



TRANSPORT ASSESSMENT

234 RANGIURU ROAD

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1.0 INTRODUCTION

Envelope Engineering has been commissioned by Classic Developments to complete an assessment of transport effects for a proposed 43 lot residential development at 234 Rangiorua Road, Otaki.

The Site is classified under the Kapiti Coast 2021 Operative District Plan (“District Plan”) as General Residential Zone at Otaki.

This report considers the transport features of the proposed development, and provides an assessment of the associated traffic generated and effects of this traffic on the existing transport environment including considering safety and capacity at key locations; the form and function of access to the site; provision of active mode infrastructure to support walking and cycling trips; the proposed levels of parking; and review of relevant District Plan provisions.

2.0 SUMMARY

This assessment finds that proposal is supported from a transportation planning perspective on the basis of:

- The additional traffic movements can be easily accommodated by the existing road network.
- The proposed access intersection on Rangiorua Road will be able to accommodate the forecast vehicle movements without any significant delays.
- The straight and level alignment of Rangiorua Road provides for good sightlines which together with the low traffic densities in this area means that turning movements will be able to be undertaken safely.
- The standard of internal roading proposed will provide for safe and efficient vehicular and pedestrian movements.
- While the development is on a bus route, it would benefit from an additional stop located in this area to improve the convenience of this mode of transport.
- Construction traffic activity will be primarily associated with the importation of fill material to the site – this can be readily accommodated by the local road network and specific effects, and safety will be managed through a standard condition of consent requiring the preparation of an agreement to a Construction Traffic Management Plan; and
- The proposal will comply with most of the relevant requirements of the district plan. The only areas of non-compliance relate to overall levels of traffic generation and aspects of the internal road design and in both cases this assessment demonstrates that there would not be any associated adverse effects which are more than minor.

3.0 SITE LOCATION

The site location is shown in Figure 1: Site location. The site has a frontage with the northern side of Rangiorua Road and is located 450m from the commercial area of the Ōtaki township.





FIGURE 1: SITE LOCATION

4.0 EXISTING TRANSPORT ENVIRONMENT

4.1 ROAD NETWORK

Rangioru Road connects the Ōtaki township (to the north-east) with Riverbank Road and the southern part of Ōtaki Beach (to the south-west).

Adjacent to the development site, the road has a width between kerbs of 9 – 9.5m which accommodates two traffic lanes and unrestricted kerbside parking. The road reserve is 16 – 16.5m wide and includes footpaths to both sides and a grassed berm on the northern side.

The alignment of the road is straight with a negligible gradient, providing for good sightlines in both directions.

A 50 km/hr speed limit is applicable, and occasional streetlights are provided (on power poles on the northern side of the road).

The intersection of Rangioru Road with Tasman Road / Te Rauparaha Street / Main Street is located 390m from the application site and within a 30 km/hr speed limit area. This is priority-controlled, with the Tasman Road and Main Street approaches having priority and movements from the other approaches required to give-way. No ancillary lanes are provided for movements turning right into the side-roads. A raised pedestrian crossing is located across the Main Street approach to the intersection.

The Rangioru Road / Riverbank Road intersection is located 650m to the west of the application site. This is priority-controlled, with movements from Riverbank Road required to give-way. No ancillary lane is provided for movements turning right from Rangioru Road (west) into Riverbank Road.

4.2 TRAFFIC VOLUMES

The traffic volume on this section of Rangioru Road is around 957 vehicles per day¹.

These volumes are low for a road of this type and congestion is not an issue in this area. Comparison with a similar count taken in 2023 indicates that virtually no growth has occurred.

¹ Estimate taken from Mobileroad.org 26 November 2025.



4.3 CRASH HISTORY

The crash history for the section of Rangioru Road adjacent to the site and extending to the Riverbank Road and Main Street intersections for the period since January 2020 has been obtained from the database maintained by New Zealand Transport Agency (NZTA) and is summarised by Figure 2 Crash plot for adjacent road network (January 2020 on).

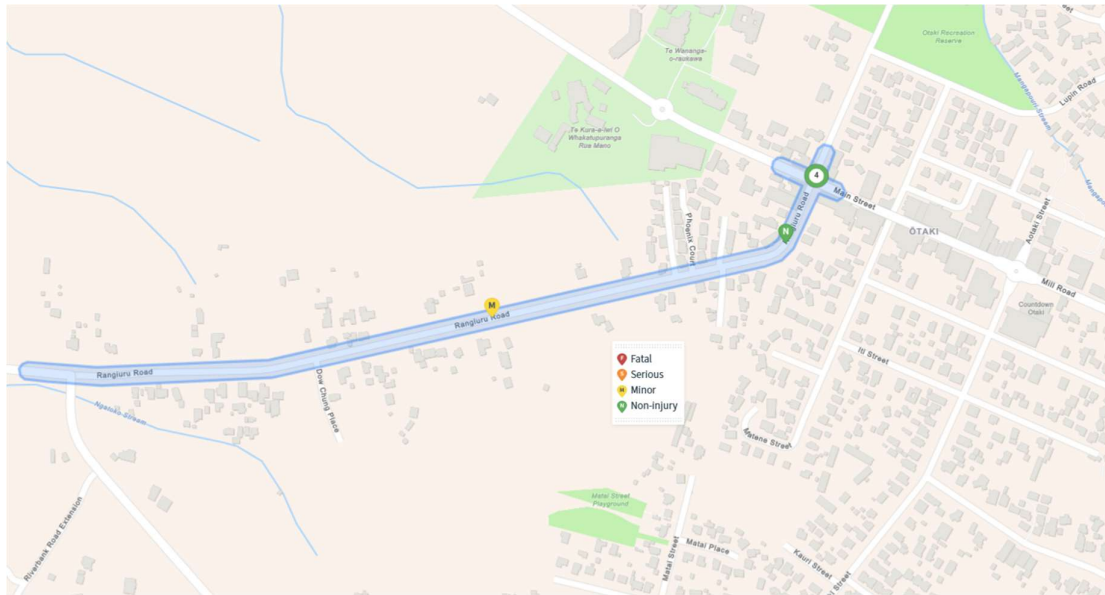


FIGURE 2 CRASH PLOT FOR ADJACENT ROAD NETWORK (JANUARY 2020 ON)

A total of six crashes were recorded over this period:

One occurred on the site frontage (October 2023) and involved a westbound vehicle which lost control while travelling at excessive speed through road works (one minor injury); and

- Five occurred at, or close to, the Main Street / Rangioru Road / Te Rauparaha Street intersection and were minor incidents involved parked or manoeuvring vehicles (no injuries).

