



114 ADELAIDE ROAD, NEWTOWN

WELLINGTON CITY 6021

TRAFFIC DESIGN STATEMENT



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Document History:

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1.0 Introduction:

In February 2017, Design Club Architecture Limited submitted a resource consent package for 114 Adelaide Road to Wellington City Council. The submission proposed the addition of a hotel complex on top of the existing heritage, and a one-way car entrance at Ground Level with a valet service provided by hotel staff. The car entrance also provided access to a car lift that led to the Basement Level, which included a robotic car parking system.

In response to the resource consent submission, Wellington Council submitted an RFI letter raising concerns on how vehicles will be managed on the site, as well as what mitigation measures will be implemented for vehicles existing the site at peak times. A traffic survey was also requested for hotel car parks to determine the estimated trip rate for the proposed hotel.

This survey was completed by Traffic Design Group in 2017 (based on the RC pack completed by Design Club Architecture) and has been included in Section 02 of this document for reference.

This design statement has been provided to address previous comments raised by WCC, and to describe and clarify how vehicular traffic will be managed at 114 Adelaide Road.

The document takes into consideration the amenity of pedestrians along the footpath of Adelaide Road where cars enter and exit the site, and provides a clear solution that mitigates any vehicular stopping or parking along the footpath of Adelaide Road.

2.0 Traffic Assessment from Traffic Design Group

Mr Stephen White
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Khandallah
Wellington 6035

TDG Ref: 14107.000
12 May 2017

Issued via email: Stephen White design.club@xtra.co.nz
Dennis Parbhu dennis@cpcnz.com

Dear Stephen

Proposed Hotel – 114 Adelaide Road – Wellington Section 92 Response

Following on from our discussions and information you have provided us, we are pleased to provide our responses to the Section 92 Request from Council relating to the proposed hotel at 114 Adelaide Road in Wellington.

1. Introduction

A number of matters have been raised with regards to transport and vehicle access arrangements and the operation of the hotel. Specifically the matters that you require our assistance with are provided below:

Transport

- 1. How will vehicles be managed and what mitigation measures will be implemented for vehicles exiting the site at peak times when there is potential conflict between pedestrians, cyclists and vehicles? Mitigation measures may include the use of a speed hump, mirrors, signage or restricting vehicle movements at peak times i.e 7am – 9am.*
- 2. Provide traffic survey of vehicle trip rate from hotel car parks – what is the estimated trip rate for the proposed hotel between 7am and 10am. Preferably include a breakdown to 30 minute intervals.*
- 4. Provide further details on how you will ensure vehicles will not queue on Adelaide Road, waiting to enter the site to use valet parking.*
- 5. Provide details on the valet parking operation to include vehicle manoeuvring, passing areas and queuing space.*
- 6. How will conflict between vehicles entering the site and exiting the site be managed?*

Our responses to each of these matters are provided below which included suggested measures to address any effects that may need addressing.



2. Vehicle Management (Point 1)

As noted in the Transportation Assessment the provisions of complying pedestrian splays is not possible due to the heritage nature of some of the site and the adjacent land uses. This situation is not unusual for brownfields developments and there are various proven mitigation measures used throughout Wellington to mitigate any adverse effects of this non-compliance.

These devices include visual and audible devices that warn pedestrians of vehicles exiting the driveway, mirrors and less common is the use of cameras. Judder bars are also used to reduce the speed of vehicles exiting the site.

This site is a little unusual as there will be a valet service to provide assistance with vehicle parking and management.

It is recommended that a standard flashing sign with audible sound (similar to what is used on One Market Lane in Wellington) warning pedestrians that vehicles are exiting the hotel parking area. A judder bar located 1.5 metres inside the property boundary is also recommended to reduce the speed of exiting vehicles.

These measures will address this non-compliance and provide safe environment for footpath users.

3. Trip Generation Data (Point 2)

The proposed development will provide 48 serviced apartments with an onsite provision of 20 car parks. The car parks will be managed by hotel management. Guest access to the car parks is not available and with the car lift and parking areas restricted to staff use only.

Average hotel occupancies across New Zealand are 80%. Data for this hotel operation shows that occupancies have an average around 70%. Therefore the typical number of occupied rooms is considered to be around 33.

The available survey data for trip generation rates for hotels is limited and can be site specific to a particular location, hotel type and hotel brand. TDG has access to good survey data relating to parking demands for several hotels across NZ. This can assist in the calculation of trip generation rates. While we have trip generation rates for hotels in NZ, the parking data available is considered to better align with the expected operation of the Adelaide Road hotel. The Road Parking demand data is provided in **Table 1**.

