

Transport Assessment on Resource Consent Application

July 2022

Service Request No: SR471670

File Reference:

Site Address: 26 Donald Street, Karori (Ryman Retirement Village)

My name is Soon Teck Kong. I hold a Bachelor of Engineering with Honours and Master of Engineering degree (Civil) from the University of Melbourne. I have been involved in the planning, design, construction and management of roads and transport systems for 25 years. I am a Chartered Professional Engineer and a member of the Institution of Professional Engineers New Zealand (MIPENZ). I am also a member of the Transportation Group IPENZ.

I confirm that I have read the Code of Conduct for expert witnesses contained in section 7 of the 2014 Environment Court Practice Note and agree to abide by the principles set out therein.

1. Introduction:

1.1. The proposal is for a comprehensive care retirement village at 26 Donald Street and 37 Campbell Street, Karori.

1.2. The applicant for the proposal is Ryman Healthcare Ltd.

1.3. The development comprises:

- 60 care beds
- 68 assisted living suites
- 180 independent apartments

1.4. The site is zoned outer residential area in the WCC District Plan.

1.5. The site of the proposed retirement village was formerly the Victoria University of Wellington (VUW) Teachers College and covers a site area of 3.06 hectares. It is sited in close proximity to schools and recreational facilities and within convenient walking distance

of the Karori town centre and local facilities. Marsden Village shopping centre is also within convenient walking distance.

1.6. The site is located near bus routes serving the City Centre, Universities and Wellington Regional Hospital.

2. Further Information Required:

2.1. I am satisfied that the information provided to support the application is adequate.

3. Legislative Requirements (i.e. District Plan / Standards / Design Guides)

3.1. Wellington City Council District Plan

4. Assessment:

4.1. My assessment refers to the Transportation Assessment Report prepared for the applicant by Commute Transportation Consultants (CTC) dated 20 July 2020. This is included as Appendix E in the resource consent application.

4.2. There are several transport matters relating to the proposed development which are covered in the applicant's assessment on which I provide my comments below with the headings as included in the Commute assessment:

- Existing Environment
- Proposed Village
- Access
- Traffic Effects
- Parking
- Travel Plan
- Loading and Servicing
- Construction Traffic

5. Existing Environment:

5.1. CTC provides a detailed description of the existing environment. This is summarised as follows and covers the key aspects of the external environment:

- Transport Environment – the development location is within the local street network; Karori Road is designated in the District Plan as a Principal Road, Campbell Street is a Collector Road and Donald Street is a Local Road.
- District Plan – The zoning for the site is Outer Residential Area subject to an Education Precinct designation. The proposal is assessed as a Non-Complying activity thus, there are no restricted matters of discretion.
- Public Transport – There are bus services near to the site with bus stops within 300m on Karori Road.
- Existing Traffic Volumes – These show moderate daily flows on the two streets providing direct access to the site from Donald Street and Campbell Street. Flows on Karori Road as the major principal road connecting through to the city centre, are high and access is provided at a traffic signal-controlled intersection at Donald Street and Karori Road. It is noted that the traffic volumes collected after 2019 do not show any increase.
- Road Safety – The NZTA- Crash Analysis System (CAS) data for the 5year period 2015 to 2019 indicates a relatively low incidence of crashes in the local area with no crashes at the existing site access points. Updated CAS data between 2019 and 2022 also do not indicate any crash trend and increase in the local area.

6. Proposed Village:

6.1. The proposal is for the construction and operation of a comprehensive care retirement village consisting of:

- 60 care beds
- 68 assisted living suites
- 180 independent apartments
- 229 parking spaces

6.2. One vehicle access point is proposed on Donald Street with another vehicle access on Campbell Street.

7. Access:

7.1. The main site access is located on Donald Street and uses an existing access which served the former complex. A proposed new access is located on Campbell Street at the southern end of the site frontage and an existing access at the northern end will be disestablished.

Number of Access Points:

7.2. The District Plan (Section 5.6.1.4) allows for only one access to a site where access is available from both a collector road (Campbell Street) and a local road (Donald Street). The site currently has three accesses and CTC is proposing a total of two access points which is appropriate for this site due to the long property frontages on both Campbell Street and Donald Street.