This record of recent crashes does not indicate any systemic safety problems with the road network in this area. By law, only those crashes involving personal injuries are required to be reported. Accordingly, it is possible that a number of other non-injury crashes may have occurred which have not been included in these records.

Refer to Appendix 1: Crash history report for a report describing each crash.

4.4 WALKING, CYCLING AND PUBLIC TRANSPORT

Rangioru Road provides continuous footpaths to both sides, connecting to the commercial area of Ōtaki township.

Cyclists in this area share the road space with general traffic – there is no shared pathway or dedicated cycle lane(s) on Rangioru Road.

The 290 bus service operates along Rangioru Road, running a clockwise loop to Ōtaki Beach with a return along Tasman Road. The service connects to Ōtaki and the Waikanae railway station, with some services extending to Coastlands in Paraparaumu town centre. The closest stops are located on Rangioru Road and Tasman Road close to their intersection (370 – 450m from the application site), or on Rangioru Road to the west of the Riverbank Road intersection (650m).

4.5 PLANNED DEVELOPMENTS / CHANGES TO ROAD NETWORK

Two access intersections were recently built as part of a residential subdivision at 237 Rangioru Road (opposite the site) comprising 84 dwellings. The analysis and Integrated Transportation Assessment



(ITA)² in support of this application identified that the development would generate around 78 vehicle movements in each of the weekday morning and evening peak periods. These additional movements would split equally in direction along Rangioru Road, with the scale of increases being insufficient to cause any tangible deterioration in the level of service experienced at the intersections of Rangioru Road with Riverbank Road or Tasman Road / Te Rauparaha Street / Main Street.

KCDC has also advised that applications for consent for the following developments have been received but not yet granted:

- 67-lot development at 221 Rangioru Road.
- 47-lot development at 255 Rangioru Road.

KCDC owns the site immediately to the east at 254 Rangioru Road, and KCDC have plans to develop the site.

There are no significant planned works to the road network in this area of relevance to this assessment. At a wider level, the Peka Peka to Ōtaki (PP2Ō) expressway opened in December 2022 and has resulted in a significant reduction in delays at the intersection of (the former) State Highway 1 (SH1) and Riverbank Road.

5.0 PROPOSED DEVELOPMENT

5.1 CONCEPT

The proposal is for the subdivision of an area of land on the northern side of Rangioru Road to provide for the construction 43 residential dwellings.

Figure 3: Proposed site layout shows a draft layout of the proposed development. Further details are provided by drawings which form part of the application material.

² Proposed Residential Development, 237 Rangioru Road, Ōtaki: Integrated Transportation Assessment. Tim Kelly Transportation Planning Ltd, October 2019.



