed land use change, relative to the level and nature of development enabled, at the Plan Change stage. In this manner, the effects of subsequent resource consent applications for specific activities were understood early, with evidence then subsequently provided of the detail of appropriate mitigation.

7.23. By contrast, the very limited nature of the information provided by Mr Kelly in both the TIA and subsequent response to Council's RFI, and the complete lack of any supporting traffic analysis, has required Council (and NZTA) to undertake traffic modelling assessments of the effects of PPC84, effectively on behalf of KCAHL. The results of this modelling are not in my view surprising, and mirror the concerns I express.

8. WIDER PLANNING CONTEXT WITHIN THE DISTRICT

- 8.1. In this section of my evidence I summarise some background to the current planning context within the District, to highlight the discord between the current planning philosophy and PPC84. Mr Hansen presents fuller details in his evidence.
- 8.2. Some 15 years ago a vision for Paraparaumu District Centre was developed through the '*Kapiti Coast: Choosing Futures*' process, which formed part of the 2003/2004 Long Term Council Community Plan ("LTCCP"). This vision focused on delivering the community's desire to reinforce and strengthen the existing centres for a number of reasons, including:
- The need to develop a sense of place within local areas;
 - Establish a District-wide civic and commercial heart;
 - Make efficient use of resources; and
 - The need to leverage the synergies between centres and transport nodes, to better facilitate passenger transport use and active mode share.
- 8.3. In addition, the Kapiti Coast Retail Strategy completed by McDermott Miller in 2006 supported the management of retail pressures within the District, by recommending that the focus should sit with consolidation around town centres.
- 8.4. Council subsequently adopted the Kapiti Coast Development Management Strategy 2006 ("KCDMS") to manage the location of continued growth, which reinforces Paraparaumu District Centre as the main centre. The findings of the KCDMS provided input into the development of a District Plan Regulatory response to facilitate this vision; PPC72A was one such response.
- 8.5. Since then, this vision has been further reinforced through a range of subsequent Council strategies and initiatives, most recently within the Centres Hierarchy approach adopted within the PDP as well as the

TCCTP, both of which seek to enable the continued consolidation of Paraparaumu Town Centre, strengthening its role as the sub-regional centre in Kapiti Coast.

- 8.6. PPC84 therefore is wholly contrary to the work undertaken by Council over the last 15 years (to consolidate activities in the established centres), and would enable the seeding of a new town centre within the AMUP. This scenario represents the antithesis of Council's vision, particularly in light of the current momentum in establishing public space, amenity, and a 'town centre' identity within the Sub-Regional centre, through the TCCTP, which is itself reinforced through the PDP and its 'centres hierarchy' consolidation philosophy (which does not identify the airport as a 'centre').

9. ORIGINAL SUBMISSION AND FURTHER SUBMISSIONS POINTS

- 9.1. The original submission points raised a number of concerns with PPC84. Those specifically related to traffic matters include:
- (a) there has been no 'assessment of traffic effects' associated with PPC84 undertaken as part of the application;
 - (b) PPC84 seeks to specifically allow development of high traffic generating retail activities (such as supermarkets and department stores) within the AMUP, that were restricted in the PPC73 outcome;
 - (c) the increase in vehicle trips to/from the site arising from establishing supermarkets and department stores invalidates the existing development thresholds that were imposed through PPC73, which stand within the ODP;
 - (d) flow-on effects of enabling higher traffic generating activities within the AMUP will impact on traffic distribution and flows on the adjacent local and strategic road network, potentially creating significant performance issues; and

(e) timeframes associated with the lifespan of the ODP suggests Resource Consent for development within the AMUP would occur almost immediately (should PPC84 be approved), meaning any required road infrastructure mitigation improvements would unlikely be delivered in time.

9.2. The submitters therefore opposed PPC84 in its entirety, and seek to retain the provisions of the AMUP as included in the ODP.

9.3. I note that in addition to the above, NZTA has made a submission opposing PPC84 on the grounds that transport implications in relation to effects on the Expressway and the local road network are not fully understood.

10. KCDC TRAFFIC EXPERT ASSESSMENT OF PPC84

10.1. Council's traffic expert, Mr Wignall, has provided a number of technical memorandums relating to his assessment of the traffic implications of PPC84. The 'Traffic and Transport Issues Memo' ("TTIM") dated 19 December 2016, summarises these investigations. Included within this, Annexure 3 provides Mr Wignall's original assessment of the KCAHL Private Plan Change request and supporting TIA (prepared by Mr Kelly).