Day	MON	TUE	WED	THUR	FRI	SAT	SUN
Units occupied	22	28	33	11	9	9	14
Unit parking charged	5	6	12	2	3	3	7
Unit parking free	1	2	1	1	2	1	0
Total Unit parking	6	8	13	3	5	4	7
Park rate per unit	0.27	0.29	0.39	0.27	0.56	0.44	0.50

Table 1: Parking Demand Data



The table shows the parking demand is higher in the weekends, which correlates well with trip generation data from other hotels. The survey also shows the different types of guests the hotel caters for. The guests during the week are less likely to drive to the hotel which is typical of the business clientele they cater for at these times. The opposite situation occurs during the weekend when there are fewer guests but noticeably more cars parking on the site – aligning more with non-business guests.

The parking demand data suggest that around 0.47 spaces per unit would be a reasonable representation of the number of spaces that might be occupied on-site at peak times for weekend visits. As shown, the demands for car parking are noticeably less during the week with an average of around 0.3 spaces per unit. Accordingly, this would suggest that up to 18 cars could be parking on the site at peak times (weekends) and around 11 cars during the week.

The length of stay for guests also provides an indication of trip generation for a hotel operation. The hotel guests stay between 2 to 4 days depending on the reason for the visit. Again this aligns with some to the shorter weekend recreational visits to the longer weekday business trip.

The most significant influence on trip generation for this activity is the standardisation of check in and check out expectations of guests. As with most hotel operations, guests are usually required to check out by 10am with some hotels providing a late check out service. The late check service is usually used by some hotels to manage the peak demands at 10am. This hotel operation will offer that same service at peak times as required. The usual check in time is 2pm.

The distribution of arrivals and departures are noticeably different with arrivals being spread over the afternoon through to the night as guests arrive from their activities during the day. Conversely, the departure patterns are usually much more concentrated. This trip generation pattern results in very few vehicles entering and exiting a hotel site at the same time.

Survey data of larger hotel operations showed that the highest trip generation rates for a hotel occur generally on Friday and Sunday. Guests typically arrive on Friday night and leave Sunday morning. The parking demand data provided in Table 1 above is more typical for the proposed development and confirms that using these similar trip patterns would be appropriate.

Based on the parking demand data, the trip generation rates would be lower during the weekday. The highest number of movements across the footpath will occur on a Sunday morning when the weekend guests leave as they check out before 10am. The Friday check in will have higher flows than any other day but these will be more spread out from 2pm.

For the purpose of responding to Council's Section 92 Request, we have considered the worst case scenario of Sunday morning.

The trip generation rates for larger hotel operations have been surveyed as part of other projects. While this data has limited use in terms of this development, some of the trends or patterns surveyed would be consistent to a smaller hotel such as this site in Adelaide Road. This can assist in developing trip generation rate estimates for this proposal.

Table 2 provides a calculated trip ratio and rates for the outward movement from the site. It is considered that 100% of the guests leave the site (during this period). While this is unlikely to happen, it does provide a conservative estimate of the trips from the site. The inward



movement rates, as noted above, are expected to be nil as guests typically don't arrive until after 2pm unless by special arrangement (this being the exception rather than the norm).

Time	Departure ratio (%)	Expected Vehicle Departures Out Weekday	Expected Vehicle Departures Out Weekend
07:00 – 07:30	10	1	2
07:30 – 08:00	22	2	4
08:00 – 08:30	18	2	3
08:30 – 09:00	16	2	3
09:00 – 09:30	12	1	2
09:30 – 10:00	14	2	2
10:00 – 10:30	10	1	2
Total	100%	11	18

Table 2: Trip movements from the site between 07:00 and 10:30

As shown, the peak movements occur around 7:30am to 8:00am for the outward flows. This equates to two vehicles over a 30 minute period during the weekday and four vehicles for the same time interval in the weekend. These are low vehicle flows at around one vehicle every fifteen minutes and would not be expected to have any measurable effect on either vehicles or pedestrians in Adelaide Road.

4. Vehicle Queuing (Point 4)

Council officers have sought more detail on how vehicle queues will be managed. As noted above, the trip generation rates are low with peak flows exiting the site being only around four vehicles in a thirty minute period. The flows entering the site are much lower and are spread out the afternoon and evening from around 2pm. The inward vehicle movements are expected to be no more than two in any thirty minute period.

The nature of the site and the activity provides excellent control over the arrivals and departures from the site. Guests will be asked as part of the booking process if they need to park their vehicle on site. They will also be asked about their intended arrival time. This will provide the hotel management with the opportunity to safely manage the parking area and ensure no queues extend from the site on to the adjacent footpath and roadway. It should be noted that there is sufficient room on the ground floor to stack two cars clear of the footpath. The hotel valet management system will ensure that queues are managed entirely within the car arrival area and basement car parking area.