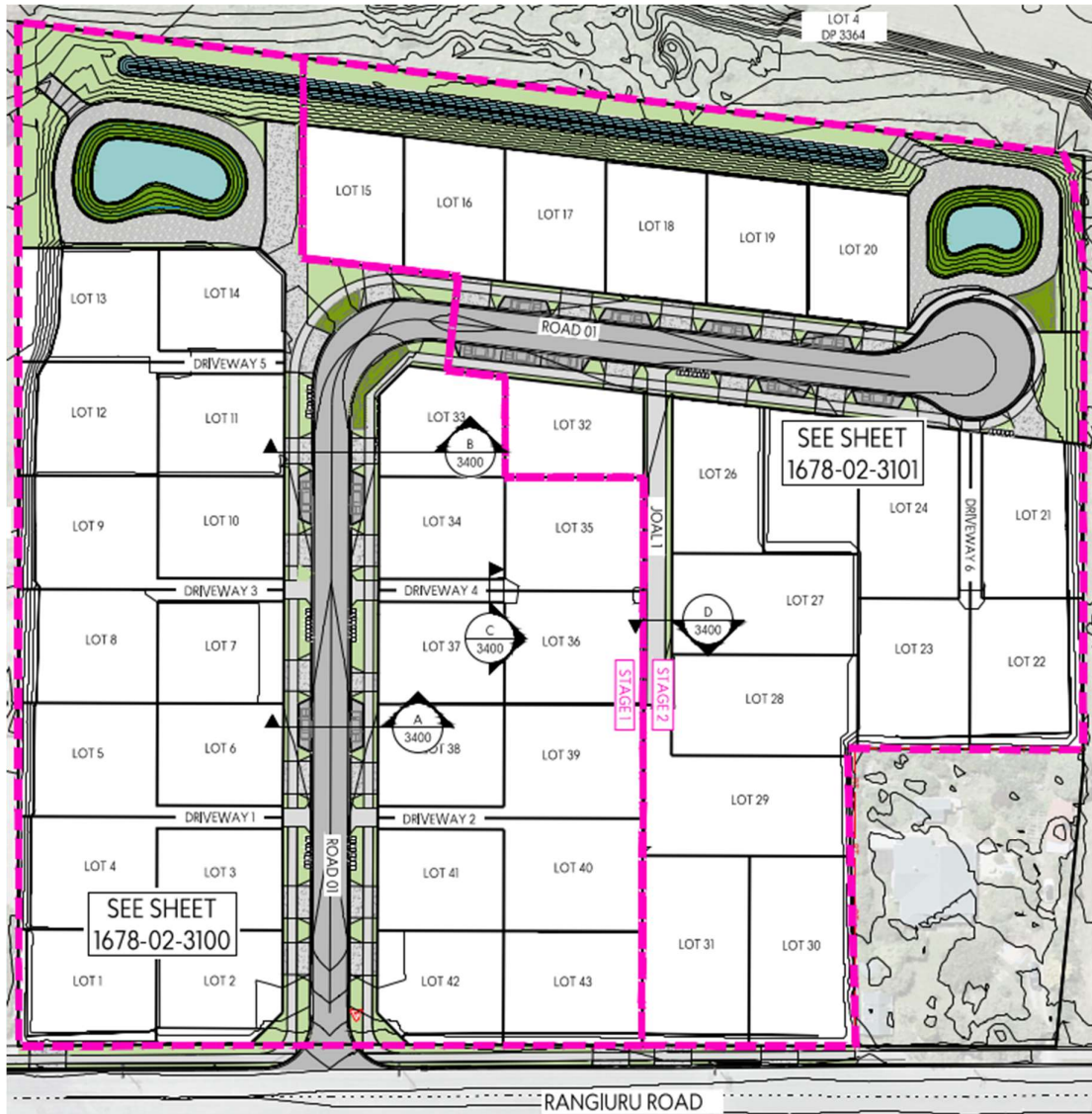


FIGURE 3: PROPOSED SITE LAYOUT

5.2 RESIDENTIAL DEVELOPMENT

The subdivision will enable the construction of 43 residential sections and dwellings.

5.2.1 ACCESS & INTERNAL ROADS

Four of the lots (1, 43, 31, 30) will have direct access to Rangiuru Road. Space within these lots will ensure that vehicles can both enter and leave in a forward direction.

Most of the remaining lots will be accessed by means of an internal cul-de-sac which will extend for a distance of 220m from an intersection with Rangiuru Road. Mid-way along its length, the road will turn through just over 90° with a centreline turn radius of 13.3m. A standard circular turning head (radius 9.5m) will be provided at the end of the road. The road slopes up at 3.9% for around 15m and slopes gently down (-0.5%) thereafter.

This internal road will have a legal width of 15m, providing for a 6m carriageway, two 1.5m footpaths and berms or kerbside parking.

There is a Jointly Owned Access Lot (JOAL) from the internal road that services three lots and will provide a 4.5m legal width.



Six shared driveways will provide access to rear lots from the primary internal road, each providing access to two rear lots. These will have a total width of 3.6m. Each of the rear lots will provide sufficient room to enable vehicles to turn around, such that there would be no necessity for vehicles to reverse along the shared driveways.

5.2.2 RANGIURU ROAD INTERSECTIONS

The intersection of the primary internal road with Rangiuru Road will be directly opposite Hapeta Street (one of the accesses constructed for the development at 237 Rangiuru Road), forming a four-way priority intersection with the side road movements being subject to 'give-way' control.

The available sight distances along Rangiuru Road are excellent. The volumes of turning and through traffic do not warrant the provision of ancillary turning lanes.

5.2.3 PARKING

It is anticipated that all the dwellings will provide for double garaging. Kerbside parking will also be available along the internal road (13 spaces) frontages.

5.2.4 SERVICING

The cul-de-sac at the end of the internal road will be accessible by a standard Council refuse or recycling vehicle. The turning area (9.5m radius) at the end of the road will enable this vehicle (an 8m rigid truck) to turn around.

The shared driveways and JOAL will not be accessed by Council refuse / recycling vehicles. Instead, wheelie bins will be moved to the nearby road frontage (where space will be provided for this purpose).

Accessibility will be ensured for fire service vehicles. This is addressed in Section 6.5.

5.2.5 PUBLIC TRANSPORTATION

The size of this development area would be unlikely to warrant the establishment of a bus stop on this part of Rangiuru Road, although this may be justified with the cumulative effects of all of the residential developments in this area. The detailed placement of such a stop would be subject to negotiation between Greater Wellington (as public transport authority) and KCDC (as roading authority) but if located to the west of the development this would also be potentially convenient for residences between the development and Dow Chung Place.

5.3 PEDESTRIAN & CYCLE CONNECTIVITY

As described above, roadside footpaths will be provided within the development area and will connect with the existing footpath along the northern side of Rangiuru Road.

The development area on the southern side of Rangiuru Road adjoins an existing recreation reserve, from where an existing footpath connects to Matai Street. A through walking (and cycling) route will therefore be available between Rangiuru Road and Matai Street.

Consistent with the standard of Rangiuru Road to which it connects, the internal road is not proposed to provide specific cycle facilities in the form of either shared paths or on-road cycle lanes.

Pedestrian/cycle (and other travel modes) connectivity is possible to the adjacent land to the east of the site.

6.0 ASSESSMENT OF EFFECTS

6.1 POTENTIAL EFFECTS

Potential effects arising from the operation of this development relate to:

- The safety of vehicle movements to and from the site;
- The safe and efficient operation of the internal roads;
- The safety of pedestrian and cycle movements;



- Servicing of dwellings within the subdivision;
- Adequacy of parking provision and impact upon kerbside parking availability;
- Impacts of additional traffic activity in the Rangiora Road corridor; and
- Wider network effects.

6.2 SAFETY OF VEHICLE MOVEMENTS TO AND FROM THE SITE

The alignment of this section of Rangiora Road provides for good sightlines in both directions. Accordingly, all turning movements will be able to be made safely.

The levels of turning and through traffic in this area, including those associated with the development on the opposite side of Rangiora Road, mean that the provision of ancillary right-turn lanes for entering traffic is not warranted. Entering vehicles will be subject to negligible levels of delay and the good sightlines will provide following drivers with plenty of warning of any slowing or stationary vehicles intending to turn into the access road or driveways.

All lots having direct access from the Rangiora Road frontage will have sufficient space to enable vehicles to turn around, avoiding any requirement for vehicles to reverse to or from the road frontage.