10.2. Commenting on the proposed PPC84 and Mr Kelly's alternative development scenario which shows a significant increase in AMUP traffic from 309vph to 672vph, for the next 20,000m² GFA within the AMUP, Mr Wignall (Paragraph A3.2) notes "*the proposed private plan change would create intensification, concentration and acceleration of traffic effects associated with the new airport related development*". Briefly, these can be described as:

- Intensification – the enabled activities would lead to a higher rate of traffic generation (associated with department stores and supermarkets), meaning greater vehicle trips will materialise from equivalent development GFA, as compared

to the specifically low traffic generating activities permissible under the ODP;

- Concentration – higher traffic generation will exert greater pressure on accesses to Kapiti Road, creating more delay and poorer network performance; and
- Acceleration – establishment of higher traffic generating activities will accelerate the need for additional road infrastructure to mitigate network effects.

10.3. In allowing higher traffic generators as proposed under PPC84, the agglomeration of such traffic effects set out above leads Mr Wignall to conclude (Paragraph 3.7) that there is in his opinion *“strong justification for retaining prohibited or non-complying status for higher traffic generating uses”*, and that *“the private plan change as proposed should not be approved”*.

10.4. With respect to the suitability of the AMUP to accommodate these higher traffic generating activities that would be enabled by PPC84, Mr Wignall (Paragraph A3.4) notes *“it has already been established (for example through the processes to approve the ODP) that the best location, by far, to locate future expansion of town centre activities, is in and immediately adjacent to the existing town centre. In traffic terms, the Expressway was found to reinforce the need for activities to be concentrated in the existing town centre (see for example, the outcome of the PC72A Environment Court Appeal Hearing). Furthermore, no alternative site could replicate the scale of infrastructure needed to service a new town centre without either causing large problems on the existing network or receiving substantial Council assistance”*.

10.5. Such considerations of the traffic generating effects of development at the site were not assessed within the information provided by KCAHL, and no traffic modelling analysis was undertaken to investigate any associated effects of performance on the adjacent

road network arising from development enabled by PPC84. In light of this (and in response to submissions made by the Airport during the PDP review to remove the existing development thresholds in the Airport Zone), both Council and NZTA held concerns for the operation of the adjacent road network, and in particular the soon to be completed Expressway. Accordingly, Council (in conjunction with NZTA) sought to undertake traffic modelling analysis of their own, as I describe next.

Council Traffic Modelling

- 10.6. In 2015, Council commissioned the development of a VISSIM traffic model of the Kapiti Road corridor (between the current SH1 and the Airport) and adjacent town centre, to assist with informing a number of roading projects in the District, including SH1 Revocation; Town Centre Link Road; and PDP investigations. This modelling was subsequently peer reviewed and found to require further development in order for it to be relied on.
- 10.7. NZTA then approached Council with concerns about Airport development traffic impacts on the adjacent network, specifically the Expressway. It was agreed (through joint funding by Council and NZTA) to commission an extension and further refinement of the existing VISSIM model, to assist in understanding any impacts arising from changes to Airport traffic patterns. Whilst it was expected this model would be completed and available to inform the PPC84 hearings process, it has not yet been finalised.
- 10.8. In the absence of this, Council's traffic expert Mr Wignall has undertaken his own modelling of the Kapiti Road corridor, for the purposes of understanding the network performance changes that could emerge if PPC84 were adopted, utilising a SIDRA network model. The details of this modelling, along with a summary of the results, is described in the TTIM. This report was prepared specifically to inform the s.42A Report.

10.9. A peer review of the model has been undertaken by Wanty Transportation Consultancy (Mr Wanty), the details of which are set out in the memorandum '*SIDRA Airport Traffic Model Review*' (revised version dated 28 November 2016). I note that in response to a number of recommendations put forward within the Peer Review, Mr Wignall has subsequently amended and re-run the SIDRA analysis.

'Airport SIDRA Model' Development

10.10. The various memorandums and reports relating to development of the Airport SIDRA Model ("AS model") indicate traffic flow and turning movement demands were obtained from the SATURN Kapiti Traffic Model version 3 ("KTM"). This version of the KTM model was specifically updated to capture the current and committed network arrangements, and has been validated against a base year of 2015.

10.11. Mr Wignall notes turning movements have been extracted directly from the KTM model for each of the individual network intersections along Kapiti Road, within the AS model extent, from Arawhata Road to the Ocean Road roundabout. The model therefore does not extend to include the town centre.

10.12. The assumed peak hour vehicle generation rates adopted within the AS model for assessment of the PPC84 development scenarios, are those included within Table 3 earlier. Again, I understand these include primary trips only to and from the site⁶ and do not capture secondary 'pass-by' or 'linked diverted' trips. As noted by Mr Wanty (and agreed with by Mr Wignall), this means the assessment using the AS model should be considered as somewhat underestimating development related traffic effects.