7.3. I support CTC proposal to provide accesses on both street frontages due to the large site and to provide a choice of routes for drivers as well as to reduce the concentration of vehicle movements at a single access point. I consider that the proposed access points are well located furthest from Karori Road where traffic volumes past these access points will be lower.

Width of Access:

7.4. The District Plan (Section 5.6.1.4) specifies a maximum 6m crossing width for an outer residential area zoning. The proposed Campbell Street access of 6m would be complying but the Donald Street access of 9m width would require consent.

7.5. CTC has not given any explanation for the 9m vehicle crossing requirement. The plans provided in the CTC assessment need to include a central traffic island for pedestrian refuge with speed calming. I consider the central traffic island refuge with speed calming measure to be acceptable for pedestrian safety subject to the detail design being approved by Council prior to construction.

7.6. CTC will need to provide tracking paths to Council to agree on the final widths of these accesses. These plans will show details on the pedestrian visibility splays and the speed calming measures such as speed humps at the back of the footpath across the entire width to ensure drivers can see pedestrians on the footpath and vehicle speed is low.

Sight Distance:

7.7. CTC has assessed the available sightlines at the two proposed accesses and can comply with the LTSA Guide RTS-6. *Guidelines for Visibility at Driveways*. This is satisfactory except that the District Plan requires a vehicle access assessment against AS/NZS 2890.1:2004. The sightline visibility at the proposed accesses would comply with the District Plan based on the information provided by CTC.

Internal Road Layout:

7.8. An internal roading network is proposed with links to parking areas and buildings within the site. The main access road width is proposed as 5.5m which is adequate for low volume 2-way access. CTC has provided additional information showing that vehicle tracking through the site will satisfy AS/NZS 2890 as required by Council. However the Applicant must reassess the internal road layout to permit Emergency Service vehicle access and manoeuvring as required in the Designers' guide to firefighting operations – Emergency vehicle access F5-02 GD.

Pedestrian Provision:

7.9. Pedestrian footpaths are proposed throughout the development with marked pedestrian crossings at regular intervals. Pedestrian access routes appear to comprehensively service the residential parts of the complex.

7.10. The plans provided are intended to have a 10km/h speed limit within the site, and this will add to pedestrian safety which is a suitable speed limit for a shared pedestrian and vehicle area. Additional speed calming measures such as speed humps and platforms are required at the proposed internal pedestrian crossing points to ensure a low speed environment.

7.11. The internal footpath is connected to existing public footpaths and crossings which will allow safe and convenient pedestrian access to and from the site via both Campbell Street and Donald Street.

7.12. I consider the proposed internal roading layout and footpath provision are appropriate for this development with the inclusion of speed calming measures (speed humps and platforms) to ensure that vehicle speed is low for pedestrian safety.

8. Traffic Effects:

District Plan:

8.1. CTC note that the proposed Village is a discretionary restricted activity under the District Plan. I have been advised by the Council's planner that it is a Non-Complying activity. They have assessed the local traffic effects at the two vehicle access points and the two key intersections at Karori Road/Campbell Street and Karori Road/Donald Street. I consider that this assessment approach is logical.

Trip Generation:

8.2. CTC have presented a detailed assessment of expected vehicle trip generation for the proposed Village. They have referenced both the New South Wales Roads and Traffic Authority Guide to Traffic Generating Developments (RTA Guide) and the New Zealand NZTA Research Report TR 453: Trips and Parking related to Land Use (NZTA Report 453) methodology for comparison purposes and also provided survey data from two existing Ryman villages at Howick and Remuera which is more targeted than the other two reference sources.

8.3. CTC have modelled the expected trip generation for the proposal and this shows good correlation for daily trips against NZTA Report 453 and lower peak trips using the more targeted Ryman data. I consider the trip generation figures presented are a good representation of the likely outcome at the proposed site.

Alternative Development Options:

8.4. CTC also presented some useful comparisons for trip generations for both educational use (which was the previous use of the site) and a typical outer residential area use of the

site as per the District Plan zoning. These comparisons show that the proposed Village is expected to generate less peak hour trips than either of the other two development options.