All lots with access from the internal road will need to reverse onto the road. The KCDP provides for this where the road is a “Neighbourhood Access Route”, which is defined as low traffic volume, low speed and providing access to local residential neighbourhoods, and needs to have more than one intersection with a local or collector road. With the development in place the internal road has all these features apart from not having more than one intersection (it has one). If the lot directly to the east is developed (as planned, refer Section 4.5) the internal road will extend and intersect with Rangiora Road, and the internal road will meet the KCDP definition of a “Neighbourhood Access Route”. On this future basis, and due to the low number of proposed dwellings and in turn vehicle movements, and low speed of the road design, there is low risk of reverse manoeuvres from vehicle crossings causing safety concerns.

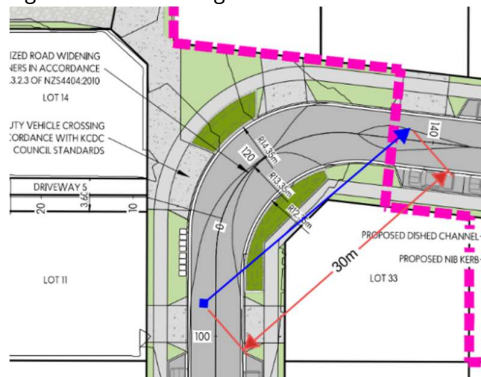
6.3 SAFE AND EFFICIENT OPERATION OF THE INTERNAL ROADS

The proposed cross-section of the internal road will easily provide for two-way vehicle movement. Driveways for adjacent lots will be at least 30m from the Rangiora Road intersection, providing good visibility of approaching vehicle movements.

With the internal road being short and including a sharp bend mid-way along its length, the development of speed is unlikely to be an issue, and specific traffic management measures are not required to enforce the intended low speed environment.

Sufficient sight distance along the internal road can be maintained along its length including the bend mid-way along the internal road, as shown in ERROR! REFERENCE SOURCE NOT FOUND.. Landscaping between Lot 33 and the road will be low height to ensure maintenance of the sight distance.

Figure 4: Sufficient sight distance available around bend



The turning head at the end of the road will facilitate vehicle turning at the end of the cul-de-sac (for up to an 8m rigid truck in a single manoeuvre).



6.4 SAFETY OF PEDESTRIAN AND CYCLE MOVEMENTS

Internally, the development will provide for footpaths to both sides of the internal road and these will connect with the established footpath along the Rangiora Road frontage.

Pedestrian and vehicles will share the carriageway within the JOAL and the shared driveways. In the context of very low levels of vehicular and pedestrian activity (only two dwellings would be serviced by each of the driveways with five dwellings for the JOAL) and the short distances involved, this is considered to be a safe and appropriate access solution.

The development will result in an increased number of vehicle crossings across the footpath on Rangiora Road. This will have a very small negative impact upon the convenience of pedestrian activity on this footpath, particularly as levels of existing pedestrian activity in this area are low. The provision of pedestrian visibility splays which meet or exceed the requirements of AS/NZS2890.1:2004³, will ensure that drivers and pedestrians will have adequate inter-visibility of one another.

Similarly, within the development, compliant pedestrian visibility splays will ensure that both pedestrians and vehicle drivers have adequate warning of each other's presence.

As noted above, the avoidance of any requirement for vehicles to reverse to or from the crossings will further ensure pedestrian safety in this area.

Although no specific facilities are proposed for cycles within the development, cycle movements will safely share the road space with general vehicle movements, within a low volume and speed environment. This is consistent with provision for cycle movements along the adjoining section of Rangiora Road.

6.5 SERVICING

Council kerbside refuse and recycling vehicles will be able to access the proposed internal road. The provision of a turning head at the end of the primary internal road will enable the associated trucks to turn around without any necessity to reverse to or from the road frontage.

Wheelie bins associated with the back sections serviced by the laneways will be processed on the primary internal road frontage.

Requirements for access by fire fighting vehicles is contained within a document published by Fire and Emergency NZ (FENZ)⁴. A minimum carriageway width of 4m is required for emergency vehicle access – as the JOAL and the shared driveways are less than this, access to a fire on a rear-section would be by running hoses from a pressurised water supply on the primary internal road. Distances between these water supply points and rear sections would not exceed the maximum hose run of 135m. The FENZ document requires that turning areas should have a radius of no less than 11.3m. The turning head at the end of the primary internal road will be 9.5m, consistent with general requirements for residential roads. The availability of driveways off the cul-de-sac to access individual sections means that space will be available for a fire service truck to be turned around, if this is necessary.

6.6 PARKING PROVISION

There is currently a negligible demand for kerbside parking along Rangiora Road in this area. For residents, it is expected that each dwelling will provide for the parking of two vehicles (although there is no longer any District Plan requirement in this regard). For occasional visitors, 13 kerbside spaces will be available in bays on the primary internal road, with a number of additional spaces also being available on the Rangiora Road frontage.

Overall, this level of parking provision will adequately meet demands generated by the development without giving rise to the regular use of kerbside parking beyond the site area.

³ Parking Facilities. Part 1: Off-Street Car Parking. Standard AS/NZS 2890.1: 2004. *Standards New Zealand, 2004.*

⁴ Designers' Guide to Firefighting Operations: Emergency Vehicle Access F5-02 GD, Reviewed December 2023.



6.7 VEHICULAR ACTIVITY – RANGIURU ROAD

Vehicular activity was previously assessed as part of the (now constructed) application⁵ for subdivision on the south side of Rangiuru Road. This assessment considered potential effects during the busiest weekday peak periods for the year 2025. The conclusion of the assessment was that all traffic movements (to/from Rangiuru Road and at the Riverbank Road and the Tasman Road / Te Rauparaha Street / Main Street intersections) would operate at a high level of service and without general adverse effects upon the efficiency of the road network. Furthermore, this assessment concluded that:

'With delays significantly below the levels at which any capacity issues would start to arise, variations in key assumptions regarding trip generation rates or the distribution of new traffic will not affect the overall conclusions of the assessment.'