10.13. The AS modelling analysis included a number of assessment scenarios designed to test the impacts of AMUP development traffic on the performance of the adjacent road network. This work focused on two main tasks, described as follows:

- i. ODP Threshold Tests – a series of scenarios using each of the ODP AMUP development thresholds (23,000m² to 340,000m² GFA), at forecast years 2017⁷, 2021 and 2031; and
- ii. PPC84 Higher Trip Generator Tests - testing of the '2017' forecast year model using the higher trip generation figures associated with the permissible activity types enabled by PPC84⁸ (which includes (only) a department store), at the two lower thresholds of 43,050 m² and 62,500m².

10.14. From the findings to emerge, I fully share Mr Wignall's significant concerns that any change to the current AMUP provisions to enable higher traffic generating activities to be established there, will cause serious traffic impacts on the network. Mr Wignall highlights this within Paragraph 2.16: *"Analysis by Council (see annex 2) has shown that development which comprises more intensive traffic generating activities, such as a department store, on the Airport land, would cause major operational issues and a severe deterioration in level of service (LOS) at the lower development thresholds."*

10.15. Mr Wignall goes on to note (Paragraph 2.17) that *"If this retail development (refer to Annex 2 for a detailed breakdown) occurred in the short term, this could mean an increase in Stage 2 traffic generation (43,050 sq. m GFA) from 670 vehicles per hour (VPH) to 1,027 VPH, an increase of 53%"*. This represents a significant uplift in development site traffic.

10.16. In the absence of any traffic modelling by the Applicant, or indeed evidence disputing Mr Wignall's analysis, I am satisfied I can rely on it for the purposes of my evidence.

⁶ Noted in Mr Wanty's peer review memorandum at Section 1.1.

⁷ Post opening of the Expressway.

⁸ Using Mr Colegrave's projected development scenario for the AMUP as set out in Table 1.

Modelling Analysis

- 10.17. I note that some of the modelling undertaken and described in the various accompanying memorandums focuses on the AMUP development thresholds. Since these sit outside of the scope of PPC84, I have therefore focused my evidence on the modelling undertaken to compare the difference in development activity mix within the AMUP, and the subsequent impacts this would have on the network.
- 10.18. Notwithstanding this, I fully concur with Mr Wignall's view with respect to the direct relationship between changes to activity status sought in PPC84, and the specified Airport Zone GFA thresholds in the ODP. Changing the types of permissible activity at the Airport Zone to enable higher traffic generating retail development, will effectively invalidate the existing development thresholds, which are the very safeguards put in place by Council at PPC73 to avoid the rate, quantum, and nature of development at the site from overwhelming the traffic network, until upgrades have occurred to accommodate this safely. This is substantiated by the modelling work undertaken by Mr Wignall, for which he concludes that the current AMUP GFA thresholds are appropriate, providing the controls on prohibited activities remain.
- 10.19. Mr Wignall makes the comment (Paragraph 2.18) that if PPC84 were allowed "*the development thresholds at which ITA's are required would potentially, need to be reduced considerably, to reflect the increased traffic intensities*". However, the thresholds are not within the remit of PPC84, and so logically its adoption as it stands could preclude the intentions of the AMUP development controls from being achieved.
- 10.20. In describing the modelled outputs, Mr Wignall has reported LoS outputs. To provide some detail around these 'Level of Service' performance indicators reported from the AS model, I have provided

the relevant delay thresholds used to determine the LoS bands (A to F) below.

Average Delay		
LOS	Priority	Signals
A	<= 10	<=10
B	11 to 15	11-20
C	16 to 25	21-35
D	26 to 35	36-55
E	36 to 50	56-80
F	>50	>80

Table 5: Level of Service Criteria

10.21. To provide further context of the equivalent traffic conditions that would manifest at each of these LoS thresholds, with respect to the differences experienced by a driver on the network, I provide the following descriptions.

LOS	Description of operation
A	Free flow conditions; little interaction between vehicles
B	Reasonably free flow condition; speeds similar to LOS A but some movement is restricted due to interaction between vehicles within traffic streams
C	Stable flow conditions; ability to manoeuvre within traffic streams is notably restricted but roads remain below capacity
D	Approaching unstable flow; freedom to manoeuvre is much more limited and driver comfort levels decrease. This is the common level for urban streets during peak hours of travel
E	Unstable flow; operating at capacity; drivers comfort level becoming poor. No visible gaps to manoeuvre in the traffic stream. Any incident will create serious delays.
F	Forced or breakdown flow; vehicle movement very constrained; traffic demand generally higher than capacity

Table 6: Level of Service Descriptions⁹

⁹ Taken from 'Highway Capacity Manual' (2010).