8.5. For total daily trips, the proposal would generate less than an education option but more than a residential option, but the variations are relatively minor over a full day. The proposal would be expected to have a lesser traffic impact at the critical peak traffic times, than either of the other two options for education and residential.

Traffic distribution:

8.6. CTC have provided estimated traffic distribution figures relating to the proposed two access points which will service the site. They suggest that 85% of traffic will access the site via Donald Street and 15% via Campbell Street. Also that 90% of trips will approach and leave via the east (city end). I consider these trips division are reasonable and overall estimated trip numbers are quite low.

Intersection modelling:

8.7. CTC has modelled the effect of the proposed Village at the two local intersections at Campbell Street/Karori Road and Donald Street/Karori Road using collected traffic data. The additional traffic generated by the development is assessed through the use of an accepted SIDRA traffic modelling and to have minimal effect on the performance of both intersections with no expected change to the current levels of service. I consider these modelled traffic effects to be acceptable as shown by CTC.

9.Parking:

District Plan parking requirement:

9.1. The District Plan Standard 5.6.1.3 requires a minimum of 1 space per household unit plus 1 visitor space per 4 households where there are 7 or more units for outer residential area zoning. It does not have a separate requirement to apply to a retirement village which would be expected to have a different parking demand profile compared to a residential development. It is also noted that since the application was lodged, the Council removed its minimum car parking requirements from the District Plan.

RTA parking demand:

9.2. CTC has provided an assessment of parking demand using the RTA Guide and estimated 194 parking spaces required for the residents, visitors and staff combined. This total is lower than the proposed 229 spaces in the application.

9.3. CTC has not assessed the parking demand against TR 453. I have checked the proposal against TR 453 parking demand rates and this produces a total parking demand of 232 spaces which includes both visitors and staff. This figure is higher than that assessed using the RTA Guide and is similar to the parking spaces proposed by Ryman.

9.4. I have also referenced advice on parking demands published by the NZ Trips and Parking Database Bureau (NZTPDB) which is an organisation researching and collating trips and parking information for use in assessing demand in New Zealand. NZTPDB suggests adopting the RTA Guide for elderly persons housing projects.

Parking provision:

9.5. CTC provides information on the parking provision rates at 5 approved Ryman villages. This consists of 1 space per apartment, 1 space per 5 assisted living suites/care beds and 1 space per 2 staff members.

9.6. I am satisfied that the total parking provision of 229 spaces for the Karori site is acceptable to meet the combined parking demands from residents, visitors and staff without encroachment onto adjacent streets. This is subject to the Applicant actively managing the on-site parking on a shared use basis for the residents, staff and visitors to maximise the use and occupancy. I suggest a condition to this effect to require the Applicant as part of the staff travel plan to actively manage on-site parking to cater for residents, staff and visitors. I also suggest a regular monitoring condition (every 6 months for 2 years) on the on-site parking utilisation for residents, staff and visitors to validate the parking provision rates stated by CTC. A baseline parking survey of the adjacent streets will be necessary for future comparison.

Parking dimensions:

9.7. CTC has provided confirmation that the parking space dimensions proposed within the development will comply with District Plan standards in accordance with AS/NZS 2890.1 - 2004 Parking Facilities, Part 1: Off-Street Car Parking. I suggest a condition to this effect when the detailed construction plans are submitted to Council for approval.

Ramps:

9.8. CTC has confirmed that all vehicle ramps within the development will comply with District Plan standards in accordance with AS/NZS 2890 and will satisfy maximum gradient and transition requirements. I suggest a condition to this effect when the detailed construction plans with markings to define direction of vehicle travel and pedestrian paths are submitted to Council for approval.

Mobility/accessibility standards:

9.9. CTC refers to NZS 4121 as requiring a minimum of 7 mobility parking spaces, whereas a total of 12 spaces is proposed. They confirm these spaces will be designed to NZS 4121. I suggest a condition to this effect when the detailed construction plans for these mobility parking spaces are submitted to Council for approval.