Traffic activity associated with the additional 43 residential dwellings now proposed would amount to around an additional 350 vehicle movements/day.

The cumulative effect of the developments at 234, 237 and 221 Rangiuru Road would be to add at most 1,560 vehicle movements/day⁶ to this area, but with these broadly dividing equally between movements to the west and east on Rangiuru Road (with the 221 Rangiuru Road development now identified as a retirement village, this is considered to be a 'worst-case' estimate).

The original SIDRA⁷ assessment of the performance of the Rangiuru Road / Riverbank Road and Rangiuru Road / Tasman Road / Te Rauparaha Street / Main Street intersections was re-run, to include a broad estimate of the cumulative traffic movements associated with all three developments. The results (summarised in Appendix 2: Intersection assessments) indicate that the delays experienced show only a negligible increase. The only change in Level of Service (LOS)⁸ is forecast to be experienced by the right turn movement from Rangiuru Road towards Main Street, where a delay increases from 9 to 10s/vehicle would result in a change from LOS A to B.

In summary, the low levels of existing traffic activity in this area means that, even when account is taken of these cumulative effects, this level of activity would be insufficient to materially affect traffic conditions or change the conclusions of the original assessments.

6.8 WIDER NETWORK EFFECTS

As described above, the proposal will have only a negligible level of effect upon the operation of the closest intersections.

As noted in Section 5.3, this proposal allows potential to connect to the adjacent lot (254 Rangiuru Road), through locating the turning head near the adjoining boundary (no lots are between the turning head and the boundary).

Beyond this area, the dispersal of traffic means that effects will be reduced. The proposal may result in some increase in traffic demands at the (former) State Highway 1 (SH1) / Riverbank Road intersection. However, the completion of the Peka Peka to Ōtaki (PP2O) expressway now provides significant relief to this intersection by the removal of the longer-distance movements on SH1.

⁵ Proposed Residential Development, 237 Rangiuru Road, Ōtaki: Integrated Transportation Assessment. Tim Kelly Transportation Planning Ltd, October 2019.

⁶ Based upon 85, 43 and 67 dwellings at #237, #234 and #221 Rangiuru Road respectively. Total dwellings = 195 @ 8 vehicle movements/day = 1,560 vehicle movements/day.

⁷ Signalised and Un-signalised Intersection Design and Research Aid.

⁸ Level of Service is a six-point scale used to describe traffic conditions, in which LOS A represents free-flow conditions and LOS F represents heavily congested conditions.



7.0 CONSTRUCTION

7.1 CONSTRUCTION ACTIVITY

The construction phase of the development will result in some additional vehicular, especially truck, activity.

Earthworks will initially involve the stripping of 300mm of topsoil. Compaction will then occur, followed by the importation of fill material and replacement of the topsoil.

Finally, the construction of roading and establishment of individual building platforms will take place, followed by building construction and landscaping.

7.2 VEHICLE MOVEMENTS – EARTHWORKS PHASE

The stripped top-soil will be stored on-site with no associated off-site transportation.

The imported fill is expected to be around 26,000m³ in volume. This is expected to be transported from the Waitohu Quarry, a route distance of 6.9kms via Waitohu Valley Road, SH1, Mill Road, Main Street and Rangiuru Road.

Transportation will take place using truck/trailer units, for six days/week between 7am and 6pm. With loads of approximately 10m³ per truck per truck, 2,605 return truck movements will be required. The duration of the fill operation will be governed by the time taken for each return trip and the number of truck/trailer units allocated to the contract.

On the basis of a 45-minute return trip and three truck/trailer units allocated to the contract, the duration of the activity would be around 62 days (10 weeks). The number of vehicle movements between the site and the road would be 84 per day (42 entering, 42 leaving).

The district plan defines a truck/trailer unit moving to and from a site as constituting 10 vehicle movements. Application of this definition means that the activity above would result in 840 vehicle movements per day. This is above the permitted activity standard and triggers a requirement for the associated effects to be considered.

The impacts of the truck activity upon the Ōtaki street network will be negligible, as the number of movements (in either direction) would be only one every 8 minutes (or 8 in each hour). This level of activity is insufficient to materially impact upon either the efficient or the safe operation of the road network in this area.

The number of truck/trailer units allocated to the contract will affect the intensity and duration of the activity. For example, the use of a single truck/trailer unit would half the intensity but double the duration of the activity. Overall, the level of effect is considered to be similar.

7.3 VEHICLE MOVEMENTS – CONSTRUCTION PHASE

During the construction phase, truck movements would be associated with the importation of plant & equipment, concrete and the larger building elements. In addition, a number of light vehicle movements would be associated with construction personnel and contractors.

On any given day, the number of vehicle movements is not expected to exceed the permitted activity standard and in any event, effects upon the operation of the street network would be negligible.

7.4 CONSTRUCTION TRAFFIC MANAGEMENT PLAN

The (district council) consent is expected to be conditional upon the approval of a detailed Construction Traffic Management Plan (CTMP), which will address aspects such as vehicular activity associated with construction, routes, hours of operation, staff parking, local traffic management and the avoidance of mud migration onto the public road network.

This approach is common for developments of this type and scale, as the detailed construction logistics will be developed post-consent by the appointed contractor(s).



8.0 DISTRICT PLAN PROVISIONS & COMPLIANCE

8.1 RELEVANT PLAN

This assessment has been undertaken against the provisions of the operative Kāpiti Coast District Plan 2021 (**KCDP**).

The application site lies within the 'General Residential Zone'.

Rangiuru Road is defined as a 'Local Community Connector' route. The internal road will be defined as a 'Neighbourhood Access Route'.

The proposal is assessed against the relevant policies, rules and standards below.

