

BEFORE THE NAPIER CITY COUNCIL

UNDER The Resource Management Act 1991

AND

IN THE MATTER OF a resource consent application by Bupa Care Services NZ Limited to the Napier City Council for a retirement village complex at 25 and 35 Ulyatt Road, Napier.

**STATEMENT OF EVIDENCE OF IAN PHILIP CONSTABLE
ON BEHALF OF BUPA CARE SERVICES NZ LIMITED
TRAFFIC
8 August 2018**

Qualifications and experience

1. My full name is Ian Philip Constable. I am a consulting traffic engineer and director of the consulting engineering practice, Traffic Solutions Limited. I am registered as a Member of the Institute of Professional Engineers of New Zealand (MIPENZ), and currently hold an Annual Practising Certificate as a Chartered Professional Engineer (CPEng). I have a Masters in Engineering Studies (Transportation) degree from the University of Auckland (2006).
2. I have been involved in road engineering for the past 41 years, specialising in traffic engineering for the past 29 years. I have provided traffic expertise, and carried out traffic and parking surveys for several aged care providers for many years. I am presently involved with another five aged care proposals New Zealand wide.
3. I have also been engaged by other Councils, to peer review land development proposals of all types, including aged care facilities.

Code of Conduct for Expert Witnesses

4. I have read and am familiar with the Code of Conduct for expert witnesses outlined in the Environment Court's Practice Note 2014 and have complied with it in preparing this evidence. I confirm that the issues addressed in this brief of evidence are within my area of expertise and that I have not omitted to consider material facts known to me that might alter or detract from my opinions.

Scope of evidence

5. Bupa Care Services NZ Limited (**Bupa**) proposes to develop a retirement village complex at 25 and 35 Ulyatt Road, Napier (the **Proposal**). My evidence will cover:
 - (a) An overview of the Proposal and a description of Ulyatt Road and modifications proposed as part of the development;

- (b) A summary of traffic impacts relating to the traffic generation effects of the Proposal on the road network; site access; parking and servicing; and the layout of driveways, parking and servicing areas within the site.
6. A full traffic assessment of the Proposal has been provided in the Traffic Impact Assessment Report (“**TIA**”) I provided with the resource consent application, which has been reviewed by Council engineering staff. This statement does not repeat the contents of the TIA, but it does highlight the main points and summarises the conclusions.
7. I have read and am familiar with the submissions, officer’s report and proposed consent conditions. This statement focusses on the traffic and transportation engineering matters discussed in the officer’s report, and traffic issues raised in submissions.
8. I have visited the site on two occasions. The first visit was in September 2017, during the initial design stage of the Proposal. During that site visit I measured roadway widths, sight distances from the proposed access points, and recorded legal speed limits and other relevant road features. From that site visit I formed opinions about the suitability of the access proposal at an early stage of the design, which are now embedded in the design. I revisited the site again after the consent application was lodged, to confirm that the road environment in the site vicinity had not changed appreciably, which it had not.

Executive summary

9. The development will generate very little additional traffic on the transport network. There is ample spare capacity available to accommodate the proposed development.
10. The parking proposed will exceed the District Plan requirement by a considerable margin. There will be ample parking on the site to accommodate demand.
11. The two site accesses proposed will both be located with ample separation from each other. There are no road intersections nearby that the accesses could conflict with. Clear visibility along the road from the accesses will enable drivers to access the site

- safely. Pedestrians will also be able to access the site safely, via separate footpath accesses.
12. Ulyatt Road will be kerbed along the site side of the road to provide a more urban form. A speed threshold will also be installed to help slow traffic speeds. The road upgrade has been designed in consultation with Council's traffic engineering team, which supports the measures.
 13. Accordingly, I conclude that there are no traffic engineering or parking reasons not to grant resource consent for the Proposal.

Overview of Proposal

14. The proposed facility will contain the following:
 - (a) 49 care home rooms;
 - (b) 19 retirement apartments; and
 - (c) 99 retirement villas.
15. The site has its eastern frontage to Ulyatt Road, and its western frontage to the Napier-Hastings Expressway. However, the site will be accessible by motor vehicles only off Ulyatt Road via two vehicle accesses.
16. A total of 167 parking spaces will be provided. These include a garage attached to each retirement villa and a garage allocated to each retirement apartment. The remaining 49 parking spaces will be spread around the site for care home staff and visitors. There will also be room for parking on the concrete aprons in front of each garage attached to the villas although these are not counted in the total.
17. A dedicated service area will be attached to the care home for service deliveries and refuse storage/collection.