- 10.22. Mr Wignall¹⁰ sets out the overall LoS on the network¹¹ under the current ODP provisions at the AMUP, when traffic associated with the three lower development thresholds¹² is introduced at the 2017 forecast year. This shows the network operating at an overall LoS D, with some 43,050m² GFA of development established at the Airport (i.e. without PPC84), with individual intersections generally operating at LoS C or better.
- 10.23. Mr Wignall goes on to provide a comparison of network performance (Paragraph A2.4) where PPC84 has enabled a different development composition¹³ within the AMUP (that includes the higher traffic generating activity of a department store). This shows a significant adverse effect, with the network shown to be operating at a reduced overall LoS E with an equivalent 43,050m² GFA of development, with some intersection approaches on Kapiti Road operating at LoS E and F.
- 10.24. As described in Table 6 above, at LoS E the network is operating at capacity, traffic flow becomes unstable and driver comfort levels diminish. More generally, the poorer LoS will give rise to significant reduction in average vehicle speeds, resulting in increased journey times and delay.
- 10.25. In looking in more detail at the individual intersection approach LoS from the AS model outputs, it appears that particular congestion is predicted to occur at the main site access roundabout, which shows LoS F in the 2017 year assessment with 43,050m² GFA of development.
- 10.26. Other notable forecast delay for the same modelled scenario is shown on Kapiti Road, east of the Expressway interchange and Arawhata Road, where LoS E is expected. This represents a significant

¹⁰ TTIM Annexure 2 (paragraph A2.3).

¹¹ As determined using the AS model.

¹² Being 23,261m²; 43,050m²; and 62,500m² GFA.

¹³ This is based on the development scenario in Table 2.

reduction in performance from the LoS C forecast at these intersections without PC84.

- 10.27. From a driver perspective, this change from LoS C to LoS E/F would be dramatic. At LoS C, drivers experience relatively free-flow conditions, with all vehicles generally clearing signalised intersections every cycle. At LoS E/F the network is at capacity, meaning a large proportion of vehicles would be required to queue, leading to cumulative delay at adjacent intersections, significantly impacting journey times.
- 10.28. This is a significant effect, with substantial impacts shown on the Kapiti Road network performance, not just at the site access, but further afield at the Expressway interchange and beyond. While it is not possible to determine the quantum of performance change beyond Arawhata Road, given the extent of the AS model, the modelling clearly indicates knock-on effects of increased AMUP traffic on upstream and downstream intersections, such that I would expect a comparable worsening of performance will also materialise at the town centre intersections off Kapiti Road.
- 10.29. Noting again that the modelling analyses undertaken using the AS model, captured only 'primary' trips, the addition of secondary trips (i.e. pass-by and linked diverted) would logically result in the network operating at an even poorer level of performance.
- 10.30. In particular, modelling the 'secondary' trips would manifest in additional delay at the site access roundabout on Kapiti Road, which I note has recently been altered to address safety concerns. These changes have reduced each of the Kapiti Road approaches down from two lanes to one lane, with resulting capacity reductions.
- 10.31. Recognising that under PPC84 the resultant development scenario at the AMUP could feasibly include both a department store and a supermarket (both of which are higher traffic generating activities), the resultant trip generation at the site could be notably higher than

that adopted within the AS model¹⁴, as described earlier in Table 4, which in turn would further exacerbate the identified degradation in network LoS.

- 10.32. The combined effects of these two further modelling considerations would, in my opinion, show parts of the network approaching an equivalent LoS F, at 2017, well before the full 43,050m² GFA is established. Mr Wignall¹⁵ expresses similar concerns where he states that *"the introduction of higher generation activities as proposed in PC84 would have the effect of reducing the operational levels of service much more substantially than under operational DP or PDP forecasts. This would mean that (as yet unspecified) infrastructure investment would be required, well before the 43k GFA threshold is reached"*.

KCDC Traffic Expert Conclusions

- 10.33. Based on the comparative modelling investigations of road network performance undertaken by Mr Wignall, for the ODP versus the PPC84 Airport Zone development scenarios (post Expressway opening), he describes¹⁶ that *"substantial increases in Airport development without additional infrastructure would cause levels of service on the local road network to decline substantially. This would also result in safety, amenity, accessibility and environmental problems."*
- 10.34. Mr Wignall goes on to state *"PPC84 would have the effect of locating higher traffic generating activities, such as a department store, on Airport Land. Analysis undertaken by Council has demonstrated that this would intensify traffic pressures, generate substantial adverse effects and potentially trigger the need to adjust other Airport development thresholds in the ODP and PDP."*

¹⁴ Which included the 672vph from Mr Kelly's forecast, as compared to the forecast 800-900vph for a department store and supermarket scenario (described in Table 4).