8.2 KCDP PART 2 DISTRICT WIDE MATTERS / TRANSPORT: POLICIES

Compliance with the relevant policies is addressed in **TABLE 1**.

The proposal is compliant with all of the relevant policies.

8.3 KCDP PART 2 DISTRICT WIDE MATTERS / TRANSPORT: RULES

Compliance with the relevant rules and standards is addressed in **TABLE 2**.

The earthworks and operational phases of the proposal will not to be compliant with the permitted activity standard which defines a maximum level of traffic activity of 100 (equivalent) vehicle movements/day for an activity in a Working Zone with access to a Community Connector road (Rangiuru Road).

The purpose of this standard is to trigger a detailed assessment of the potential effects of the development upon the operation of the road network. Such an assessment has been presented by this document and concludes that proposed development can operate without adverse effects upon the safe and/or efficient operation of the road network which are more than minor.

The proposed internal road will not provide specific cycle lanes or paths, as required by the controlled activity standard. Such provision is not practicable on a short section of road which connects to Rangiuru Road where no such facilities are provided.

The proposal will be compliant with all of the other rules and permitted activity standards.



TABLE 1: COMPLIANCE WITH KCDP ACCESS AND TRANSPORT POLICIES (PART 2 – DISTRICT WIDE MATTERS / TRANSPORT)

POLICY	COMPLIANCE	COMMENTARY
<i>Policy TR-P1 – Integrated Transport and Urban Form</i> Development and subdivision will be integrated with and consistent with the transport network hierarchy and undertaken in a manner and a rate to ensure: 1. The transport network is capable of serving the projected demand safely and efficiently; 2. The location of development is appropriate, including providing for the co-location of compatible developments and land use and transport networks to reduce unnecessary travel; 3. Travel time and distance to services are minimised for all modes of travel; 4. Development is consistent with Council's Subdivision and Development Principles and Requirements 2012; and 5. Enhanced community connectivity is achieved, resulting in more efficient travel patterns from the community.	✓	<i>This assessment has demonstrated that additional traffic activity associated with the operation of the development will be able to be accommodated by the adjoining road network with an overall level of effect which is no more than minor.</i> <i>The development location is serviced by a bus route and the provision of an additional stop in the vicinity of the development on Rangiorua Road may be warranted based upon the nearby residential development (as described in Section 5.2.5, the detailed positioning of such a stop will necessitate liaison between GWRC and KCDC).</i>
<i>Policy TR-P2 – Sustainable Transport and Maximising Mode Choice</i> Development and subdivision will be integrated with a transport system that offers a wide range of travel mode choices, which connects residents to essential community services, centres and social infrastructure, through: 1. Well-integrated and connected communities; 2. Development that is conducive to active modes of travel, particularly walkable communities which reduce demand for vehicular travel, particularly by private vehicle; 3. Land use that is integrated with the transport network; 4. Improved public transport services to the District; 5. Travel plans and transport assessments for major traffic activities as part of an application for consent for new developments; 6. Consistency with Council's Subdivision and Development Principles and Requirements 2012; and 7. Development that ensures adequate access and space for all modes, including pedestrians, people with mobility	✓	



TABLE 1: COMPLIANCE WITH KCDP ACCESS AND TRANSPORT POLICIES (PART 2 – DISTRICT WIDE MATTERS / TRANSPORT)

POLICY	COMPLIANCE	COMMENTARY
problems, cyclists, public transport and private car travel.		
<i>Policy TR-P3 – An Efficient and Economic Transport Network.</i>	N/A	<i>(Not relevant – relates to development of the network).</i>
<i>Policy TR-P4 – Effects of Transport on Land Use/Development.</i>	N/A	<i>(Not relevant – relates to the transport network rather than development).</i>
<i>Policy TR-P5 – Effects of Land Use on Transport.</i> The potential adverse effects on the transport network from development will be avoided, remedied or mitigated by identifying both the key existing transport routes and proposed transport routes likely to be required long term as part of the district’s transport network and having regard to these when considering applications for development.	N/A	<i>(Not relevant – no changes required to transport routes).</i>
<i>Policy TR-P6 – Safety.</i> <i>The safety of all transport users will be enhanced during the development, operation, maintenance and upgrading of the transport network, by:</i> 1. (Not relevant); 2. Requiring that all developments provide for safe vehicular and pedestrian access and have adequate visibility (sight lines); 3. Requiring all developments to have safe connections to the wider transport network; and 4. (Not relevant).	✓	<i>This assessment has demonstrated that the proposed access arrangements will operate safely for vehicular and pedestrian movements.</i>
<i>Policy TR-P7 – Cycling, Walking and Bridleway Links and Safety.</i> Development will be as far as practicable, located and designed to make walking, cycling and the use of bridleways safer, more enjoyable and convenient in accordance with the CPTED guidelines and the following principles: 1. New street linkages will provide safe pedestrian access to shops and services and public transport nodes. 2. Development will: • Enable cycle and pedestrian routes, both on and off road, which offer good continuity; and • Avoid large blocks that sever connectivity.	✓	<i>The development of a single site does not provide significant opportunities to enhance walking/cycling networks.</i> <i>However, the proposal provides for footpaths within the development and allows connections for all modes to 254 Rangiuru Road (the site to the east) should that be developed. The development will only generate low traffic volumes, suitable for cyclists to share the road with other road users.</i> <i>Also the proposal provides for the close integration of the site with the established networks and for improved access to the bus network through additional stops in this area.</i>



TABLE 1: COMPLIANCE WITH KCDP ACCESS AND TRANSPORT POLICIES (PART 2 – DISTRICT WIDE MATTERS / TRANSPORT)