5. Valet Parking Operations

The valet parking operations will consist of:

- managing vehicle arrivals;
- taking cars to basement car parking area;
- managing the basement car park;
- use of car lift;
- provide assistance to guests entering or exiting the site; and
- ensuring safety of guests and users of the adjacent footpath.

Guests will arrive on site and drop keys off with the concierge. The valet staff will then take the car down to the basement car park and park in one of the proposed stacking units. This will allow other cars to come into the site and be managed effectively within the arrival area and basement car park below. The use of the car arrival area, basement parking, car lift and circulation is restricted to valet staff.

When guests are leaving the hotel they will inform the concierge of their intentions to leave, and the concierge who will then instruct valet staff to retrieve the car from the basement car park. The car will then be brought back to the valet pick-up / drop-off area for the guest to then drive away.

6. Driveway Conflicts (Point 6)

The arrivals and departures for the site are separated by time as noted above. The trip generation rates for the site are low and the likelihood of two opposing vehicles using the driveway at the same time is very low.

The hotel management will be managing the arrival and departures from the site. The exiting vehicle will have right of way with valet staff being at the entrance of the site to ensure exiting vehicles leave the site safely. Should any vehicle be entering the site around the same time, then they will have to wait in the flush median on Adelaide Road which they can do so safely until it is clear to enter the site. The flush median provides a safe waiting area should this need to be used.

7. Vehicle Conflict Management

This matter has been largely covered in the above response. In summary, the trip patterns are dictated by the check in and check out systems of the hotel. It is highly unlikely entering and exiting vehicles will occur at the same time through the driveway. In the unlikely event that such a situation should occur the entering vehicle will be able to enter the site. The valet staff will manage the arrival area and parking area to manage the conflict using their training and experience to deliver a safe outcome. This will involve moving cars between the arrival area and basement parking area. It may (depending on Adelaide Road flows) involve reversing a vehicle from the site under valet supervision and parking off-site temporarily.



We welcome the opportunity to provide any clarification on the information provided above

Yours sincerely
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3.0 Vehicle Entrance Design:

The only vehicular entrance to the site is from Adelaide Road, which is the existing vehicle entrance to the site. Once past the boundary line, vehicles enter a private, covered driveway that leads to the car lift, loading bay and internal roundabout:

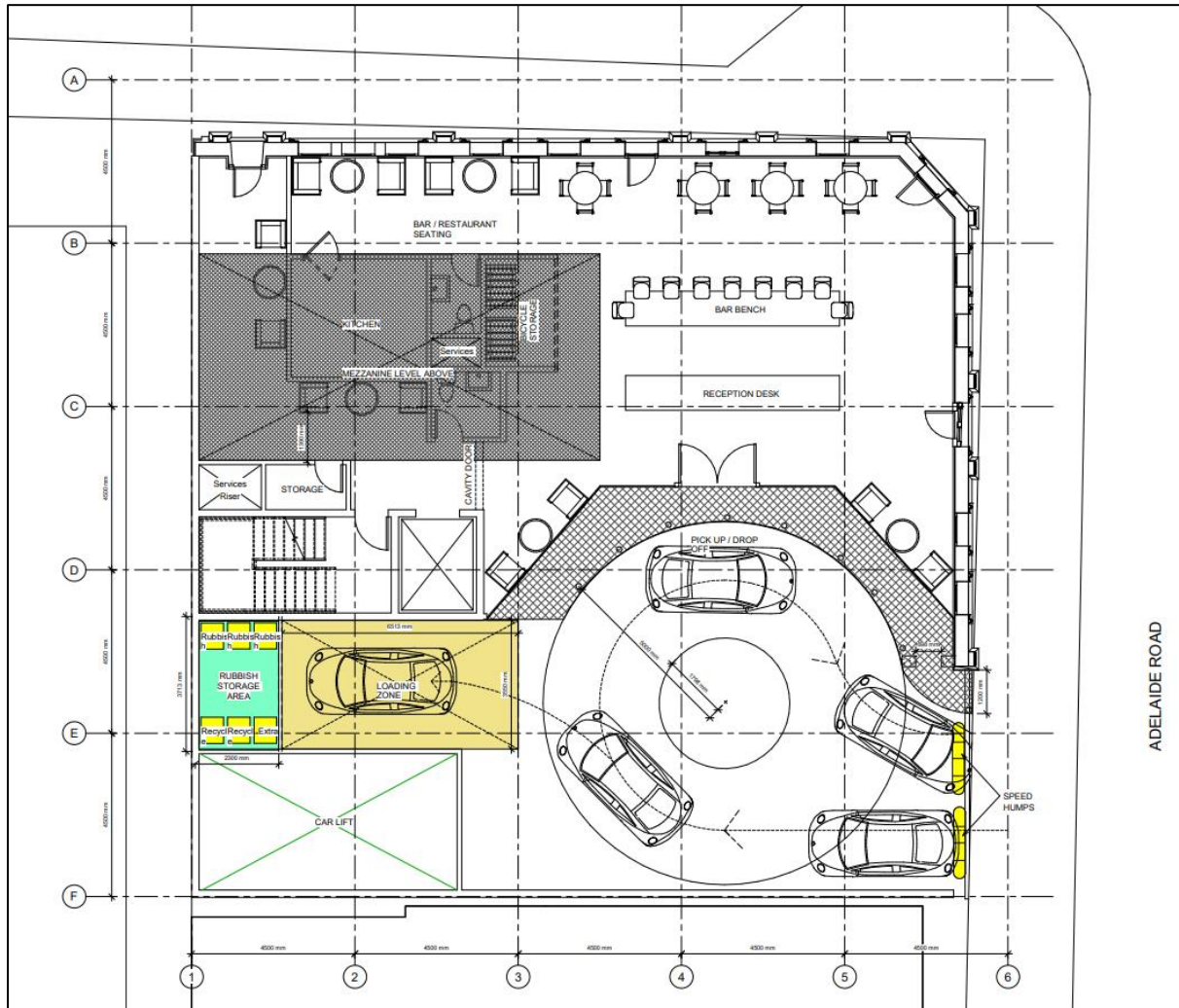


Image 01: Showing car positioning within the private driveway adjacent Adelaide Road.

Speed humps have been included at the vehicle entrance to assist controlling the speed of cars entering and exiting the site. Reducing speed at the site boundary will also help protect pedestrians along the footpath, and a generous opening has been provided for the vehicle entrance to increase pedestrian/street visibility at Ground Level.

Once inside the building, cars will follow the pathway of the roundabout to the hotel entrance. The loading bay for rubbish collection is also accessible via the roundabout and could be used to temporary parking when rubbish is not being collected.

4.0 Internal Roundabout Design

The façade material separating the internal roundabout and the reception desk is proposed to be glass (or an equivalent transparent material) so there is sufficient visibility of the vehicle entrance from the reception desk. Adequate lighting will be provided to improve visibility for drivers/hotel staff, as well as reduce the risk of any crime activity. The following images show previous hotel vehicle

entrance solutions that are similar to this design, and have been provided to visually demonstrate the intended atmosphere for this proposal:



Images 02 and 03: showing previous hotel vehicles entrances that are similar to this proposal.

The addition of the roundabout at Ground Floor significantly reduces the concern of vehicles backing out onto Adelaide Road as a route has been provided that enables drivers to exit the site facing towards the street.

The internal roundabout has a radius of 5 meters, which would enable a total of four cars to be comfortably situated within the site. The roundabout size has the capacity to retain the number of predicted cars at the highest peak flow exiting demand as noted in the TDG traffic report (which is four cars). As the highest peak flow entering the site is two vehicles, the internal roundabout can also hold this capacity. As noted in the TDG traffic report, the trip generation rates for the site are low and the likelihood of two opposing vehicles using the driveway at the same time is very low.

5.0 Valet Parking Service:

Hotel staff will be responsible for managing vehicles once inside the building to ensure there is no traffic disturbance along Adelaide Road. The internal roundabout can would enable a total of four cars to be comfortably situated within the site.

In the scenario where taxi drivers are dropping off visitors, the hotel staff will direct the drivers to temporarily park either in the loading bay or near the entrance while luggage is unloaded. Cars temporarily parking in the roundabout will be directed to stop close to the door so additional cars can move into the covered area without blocking the footpath.

In the scenario that newcomers arrive with their own vehicle, the hotel staff will direct them where to park while they unload luggage. Once all items are removed from the car, the hotel staff will direct the driver to park the vehicle in the car lift (or hotel staff could park the car on behalf of the driver).

The car lift will be protected either by a roller shutter or entrance bar, which will be under the control of the hotel staff. Once the vehicle is securely parked in the lift, the hotel staff will send it down to the basement where the robotic parking system will store the vehicle. The robotic car parking system will be fully managed by hotel staff to ensure distribution of vehicles does not cause disruption to the traffic flow on site. Controls for the parking system will be linked into the reception desk next to the internal roundabout.

6.0 Conclusion:

Based on this, we can conclude that the likelihood of the parking/valet service proposed causing traffic/pedestrian disturbance along Adelaide Road is very minimal. This decision is based on the following:

- An internal roundabout has been provided that can include four cars at any given point in time. This meets the maximum expected number of vehicles exiting the site at peak times.
- A full valet service will be provided by the hotel staff, who will manage the movement of cars on site to ensure there is no disturbance along Adelaide Road.
- Cars can manoeuvre on site so they are not backing out onto Adelaide Road.
- Speed humps have been provided along Adelaide Road to reduce the speed of cars entering and exiting the site, which will provide a safer pedestrian footpath in front of the site.