18. The development will be served by two vehicle crossings and two pedestrian footpaths, off Ulyatt Road. A gated pedestrian access will also provide a connection to the recently constructed cycle/footpath along the Napier-Hastings Expressway.

Ulyatt Road as existing

19. Ulyatt Road is classified as a collector road in the Council's road hierarchy.
20. It is a rural unkerbed two-laned road. It has a straight and level alignment, with clear visibility along it.
21. There are presently no footpaths or cycle facilities adjacent to the site, although the road is kerbed with footpaths a short distance north of the site.
22. There is an existing speed threshold near the northern end of the site frontage, which includes kerbed side islands, change of speed limit signage, and a short flush median. The threshold provides a visual boundary between the urban road environment to its north, which has a 50 km/h speed limit, and the rural road environment to its south, which has a 100 km/h speed limit.
23. I have estimated that the road carries less than 5,000 vehicles per day, based on observation at the site. Such volume is well within the capacity of a two-laned road.
24. A study of accidents recorded in the New Zealand Transport Agency national database shows that few accidents were recorded in the vicinity in during the 5-year period 2011 to 2015, which was the period considered in the TIA. A more recent study shows that no further accidents have been recorded since then up to the end of 2017. Official accident records do not indicate any existing traffic safety issues in the vicinity.

Ulyatt Road upgrade

25. As part of the Proposal, Ulyatt Road will be upgraded along its western side directly adjacent to the site frontage, and along its full length. A plan showing details of the proposed upgrade is included with the TIA but is also attached as Attachment A to this statement for convenience.

26. The upgrade will including the following:
- (a) New kerb and channel along the western side of the road, extending southwards from its existing termination point to the southern end of the site;
 - (b) A sealed shoulder between the northbound traffic lane and the new kerb, that can be used by cyclists;
 - (c) A new pedestrian footpath extended southwards from the existing footpath, which terminates north of the site, along the west side of the road;
 - (d) A new speed threshold near the southern end of the site to emphasize the change of environment from rural to urban at that location. The legal speed limit adjacent to the site will not change as part of this development, however Council's engineering team is currently reviewing speed limits on this road as a separate exercise. The proposed changes on the road will be sympathetic to a legal speed limit reduction.
27. The modifications have been examined by Council's engineering team, who support the Proposal.

Summary of traffic impacts

Traffic Generation

28. In the TIA I predicted that the Proposal will generate traffic flows of approximately 500 vehicle trips per day, and a peak hourly flow of about 50 vehicle trips per hour. The peak flow will occur during the middle part of weekday and weekend days, which is typical of aged care facilities. Half to two-thirds of the peak flow should be expected in the weekday commuter traffic peaks. This means that peak flow will occur when the transport network has more spare capacity, outside the weekday commuter peak periods.

29. I anticipate that most of the generated traffic will travel to and from the north, although some will travel to and from further south.
30. The expected traffic flows are well within the capacity of Ulyatt Road and the wider network. With the low flows expected, I consider that the capacity and traffic safety effects of the development on the transportation network will be negligible.

Site Access

31. Two new vehicle crossings are proposed which will both be 6m wide at the site frontage boundary. Both accesses have been designed to accommodate entry and exit movements by cars simultaneously, and will be wide enough to accommodate larger vehicles such as emergency vehicles and service vehicles.
32. The available sight distances from both vehicle crossings are excellent due to the straight road alignment, exceeding 300m in both directions. Sight distances easily exceed the requirement in the Council's Code of Practice (160m), and the minimum recommendation in the commonly used publication RTS 6 "Guidelines for Visibility at Driveways" (250m). Therefore, I consider that the accesses will operate safely.
33. Pedestrian footpaths will be provided into the site adjacent to both vehicle accesses. These will connect to the proposed new public footpath along Ulyatt Road. A walkway link will also be provided at the rear site boundary, which will connect to the cycleway and walkway along the expressway. These footpaths will all provide direct and safe pedestrian links to and from the site.
34. I consider that the vehicle and pedestrian accesses will operate safely.