POLICY	COMPLIANCE	COMMENTARY
3. Development will provide for convenient cycle parking facilities in centres; and 4. Pedestrian and cycle routes will have well designed and built facilities including surface conditions, lighting, signage and passive surveillance from adjacent development.		
<i>Policy TR-PARK-P8 – Parking</i> All new subdivision and development shall provide for safe vehicular access and pedestrian access and appropriate vehicle parking areas by: 1. providing parking numbers, layouts and dimensions consistent with parking standards; 2. supplying adequate off street parking to meet the demand of the land use while having regard to the following factors: - o the intensity, duration, location and management of the facility; - o the adequacy of parking in the location and adjacent areas; - o the classification and use of the road and speed restrictions that apply; - o the nature of the site, in particular its capacity to accommodate parking; - o the characteristics of the previous activity that utilised the site. 3. taking effects on neighbouring areas into account when designing the location, layout and number of parking spaces (including car and cycle parks and disability car parks); 4. ensuring the location, layout and number of disability carparks and cycle parks is safe, user-friendly and appropriate; and 5. achieving a balance between encouraging mitigation of parking overflow effects (e.g. shared use of car parking), and discouraging car-based travel through use of travel plans	✓	<i>The sub-division will be self-contained regarding parking demand and supply, with no 'overspill' onto the adjacent section of Rangiuru Road.</i>
<i>Policy TR-PARK-P8A – Parking</i> All new subdivision and development shall provide for safe, sufficient, and appropriately located on-site cycle parking facilities.	✓	<i>The sub-division will provide sufficient space within each lot for cycle parking.</i>



TABLE 2: COMPLIANCE WITH KCDP TRANSPORT-RELATED RULES (PART 2 – DISTRICT WIDE MATTERS / TRANSPORT)

PERMITTED ACTIVITY / RULE / STANDARD	COMPLIANCE	COMMENTARY
<i>Rule TR-R2 – Vehicle Movements</i>		
Up to an additional 100 vehicles/day are permitted in the Residential Zone.	X	<i>Does not comply – total vehicular activity associated with the operation of the proposed subdivision will be approximately 350 vehicle movements/day. As such, the activity is defined as a ‘major traffic activity’. This triggers consideration as a Restricted Discretionary Activity – refer TR-R10.</i> <i>(Also, truck activity during the earthworks phase may exceed an equivalent of 100 vehicle movements/day).</i>
<i>Rule TR-R3 – Site Access and Loading for Vehicles</i>		
1. Every site must provide vehicular access over land or by mutual right of way or service lane for parking and/or loading and shall be in accordance with TR-Diagram-2.	✓	<i>Site will have legal access from Rangioru Road frontage.</i>
2. All vehicle accesses must be designed, constructed and maintained to ensure that: a) They are able to be used in all weather conditions; b) They have no adverse impact on the roadside drainage system; and c) Surface water and detritus does not migrate onto the highway pavement.	✓	<i>Vehicular accesses will comply with these requirements.</i>
3. All accesses must meet the following: a) be a minimum of 3.5m wide, except for as set out in TR-Table 1; and b) be a maximum of 9m wide.	✓	<i>Proposed crossings can comply with the dimensional requirements.</i>
4. Sites containing non-residential activities, and which provide more than 6 carparks, shall provide two-way accesses which must be a minimum of 6m wide.	N/A	
5. (not applicable, state highway accesses only).	N/A	
6. Access spacing – at intersections carrying traffic volumes of 1,000 vehicles or more in any peak hour, or at which traffic signals are operating, no part of a crossing point must be located within 30m of an intersection.	N/A	<i>Volumes are well below this threshold.</i>



TABLE 2: COMPLIANCE WITH KCDP TRANSPORT-RELATED RULES (PART 2 – DISTRICT WIDE MATTERS / TRANSPORT)

PERMITTED ACTIVITY / RULE / STANDARD	COMPLIANCE	COMMENTARY
7. Access spacing – where a site is located near an intersection having volumes less than 1,000 vehicles in any peak hour; the minimum distance between the crossing point and the roadway edge or kerblines must be: a) 9m measured from the intersecting point of the kerblines or road edge lines or 4.5m from the tangent point of the kerb lines or road edge whichever is greater; and b) 12m where a ‘stop’ or ‘give-way’ control exists on the roadway measured from the intersecting point of the kerb lines or road edge lines.	✓	<i>The minimum spacing criteria will be exceeded.</i>
8. Access spacing for major traffic activities – no crossing point must be located closer to any intersection than (for a local community connector frontage road): 30m from a strategic arterial, 30m from a Major Community Collector route and 15m from a Local Community Collector route.	✓	<i>This is a ‘major traffic activity’. No crossing points with Rangioru Road will be within these distances.</i>
9. Access spacing sight distances – the required minimum sight distance between the access and the road must be (for a 50km/hr speed limit area), 50m for a private access.	✓	<i>The available sight-distances at the crossing points to Rangioru Road will exceed 50m.</i>
10. Not applicable (state highways).	N/A	
11. Not applicable (state highways/rural roads).	N/A	
12. Manoeuvring (private residential access) – unless the driveway accesses directly from a Neighbourhood Access Route, sufficient manoeuvring space must be provided on-site to ensure no reversing onto the road is necessary.	✓	<i>Sufficient on-site manoeuvring will be provided to ensure there is no necessity for reversing to or from the Rangioru Road frontage. Refer Section 6.2.</i>
13. Loading spaces – N/A (Working Zones only).	N/A	
14. Landscaping – N/A (non-residential activities only).	N/A	
15. Landscaping – all landscaping adjoining the road boundary of sites must be designed and maintained so that visibility to and from the crossing point	✓	<i>Landscaping elements will be appropriately sized in the vicinity of access points to ensure that both vehicular and pedestrian sight-lines are achieved.</i>



TABLE 2: COMPLIANCE WITH KCDP TRANSPORT-RELATED RULES (PART 2 – DISTRICT WIDE MATTERS / TRANSPORT)