10. Staff Travel Plan:

10.1. In Council's S.92 request, the Applicant was asked to provide information on and confirm whether they have a staff travel plan at other Ryman villages and whether they are considering a plan for the Karori site, which is consistent with the Council's sustainable transport policies and be applicable to a site such as this, with substantial number of staff employed on shift and changeover shift and routinely travelling to and from the site.

10.2. The response to this request is provided in page 25 of the CTC report and is that Ryman do not prepare a formal staff travel plan and do not consider one is necessary for the Karori development. They state that staff shifts are arranged to avoid commuter peaks and note that the site is well positioned for public transport, walking and cycling. I suggest a consent condition that the Applicant should provide details of the staff travel plan to include the staff shifts, changeover period and staff travel choice to validate the above statement. They note also that staff parking is provided at a rate of 1 space per 2 staff. The Applicant

should also confirm in the staff travel plan on the total staff number on site at any given time during a weekday and a weekend to substantiate CTC statement that the on-site staff parking provision will be adequate at a rate of 1 space per 2 staff.

10.3. I am of the view that the site will have sufficient parking on site to accommodate both staff and residents parking requirements. As the site is well located to provide travel options for those staff who choose to use public transport or walk or cycle.

10.4. I suggest that none the less there is merit in requesting Ryman to develop a staff travel plan to promote and encourage car sharing or alternative work travel modes as a contribution to reducing emissions and support Council's climate change policies. The net result is likely to be modest but it is appropriate that such a major development participates in promoting and supporting the Council's wider environmental policies.

11. Loading and servicing

11.1. The Proposed Village will have one main loading bay within the site designed to accommodate a 9.2m rigid truck as specified by the waste management contractor. The CTC report provides plans showing the manoeuvring envelopes for a truck to negotiate the internal roadways and access all the proposed service areas.

11.2. Further information on vehicle clearances for parking is acceptable for private vehicle but not for service vehicles.

11.3. Based on the plans and information provided I consider that the proposed loading and servicing arrangements are appropriate to service the needs of the development. I suggest a condition that the detailed construction plans are submitted to Council for approval.

11.4. The Applicant has to confirm that Emergency Service vehicles access and manoeuvring are catered for in the detailed construction plans.

12. Construction traffic

12.1. The CTC report notes that the construction methodology has not been finalised and will depend on a range of factors including any resource consent requirements. They propose that a Construction Traffic Management Plan (CTMP) is developed for the works and suggest a number of draft conditions.

12.2. I agree with this proposal which will be included in my suggested conditions.

12.3. It is expected the proposed CTMP will be developed to self-contain construction activity and related impacts including construction equipment and material storage, construction worker parking and construction vehicles manoeuvring within the site to minimise the use of adjacent roads.

13. Conclusion

13.1. Subject to my above assessment and suggested consent conditions, I am able to support the proposal in terms of its transport related effects.

14. Submitter Queries

The following sections document the traffic concerns raised by submitters and my responses to their concerns. I have collated the submitters' concerns into common themes and respond according to the headings below:

14.1. Construction traffic, parking and safety

Many submitters have raised concerns on the construction activity at this site affecting public safety in particular students attending nearby schools, causing traffic congestion during school drop-off and pick-up times, heavy vehicle movements and routes to and from the site, construction workers parking on adjacent streets and management of the construction site to address complaints to highlight a few.

I agree with the submitters that these construction activities will affect the neighbourhood due to the heavy vehicle routes and movements, time of these movements and on-street parking by construction workers.

I have suggested a condition with a list of requirements in the development of the Construction Traffic Management Plan (CTMP) to address the submitters' concerns. I have suggested that all construction traffic movements must not occur during school drop off (8.15am to 9.15am) and pick up (2.30pm to 3.30pm) times during school terms to minimise public safety risks, ensure pedestrian safety and reduce congestion near schools. Parking needs for construction workers are to be managed to minimise the use of public road.

Heavy vehicle movements are to be managed to minimise safety risks to adjacent schools, childcare, swimming pool and playground. Other requirements include pedestrian safety measures and visibility splays at the construction site access and complaint register to be actioned.