¹⁵ TTIM Annexure 3, para A2.5.

¹⁶ TTIM section 2.21 summary.

10.35. It is clear therefore Mr Wignall is very concerned about the quantum of additional traffic that would emerge through more permissive retail development within the AMUP, both in terms of the ability of appropriate network mitigation measures to be achieved and delivered in a very short time, and the consequential undermining of the ODP development thresholds. I share Mr Wignall's concerns.

11. SECTION 42A REPORT

11.1. I have read the s.42A Report, and provide comment on the assumptions and recommendations with regard to traffic matters, below.

11.2. The s.42A Report provides clarification (Paragraph 3.29) on the scope of PPC84, stating *"Unlike the PDP process, the plan change does not represent a full review of the provision for the Airport Zone under the PDP, and submissions on the PPC84 cannot seek any relief that would be outside the scope of the plan change request."*

11.3. Notwithstanding this, Mr Wignall and I both agree it is difficult to assess the traffic effects of the proposed changes to the Airport Zone rules, without also considering the AMUP development thresholds, because of the direct relationship between activity type and trip generation. In my view, and I believe Mr Wignall's too, the two go hand-in-hand.

11.4. With no changes to thresholds proposed under PPC84, this effectively permits two to three times the traffic generation at the site allowed for under PPC73 (309vph) associated with the next 20,000m² GFA of development.

11.5. In this regard the s.42A Report acknowledges Mr Wignall's concerns (Paragraph 5.11) related to PPC84 effects on the thresholds, for which the modelling analysis undertaken shows development of more intensive traffic generating activities will lead to major operational issues and a severe deterioration in the level of service at the lower development thresholds.

- 11.6. However, whilst acknowledging such difficulties, the Reporting Officer does not offer any method of achieving a re-calibration other than simply stating that resource consent applications can provide the mechanism for ensuring appropriate effects and mitigation on the network are considered. I do not agree with this approach, as ad hoc resource consent applications for individual higher traffic generating activities cannot efficiently and effectively assess the cumulative effects in advance. This is needed to ensure roading improvement mitigation can be delivered in a timely manner.
- 11.7. With regard to the prohibited activity status within the Airport Zone, the Reporting Officer describes (Paragraph 5.40): *"In my experience, it is accepted practiced (and confirmed through case-law) that prohibited activity status should be used sparingly, requiring a very high threshold of certainty of unacceptable adverse effects."*
- 11.8. I note that the prohibited activity status adopted into the ODP occurred through the PPC73 Environment Court ruling, and had the benefit of drawing from detailed modelling analysis carried out at that time. The PPC84 application has provided no supportive contrary traffic modelling evidence to suggest that the PPC73 provisions are no longer appropriate, and there have been no subsequent network changes since these provisions were adopted that can in my opinion be considered 'enabling'. In fact, since the PPC73 decision, difficulties with the network have increased substantially.
- 11.9. In this regard Mr Wignall¹⁷ states that the Expressway does not represent a "game-changer", and does not obviate the need for development related infrastructure investment.
- 11.10. In summarising the assessments and conclusions of Council's traffic and economic experts, the Reporting Officer generally concurs with their views, stating that (Paragraph 5.47);

¹⁷ In the TTIM, Paragraph 2.21.

"I acknowledge that the advice supplied to Council by its economic and traffic experts urge a high level of caution in regard to considering the enablement of further development of retail activities within the Airport Zone (i.e., beyond the existing provision, given the significant adverse effects that further development of these activities in this location would have on the Paraparaumu Sub-Regional Centre and on the transport network/infrastructure.

In particular, I acknowledge that Kapiti Road is likely to be under considerable further strain once the interchange onto the Mackays to Peka Peka Expressway is open. Both sets of experts advise that Council take a firm stance on the request to expand the potential for significant amounts of further retail development via the amendment to the prohibited activity rules."

11.11. The Reporting Officer then goes on to describe that in his view, whilst such concerns are valid, removing the 'prohibited activity' status and adopting an approach which retains a high level of control over such activities, so that a high level of rigour can be imposed when assessing resource consent applications, is appropriate. In light of this, the Officer proposes (Paragraph 5.54) the following changes to the ODP 'prohibited activity' provisions:

- (a) removal of prohibited activity status for supermarkets;
- (b) removal of prohibited activity status for 'one' department store (whilst retaining the prohibited activity status for any further departments stores); and
- (c) removal of prohibited activity status for more than one store of between 151m² - 1500m² GFA that retails groceries or non-specified food lines.