Parking Provision

35. In the TIA I assessed that the District Plan parking requirement of the Proposal is 126 spaces. With 167 spaces proposed, there will be a 41 space surplus.
36. In the TIA I predicted that the care home part of the Proposal will generate peak parking demands between 20 and 25 vehicles. These will comprise mainly staff

- parking, but visitors to care home residents are also allowed for. This estimate is derived from parking surveys I have carried out at many similar care homes elsewhere in New Zealand in recent years, results which are tabulated on Attachment B to this evidence. I have also referenced various other data sources commonly used by traffic engineers¹. There are 49 spaces available for use by the care home rooms, which will easily accommodate peak parking demands.
37. The retirement villas and apartments will each have an associated garage, for resident use. Visitors to residents in the villas will have access to at least 24 other parking spaces around the site that are unused. Visitors to the villas can also use the driveway aprons in front of the garages attached to the villas they are visiting, which is a practice I know occurs at other retirement villages. Visitor demands at the villas and apartments is unlikely to exceed 10 to 15 vehicles at any time², which will easily be catered for with the unused 24 spaces.
38. Hence, in my opinion there will be an ample supply of parking on the site to accommodate the demands of the care home and village.

Site Layout

39. Parking spaces for visitor use will be distributed throughout the retirement village so there is always convenient parking available. Most of the parking, however, will be close to the care home, which is where residents in the apartments, staff and a significant number of visitors will wish to park.
40. All of the villa resident spaces will be in garages attached to the villas.
41. All of the parking spaces on the site will comply with Council's dimension requirements in the District Plan. I consider that all the carparking spaces will be easily accessible.
42. Two disabled spaces will be provided. These will be located close to the main building entry to the care home. The disabled parking spaces will be located and marked in accordance with the NZ Standard NZS 4121:2001.

¹ Including New Zealand Trips and Parking Database Bureau, Roads and Traffic Authority of New South Wales (RTA Guide), Institute of Transportation Engineers USA.

² Based on parking surveys I have carried out at Bupa Sunset Care Home, Blockhouse Bay, Auckland

43. The service area will be located close to the kitchen and laundry facilities, for efficient supply delivery and refuse collection activities. The service area will be easily accessible by 8m long medium-sized trucks, which is a typical size of the larger types of vehicles that service care homes. Ambulances will be able to drop off and pick up patients in the porte cochere at the main building entry. Vehicle tracking paths included in the TIA demonstrate that these service vehicles will be able to access these areas satisfactorily.
44. Internal footpaths will be provided throughout the site, particularly along the main internal driveways. These will connect with the footpaths to Ulyatt Road. Internal links will also be provided to provide direct access between the village and the facilities within the care home. I consider that pedestrian movement within the site will be well catered for.

Construction Traffic

45. Construction of the care home and village, and associated site works, will generate construction vehicle trips for purposes of spoil removal, import of hard fill, materials delivery, delivery and removal of plant and machinery, rubbish removal and general employee and subcontractor movements. Construction traffic has the potential to affect neighbours and other road users in terms of traffic generation, noise and dust.
46. Condition 11 in the proposed conditions (attached to the evidence of Mr Greg Knell) requires that a Construction Management Plan be provided prior to engineering design approval. Construction Management Plans include matters relating to construction traffic, and I consider that such a condition is an appropriate means to minimise construction traffic effects.

Submissions

47. Some submissions include issues relating to traffic matters. In summary, the submitters' concerns relate to additional traffic on the road network, worsening traffic safety, anti-social behaviour, pedestrian safety along Ulyatt Road with no footpath and poor street lighting, and loss of business due to construction noise and traffic.

48. I have already identified how much traffic the development will generate on Ulyatt Road, and this is clearly identified in the TIA. The maximum increase in traffic flow at any one time on Ulyatt Road is estimated to be about 30 vehicle trips per hour (two-way) north of the site and about 20 tph south of the site³. These flows are expected at times of peak demand of the care home and village, and lower flows will occur during the weekday commuter peaks. Even the highest flow equates to one additional vehicle every two minutes on average, which I consider will be almost unnoticeable and will not exacerbate current traffic safety concerns.
49. NCC transport engineers agree with the TIA and conclude that Harold Holt Avenue and Ulyatt Road can both accommodate the anticipated increase in traffic demand from the Proposal.
50. In my opinion the road modifications proposed as part of the Proposal will have positive transport effects by contributing to a safer transport environment.

Officer's report

51. I have read the officer's report. I agree with its conclusions and recommendations that relate to transport. Paragraph 153 in the report states as follows:

"The effects of traffic and safety have been considered by the applicants transport engineer and NCC transport engineers, and subject to the design proposed and conditions to ensure they are implemented that the effects will be no more than minor and can be mitigated. Specific comments have also been provided in terms of illegal road use and the separate process for Council to review the road speeds in this location."