14.2. Carparking provision

Many submitters have raised concerns regarding the on-site parking provision and potential for parking demand to encroach onto adjacent streets.

I have assessed the parking provision rates from the RTA, TR 453 and NZTPDB documents and have confidence the proposed on-site parking provision will be adequate. However I accept that these parking provision rates are based on site specific surveys. There will be some variability in the ratio of vehicle ownership per resident, use of private vehicle by staff and visitors, surrounding facilities and amenities and availability of public transport services. I have suggested a condition that the consent holder must actively manage how the on-site parking spaces are assigned to meet the parking demands for residents, staff and visitors. The active on-site parking management will also allow the consent holder to gather information on their staff travel behaviour and mode choice as well as vehicle ownership for residents. The collected data will enable the consent holder to validate the CTC parking provision rates for this specific site.

14.3. Safety in the local network

Submitters raised concerns regarding pedestrian safety, parked vehicles obstructing access, inconsiderate parking and increase congestion.

The proposed accesses on Donald Street and Campbell Street will be designed with complying sightlines for drivers and more importantly, both accesses will incorporate unobstructed pedestrian visibility splays with no physical and no landscape features higher than 1.0m (above the ground level) to ensure pedestrians on the footpath are not obscured from drivers exiting the site.

Parking obstructing property access is common and is normally resolved with roadmarkings such broken yellow lines or L-bar to prevent vehicles encroaching over driveways. If the function of the street is affected by inconsiderate parking, additional No Stopping Lines are implemented to maintain safe access through a Council resolution process.

The additional trips generated from this site are low and will not contribute to the local congestion.

14.4. Traffic modelling assumption

The assumption of trips division at the intersections of Donald Street/Karori Road and Campbell Street/Karori Road is a concern with 90% of trips coming from and going towards the east and 10% towards local destinations. Another concern raised is on the 85% trips using Donald Street and 15% using Campbell Street. The intersections modelling can be repeated to test the sensitivity of the trips division from 90/10 to 70/30 on both intersection performance.

In my view, the level of service at these intersections on Karori Road will not change noticeably based on the modelled level of service with 90/10 trip division and the 85/15 split for Donald Street and Campbell Street due to the low generated trips.

14.5. Outdated traffic data

The use of outdated traffic data for modelling is raised as a concern. I have checked recent 2022 traffic data along Karori Road between Lancaster Street and Hatton Street. I am unable to identify an increase in traffic between 2019 and 2022. I am of the view that 2019 traffic data is still relevant. The travel behaviour has also changed post pandemic on work trips and hybrid working arrangement.

14.6. Staff Travel Plan

There is concern that staff employed will choose to travel in a mode choice different to the CTC adopted on-site parking provision rate.

I agree with the submissions that the consent holder should actively manage the on-site parking for staff and monitor their staff travel behaviour and mode choices so that staff parking will be self-contained. I have suggested a condition that a staff travel plan is developed with travel behaviour and mode choices to better manage on-site staff parking.

14.7. Emergency Service Vehicle access

The Fire and Emergency New Zealand (FENZ) has raised concerns regarding the proposed internal road layout and design dimensions not meeting the requirements specified in the Designers' guide to firefighting operations – Emergency vehicle access F5-02 GD.

I have suggested a condition that the requirements specified by FENZ are met to allow emergency service vehicles access to the site.

15. Suggested Conditions

15.1. A Construction Traffic Management Plan (CTMP) will be required to ensure the major development can proceed while ensuring the safeguards are provided to protect the public from any adverse construction effects. The CTMP will have to be prepared and submitted to the Council for approval, prior to any work starting on the site. The plan must include methods to avoid, remedy or mitigate, adverse construction traffic effects during the development of the site.