11.12. I question the contradiction between prohibited activity being described by the Reporting Officer as 'difficult to support' (§.42A Report, Paragraph 6), and then including a prohibited activity status

within the subsequent recommendations (i.e. *more than one department store classified as 'prohibited'*). If development can be adequately controlled through tighter activity status restrictions such as non-complying, why then is it necessary to maintain any prohibited activity status within the Airport Zone whatsoever?

11.13. In reasoning that the removal of 'prohibited activity' in favour of non-complying (or discretionary) would retain an adequate level of control for a proposed development, the Reporting Officer (Paragraph 5.46) makes the point that resource consent applications would need to be assessed against the Objectives and Policies of the ODP.

11.14. However, in my view, this is problematic in the case of traffic because the Objectives and Policies of the Airport Zone do not provide anything in the way of specific network performance indicators. This would make it very difficult to require a desired LoS along Kapiti Road for example, at intersections more removed from the airport access, given the statutory difficulties in tying network upgrades to development. This is highlighted by the AS modelling of Kapiti Road and the soon to be completed Expressway interchange, which is shown to be failing in the forecast year 2017 with PPC84 AMUP trips added to the network.

11.15. Paragraph 5.60 of the s.42A Report sets out the Reporting Officer's recommended amendments to the PPC84 provisions to provide for:

- (a) Only one supermarket as a discretionary activity, with additional supermarkets as non-complying activities;
- (b) One department store as a non-complying activity, with any additional department store remaining as prohibited;
- (c) More than one store of between 151m² and 1500m² GFA that retails groceries or non-specified food lines as a non-complying activity; and

(d) Noise sensitive activities that are not otherwise permitted as non-complying activity as non-complying activities.

11.16. I have already provided an assessment of the likely traffic generation levels associated with such a development scenario enabled by the more permissive provisions, at Table 4 earlier in my evidence. Notwithstanding this, I refer to Mr Wignall's comment¹⁸, where he is of the opinion that in the event PPC84 is approved, then "*it should be substantially modified to include appropriate safeguards as recommended by the Council Officer*". From this I take it that Mr Wignall is referring to the development thresholds identified within the ODP, which would be rendered obsolete in a traffic sense should the PPC84 prohibited and non-complying activity status become more permitting. I note there are however no such traffic safeguards offered by the Reporting Council in his recommendations set out above and do not believe that there is scope to do so.

11.17. Accordingly, I disagree with the Reporting Officer's conclusions and recommendations from a traffic perspective. Furthermore, it is difficult to see how the intentions of the ODP with respect to the consideration of the development thresholds can be achieved if PPC84 is adopted as recommended in the s.42A Report.

11.18. Indeed, a key reason from a traffic perspective for restricting higher traffic generating activities within PPC73, such as supermarkets; department stores; and 'retailing of groceries and non-specified food lines', was to manage traffic generation at the site, to avoid overloading the network. As I have described, the recent modelling work completed by Council indicates nothing has changed in this respect, and that strict controls are required in order to avoid network capacity being eroded and performance worsening.

¹⁸ Annexure 3 of the TTIM, Paragraph A3.7.

12. ASSESSMENT OF PPC84

12.1. In my view, the quantum of development allowed between thresholds in the ODP at the AMUP is already very large, comprising roughly 20,000m² GFA (between 23,000m² and 43,050m²; and again between 43,050m² and 63,000m²). To provide some context, the existing Coastlands Shoppingtown site currently comprises around 50,000m² GFA activity. Further, in comparing this to other current retail development in the District, such as the PPC72A site off Rimu Road, where the ODP and PDP anticipate and encourage more intensive development, 'Coastlands Square' Stage 1 is only permitted to develop to a level of 10,500m² GFA, before comprehensive traffic modelling is required prior to any Stage 2 development..

Development Effects on Sheffield Properties Limited, Coastlands Shopping town Limited and Ngahina Developments Limited

12.2. Interpreting the more detailed LoS outputs from the AS model, it is shown that particular congestion is experienced for the PPC84 scenario¹⁹ on Kapiti Road east, around the Expressway interchange and Arawhata Road (showing LoS E). The effects of such congestion will materialise in delay for those east-west movements on Kapiti Road, culminating in increased journey times for people wishing to travel to and from the Paraparaumu Town Centre. The effects of such delay and increased congestion would likely manifest in the form of new travel choices being made, including the use of alternate routes not otherwise considered and retail visits being made elsewhere, away from the desired location of the town centre.