52. I consider that this paragraph summarises the traffic effects of the Proposal succinctly, and I have no further comments to add.

³ Refer Figure 3, Traffic Impact Assessment report

Conditions

53. I have read through the proposed conditions of resource consent attached to the evidence of Mr Greg Knell. Conditions that relate to transport are:

- (a) Requirement that the modifications to Ulyatt Road be carried out as shown in Appendix A in the TIA (Attachment A to this statement) and the Council's Code of Practice for Subdivision and Land Development (Condition 4m);
- (b) Requirement to provide two 6m wide vehicle accesses in accordance with the TIA and the requirements of the District Plan and Code of Practice (Condition 4n);
- (c) Requirement for all works within boundaries of the public road to be undertaken by a contractor who is approved to work within the road reserve (Condition 7);
- (d) Requirement to provide a Construction Management Plan (Condition 11).

54. I agree with all of these conditions.

55. The Commissioner has asked which sections/standards/rules of the District Plan are being referred to in condition 4n. The rules are:

- (a) Rule 61.18(a) Napier District Plan, which states:

"all vehicle crossings must be constructed in accordance with the requirements of Chapter 66 (Volume II – Code of Practice for Subdivision and Land Development."

- (b) Rule 2.5.12.3(c) Code of Practice for Subdivision and Land Development Part D, which states:

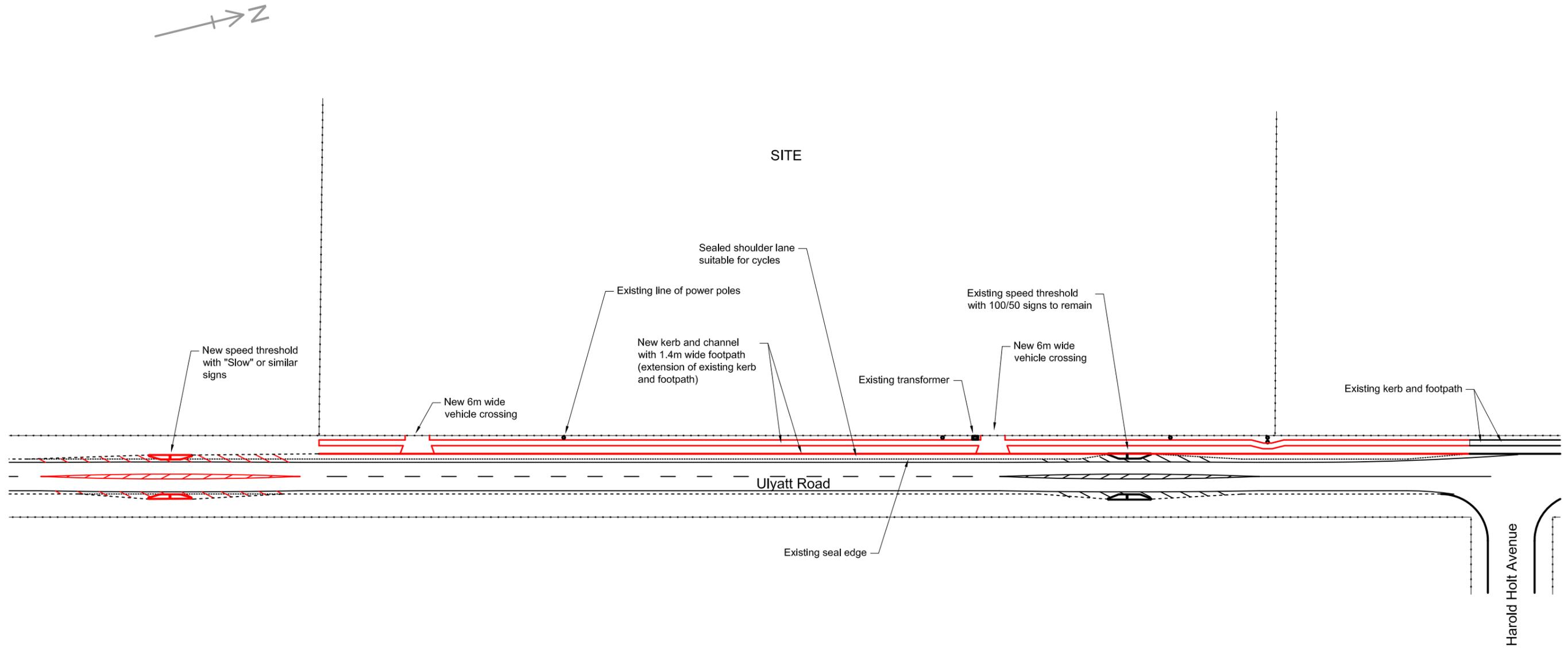
"the maximum width of commercial vehicle crossings at the boundary and at the kerb line not including splays, shall be 6m."