15.2. The CTMP must include but not be limited to the following matters:

- Construction dates and hours of operation including any specific non-working hours to minimise traffic congestion
- Construction traffic movements to and from the site must not occur during school drop off (8.15am to 9.15am) and pick up (2.30pm to 3.30pm) times during school terms to minimise public safety risks, ensure pedestrian safety and reduce local congestion
- Truck route diagrams both internal to the Site and external to the road network
- All heavy vehicle movements must be managed to minimise the safety impact on local facilities and amenities
- Temporary traffic management signage/details for pedestrians and drivers to safely manage the interaction of these road users with heavy construction traffic
- Details of Site access/egress over the entire construction period are to be provided to ensure that pedestrian visibility splays are included with complying sight distances as per the Land Transport Safety Authority "Guidelines for visibility at driveways" RTS6 document

- An emergency (24/7) contact phone number for the site
- A public complaints register is to be kept on-site. The register must indicate how the complaint was addressed.
- Measures to deal with any collateral damage to vehicles, property and public assets
- Where practicable, construction worker parking demands are to be provided off-street to minimise the use of public road.

15.3. The consent holder must develop a staff travel plan to promote and encourage car sharing or alternative work travel modes as a contribution to reducing emissions and support Council's climate change policies. The net result is likely to be modest but it is appropriate that such a major development participates in promoting and supporting the Council's wider environmental policies. This should be submitted to the Council for approval prior to the proposed Village commencing operation.

15.4. The consent holder must provide details on the staff travel plan to include staff shifts, changeover period, staff number on-site at any given time during the weekday and weekend and also staff travel behaviour and mode choices to confirm that staff shifts are arranged to avoid commuter peaks and that on-site staff parking provision is self-sufficient as expected by CTC. This staff travel plan is to be completed by the consent holder after 6 months of operation and repeated 12 months later to ensure that the staff travel behaviour, mode choices, staff shift avoiding commuter peaks and on-site staff parking provision (1 space for 2 staff) continue to be consistent with CTC for staff parking to be self-contained on-site.

15.5. All on-site parking spaces must be clearly marked and signed to be available for shared use by the residents, staff and visitors. All mobility parking spaces are to be clearly marked and signed exclusively for mobility users. The staff travel plan will include the shared use of all on-site parking is to ensure that staff who arrive by private vehicles can park on-site while the consent holder gathers information on the staff travel behaviour and mode choice to develop the staff travel plan. The consent holder should actively manage how the on-site parking spaces are assigned to residents and staff as part of the staff travel plan to contain

these parking demands within the site. The parking demand for residents and staff will be self-contained as expected in the CTC subject to active parking management by the consent holder to be incorporated in the staff travel plan.

15.6. The consent holder must conduct a regular monitoring (every 6 months for 2 years) of the parking occupancy within the site and adjacent streets to ascertain the level of on-site parking demand and parking usage around the site. A baseline parking survey of the adjacent streets will be necessary for future comparison.

15.7. All covered parking areas, ramps and loading area must comply with the District Plan AS/NZS 2890.1:2004 including details on vehicle height clearances to permit Emergency Service vehicle access and manoeuvring as required in the Designers' guide to firefighting operations – Emergency vehicle access F5-02 GD.

15.8. A vehicle access approval will be required for the construction of the proposed accesses and kerb crossings under Part 5. Section 18 of the WCC Consolidated Bylaw 2008. All redundant vehicle crossings must be reinstated by the Applicant with new footpath and kerb and channel at the Applicant's costs prior to the proposed Village commencing operation.

15.9. Details of the internal road layout must include speed humps and pedestrian crossing platforms to ensure a slow speed environment of 10km/h as proposed. The internal road layout must provide Emergency Service vehicle access and manoeuvring as required in the Designers' guide to firefighting operations – Emergency vehicle access F5-02 GD.

15.10. All vehicle accesses must be designed with tracking paths to finalise the widths, pedestrian visibility splays and traffic calming measures (speed humps at the back of footpath within the site) to ensure slow vehicle speed over the public footpath. There must be no visual obstruction higher than 1.0m permitted within the pedestrian visibility splays.

15.11. All internal vehicular and pedestrian paths must be clearly marked and signed to minimise conflict.

16 . Suggested Advice Note:

16.1. The consent holder must gain a corridor access approval from the Council before trucks and other heavy vehicles will be permitted on site.

Soon Kong

Transport Engineering and Operations Manager

Wellington City Council