12.3. On this point I note that Mr Small has undertaken analysis of the economic influence of PPC84 on existing trade in the District, which indicates some 21% of spend could divert from the Paraparaumu Town centre to the ARUP. This already significant proportion would likely increase further if the influence of traffic congestion (which

¹⁹ 'AS model' development scenario includes Department Store (but no supermarket).

would have the effect of deterring people from visiting the town centre) on Kapiti Road arising from PPC84 were taken into account.

- 12.4. As part of the traffic modelling analysis undertaken to support the recently consented 'Coastlands Square', the operation of the Rimu Road / Kapiti Road signalised intersection was assessed by the applicant using SIDRA modelling. This modelling showed the intersection to be approaching LoS E in the forecast 2021 year with Stage 1 of the Coastlands Square development traffic added to the network (with the Expressway and SH1 Revocation in place, but no Town Centre Link Road). That assessment highlighted the sensitivity of the intersection to changes in traffic flows, notably influenced by an increase in forecast volumes using Rimu Road following revocation of the existing SH1 route.
- 12.5. With the significant drop in LoS C to LoS E forecast on Kapiti Road at the Arawhata Road intersection, with PPC84²⁰ traffic added to the network, it is reasonable to me to assume that with the majority of these new AMUP related vehicles at the intersection travelling to and from Main Road (current SH1), and its associated catchments, a similar quantum of additional vehicle movements would be added to the Rimu Road signals. Such additions are likely to trigger a similar substantial drop in performance as manifested at Arawhata Road, with LoS E or F on some approaches. Such congestion would frustrate traffic visiting the town centre.
- 12.6. This presents a significant problem for the consented Stage 1 Coastlands Square development, from an accessibility perspective, which was consented on the basis of a permitted baseline that anticipated PPC73 and associated prohibited activity status at the airport. In adopting PPC84, the network capacity anticipated to be available for the consented Coastlands Square development, including Stage 2, is suddenly under risk of being eroded by development not envisaged, outside of the town centre.

²⁰ Using traffic generation for scenario includes Department Store (but no supermarket).

- 12.7. This would in turn result in requirement to provide greater levels of intervention on the network, in the form of mitigation, in order to potentially off-set the subsequent PPC84 additions that could be on the network by then. It is also possible that as a result of network erosion caused by PPC84 and associated applications, it would not be feasible to mitigate Stage 2 through discrete intersection improvements. If the required TIA indicated more substantial infrastructure is required, which could only be provided say by the Town Centre Link Road (a project that is out of the developers control), this could delay development of Stage 2 by several years, until such time as the Link Road is constructed.
- 12.8. At a broader level, and as above, the increased delays along Kapiti Road arising from the additional AMUP traffic (enabled by PPC84) will cause drivers to re-consider preferred route patterns within the district, for example those heading north on the Expressway and wishing to visit the town centre who ordinarily would exit at Kapiti Road and travel east may perceive it as now quicker to route along the old (current) SH1 alignment.
- 12.9. This presents a different picture of traffic patterns to that used in planning the District's roading network, including the Expressway and SH1 revocation, which could lead to knock-on effects for traffic distributions which have not been anticipated. This may in turn undermine the proposed investment in the Sub-Regional Centres transport network, as well as the impact on proposed timing (and suitability) of roading relief projects such as the Town Centre Link Road.

Effects on the Strategic Road Network

- 12.10. The Expressway, due to be completed and opened shortly, forms part of the Wellington Northern Corridor 'Road of National Significance'. Its design has been developed on the basis of providing strategic transport infrastructure, as well as having a lesser role of distributing traffic to and from the local road network.

- 12.11. The Traffic Modelling Report 'Technical Report 34' (2012), prepared by Beca, details the technical inputs and outputs of the traffic modelling work undertaken to determine both the effects and benefits of the Expressway design. The report describes how the traffic demands adopted for the forecast year scenarios within the modelling assessment drew on data from the Wellington Transport Strategy Model ("WTSM"), which sets out anticipated land use activity in the District. These WTSM land use forecasts enable determination of the traffic generating characteristics of both current and future development, in line with the ODP zoning. Accordingly, effects arising from any plan change will not have been considered within the traffic generation assessment used to develop and test the Expressway design.
- 12.12. It stands to reason therefore that any change to the 'consented land use pattern' that will indisputably result in an increase in vehicles on the network, will then have some influence on the Expressway operation, most particularly at the interchange with Kapiti Road, which is sited just east of the main AMUP access point.
- 12.13. The AS modelling assessment undertaken by Mr Wignall already shows signs of the network failing (reaching LoS E) in the vicinity of the interchange with some 43,050m² of development²¹ (including a department store) at 2017. In the event that development at the AMUP included a department store and a supermarket²², traffic generation at the site would be some 500vph higher than the ODP provisions anticipate (and the Expressway contemplated).
- 12.14. In the absence of any investigations by the Applicant into potential PPC84 roading mitigation measures, it is difficult to know what improvement would be needed to maintain a level of service that matches that currently anticipated. In my opinion this presents a significant risk as to whether the relief sought through the Expressway

²¹ Using traffic generation for PC84 scenario includes Department Store (but no supermarket).