Conclusions

56. The traffic flows that the Proposal will generate will be well within the spare capacity of Ulyatt Road and the wider transport network. I consider that the additional traffic will have negligible effect on the operation of the network, and traffic safety.
57. Ulyatt Road will also be upgraded to reduce travel speeds, and to provide a public footpath connection to the site. Council officers have indicated their support for the Proposal. I believe that the upgrades will have positive transport effects by creating a safer transport environment than already exists. Council's transport engineering team is also reviewing speed limits by a separate process.
58. The two vehicle accesses will have adequate visibility to enable drivers to access the site safely. Pedestrian accesses, which will be separated from vehicle access, will provide safe connection to the surrounding public footpath infrastructure.
59. The development will exceed the District Plan requirement for parking, and there will be an ample supply of parking on the site to accommodate the demands of the Proposal.
60. Taking into consideration all of the above, I conclude that the traffic and parking effects of the Proposal will be acceptable, subject to the conditions proposed, and that resource consent should be granted from a traffic engineering perspective.

Ian Constable

Date: 8 August 2018



<p>BUPA CARE HOME AND RETIREMENT VILLAGE 25 ULYATT ROAD, NAPIER Road Modifications and Site Access</p>		
<p>A3 Scale 1:400</p>		<p>Drawing No:</p>
<p>Traffic Solutions Ltd 82 Hindmarsh Drive, Taupo 3330 Ph (07) 376-5031</p>		<p>Drawn: IPC Date: 20/10/2017</p>
		<p>892/1</p>

CARE HOME / HOSPITAL PARKING DEMANDS

TIME	Havencare Beach Haven 97 Beds	Erin Park Manurewa 106 Beds	Glenburn New Lynn 105 Beds	Little Sisters of the Poor, Herne Bay 32 Beds	Bernadette Lifecare Tauranga 63 Beds	Mary Shapley Whakatane 66 Beds	Sunset Blockhouse Bay 96 Beds	Melrose Tauranga 139 Bed/Units	Liston Heights Taupo 106 Bed/Apts
	Weekday Weekend	Weekday Weekend	Weekday Weekend	Weekday Weekend	Weekday Weekend	Weekday Weekend	Weekday Weekend	Weekday Weekend	Weekday Weekend
8:00							14 0.15	31 0.22	
8:30				7 0.22			18 0.19	44 0.32	32 0.30
9:00				14 0.44		20 0.30		28 0.20	25 0.24
9:30							13 0.14		0.00
10:00		24 0.23				20 0.30		50 0.36	46 0.43
10:30		28 0.26			17 0.27	25 0.38		27 0.19	
11:00	29 0.30	26 0.25	28 0.27			21 0.32		26 0.19	49 0.46
11:30	32 0.33	25 0.24	29 0.28	18 0.56					
12:00	29 0.30	24 0.23	25 0.24			26 0.39		27 0.19	44 0.42
12:30	29 0.30	21 0.20	23 0.22		14 0.22				30 0.28
13:00	24 0.25	25 0.24	25 0.24			19 0.29		42 0.30	40 0.38
13:30	23 0.24	25 0.24	26 0.25			23 0.35			29 0.27
14:00	25 0.26	24 0.23	30 0.29					45 0.32	23 0.17
14:30	23 0.24	24 0.23	27 0.26			18 0.27		48 0.35	29 0.21
15:00	25 0.26	24 0.23	27 0.26	14 0.44		26 0.39	28 0.29		31 0.29
15:30	18 0.19	19 0.18	21 0.20			29 0.44	20 0.21	42 0.30	26 0.19
16:00	13 0.13	15 0.14	20 0.19			23 0.35		35 0.25	
16:30						19 0.29			35 0.33
17:00						20 0.30		41 0.29	31 0.29
17:30		11 0.10							
18:00							11 0.11		25 0.24
									21 0.20

18 = Surveyed parking demand

0.19 = Demand ratio per bed/unit