²² As derived from Table 3.

design and construction will deliver the forecast benefits, at the projected timeframes, when no traffic analysis mitigation assessment has been undertaken by KCAHL. I note that NZTA share my concern regarding such effects, as set out in their original submission.

Infrastructure Mitigation

- 12.15. In the absence of specific option testing of infrastructure mitigation measures that might appropriately accommodate the additional development traffic, I find it difficult to see how such forecast congestion could be addressed via conditions by a single applicant at the time of resource consent. I note particularly that none of the planned infrastructure improvements currently identified within the District (such as the Town Centre Link Road) are likely to deliver capacity improvements on the section of Kapiti Road in the vicinity of the Expressway interchange, that would alleviate the modelled PPC84 traffic effects.
- 12.16. In considering the detailed analysis undertaken for PPC73, this showed significant network infrastructure improvements were necessary in order to accommodate the additional AMUP traffic generated at each of the lower GFA thresholds²³. These specific infrastructure requirements included completion of the Ihakara Street extension and various stages of the Western Link Road ("WLR"). Such works would have provided improved traffic distribution at and around the site, with less reliance on traffic routing via Kapiti Road.
- 12.17. With the WLR having been replaced with Expressway, these improvements are now off the table. This effectively removes any means of viable alternative access to the AMUP, having the effect of concentrating all associated traffic on Kapiti Road.

²³ The 43,050m² and 63,000m² GFA thresholds.

Risks of Deferring Traffic Assessment for PPC84

12.18. Whilst KCAHL's traffic expert Mr Kelly makes repeated mention of the fact that adequate assessment of the traffic impacts can be undertaken at the Resource Consent stage, I disagree with deferring analysis in this manner, for the following reasons:

- (a) It could provide a permitted baseline that potentially exceeds 'achievable infrastructure mitigation intervention';
- (b) Difficulties in determining the area of influence of PPC84 development (i.e. how far from the site do mitigation works need to be undertaken to address consequential effects of AMUP traffic i.e. Kapiti Road>Expressway interchange>Town Centre);
- (c) the PPC84 KCAHL traffic would erode network capacity much sooner than anticipated, frustrating the development of land already zoned for retail/commercial along the Kapiti Road corridor and elsewhere, including the town centre; and
- (d) PPC84 effects on traffic pattern redistribution across the district, and on the programmed and proposed roading projects in the district, including the work undertaken on the Town Centres Transformation Projects.

12.19. With respect to the second bullet point, the s.42A Report (Paragraph 5.27) indicates that Council's discretion is restricted to:

- (a) Expected traffic generation from the Airport Zone; and
- (b) Effects on the local road network and SH1 within the District.

12.20. However, I note that these descriptions do not explicitly identify the area of mitigation for which infrastructure improvements must be undertaken, and therefore do not provide sufficient surety that this concern can be appropriately addressed.

13. SUMMARY

- 13.1. The PPC84 recommended changes to the ODP provisions will lead to significant increases in AMUP traffic generation levels (a possible increase from 300vph to 900vph) as compared to the existing provisions relating to the next 20,000m² GFA of development.
- 13.2. The considerable district roading changes currently taking shape in Kapiti are arguably the most significant in Paraparaumu's recent history. As such, any disruption or change to land use and development intensity, that will exert an influence on traffic patterns both locally and at a wider level, requires careful consideration and analysis.
- 13.3. In this regard, I note KCAHL have not attempted to provide any analysis of the effects of increased traffic generation on the road network, or undertaken evaluation of road infrastructure upgrades to facilitate and mitigate the increased vehicle trips generated on the network.
- 13.4. The traffic modelling work undertaken by Council shows the effects of such development site traffic will trigger poorer levels of service on the network, not just at the site access onto Kapiti Road, but at downstream intersections including the Kapiti Expressway interchange and Arawhata Road. These effects will be significant.
- 13.5. This deterioration in performance would in my view extend to the town centre network and frustrate both consented development, and future 'infill' activity arising from Council's desire for consolidation within the Sub-Regional centre, including developments and properties owned by submitters for whom the effects would present in terms of erosion of available capacity and accessibility, and in so doing bring forward the need for currently unplanned infrastructure.

Mark Grant Georgeson

Date: 3 February 2017