PERMITTED ACTIVITY / RULE / STANDARD	COMPLIANCE	COMMENTARY
complies at all time with the minimum standards sight distance set out in TR-Table-3.		
Rule TR-R4 – Design and layout of vehicle parking for all activities		
1. All parking must be formed, marked out and maintained for use in all weathers.	✓	As a residential subdivision, all parking will be provided either within lots or at the kerbside. All parking will comply with these requirements.
2. Surface water originating from the parking area must be managed without adversely impacting other properties either upstream or downstream of the development site.		
3. Vehicles using the parking area must only use the formed vehicle access point (crossing point) to enter and exit the vehicle parking areas.		
Rule TR-R5 – Parking layout and design (non-residential activities) [not applicable]		
Rule TR-R6 – Heavy trade vehicle access [not applicable]		
Rule TR-R7 – Vehicle access across a railway level crossing [not applicable]		
Rule TR-R8 – Service Stations [not applicable]		
Rule TR-R9 – New roads including where they are to serve a subdivision		
New roads are a Controlled Activity. Cycle paths must be provided either as on-street cycle lanes, off-street shared paths or off-street dedicated cycle paths.	✗	It is not practicable to provide specific cycle facilities on a short internal road section where there are no connecting facilities on Rangiuru Road. Is it not considered that this would give rise to any tangible adverse effects as traffic volumes on Rangiuru Road are not high and the road cross-section provides space to accommodate cycle movements.
Rule TR-R10 – Vehicle movements that do not meet the permitted activity standards under TR-R2		
Consideration as a Restricted Discretionary Activity. A Transport Assessment and a Travel Plan must be prepared by a suitably qualified person and submitted to Council with the application for resource consent.		This document represents the required Transport Assessment and concludes that the additional traffic activity associated with the proposed subdivision can be accommodated by the area road network without adverse effects upon its safe and efficient operation which are any more than minor. The preparation of a Travel Plan for a residential development is not practicable.
Rule TR-PARK-R18 – Parking [not applicable – only relates to activities requiring more than 2 carparks]		
Rule TR-PARK-R19 – Parking for Residential Activities		



TABLE 2: COMPLIANCE WITH KCDP TRANSPORT-RELATED RULES (PART 2 – DISTRICT WIDE MATTERS / TRANSPORT)

PERMITTED ACTIVITY / RULE / STANDARD	COMPLIANCE	COMMENTARY
<i>A minimum of 2 carparks per residential unit</i>	✓	<i>Note that this requirement has been removed by the National Policy Statement on Urban Development 2020 which requires the removal of minimum parking requirements from the district plans for Tier 1 authorities.</i> <i>Regardless, all residential units will provide two off-street parking spaces.</i>
<i>Rule TR-PARK-R20 to R30 – Off-Street Parking [not applicable]</i>		



9.0 CONCLUSIONS

It is proposed to subdivide land at 234 Rangiora Road to provide for the construction of 43 residential dwellings.

This assessment has reviewed the transportation aspects and potential effects of the proposed development, and concludes that:

- The additional traffic movements can be easily accommodated by Rangiora Road and its intersections with Riverbank Road and Tasman Road / Te Rauparaha Road / Main Street, even when allowing for the cumulative impacts of other committed residential developments in this area;
- The proposed access intersection on Rangiora Road will be able to accommodate the forecast vehicle movements without any significant delays;
- The straight and level alignment of Rangiora Road provides for good sightlines which together with the low traffic densities in this area means that turning movements will be able to be undertaken safely;
- The standard of internal roading proposed will provide for safe and efficient vehicular and pedestrian movements;
- While the development is on a bus route, it would benefit from an additional stop located in this area to improve the convenience of this mode of transport;
- Construction traffic activity will be primarily associated with the importation of fill material to the site – this can be readily accommodated by the local road network and specific effects and safety will be managed through a standard condition of consent requiring the preparation of and agreement to a Construction Traffic Management Plan; and
- The proposal will comply with most of the relevant requirements of the district plan. The only areas of non-compliance relate to overall levels of traffic generation and aspects of the internal road design and in both cases this assessment demonstrates that there would not be any associated adverse effects which are more than minor.

Overall, the proposal is supported from a transportation planning perspective.

10.0 LIMITATIONS

10.1 GENERAL

This report is for the use by Classic Developments only and should not be used or relied upon by any other person or entity or for any other project.

This report has been prepared for the particular project described to us and its extent is limited to the scope of work agreed between the client and Envelope Engineering Limited. No responsibility is accepted by Envelope Engineering Limited or its directors, servants, agents, staff or employees for the accuracy of information provided by third parties and/or the use of any part of this report in any other context or for any other purposes.



APPENDICES

APPENDIX 1: CRASH HISTORY REPORT

CODED CRASH ID	Crash road	FEATURE	Distance	Direction	Side road	Easting	Northing	Longitude	Latitude	ID	Date	Day of week	Time	Descripti
1406374	MAIN STREET			I	TE RAUPARAHA STREET	1780422	5486585	175.137221	-40.751912	2023291914	10/08/2023	Thu	10:30	Car/Wagi control tu
1365212	RANGIURU ROAD		248	E	DOW CHUNG PLACE	1779971	5486409	175.131926	-40.753598	2023271188	20/10/2023	Fri	21:30	Car/Wagi control; w other, fen SUV1 NDI turning le
1229093	RANGIURU ROAD		95	S	MAIN STREET	1780380	5486501	175.136746	-40.752678	2020143367	20/01/2020	Mon	1:35	fence, tre
1248090	TE RAUPARAHA STREET			I	MAIN STREET	1780428	5486603	175.137284	-40.75175	2020170545	7/08/2020	Fri	12:30	Truck1 SE Truck2 he
1435951	TE RAUPARAHA STREET			I	MAIN STREET	1780421	5486590	175.137209	-40.751871	2024295698	10/08/2024	Sat	19:45	Car/Wagi end of Ca Ute1 SDB
1448126	TE RAUPARAHA STREET			I	MAIN STREET	1780425	5486598	175.137251	-40.751795	2024312331	22/11/2024	Fri	17:30	control; w sign, othe

APPENDIX 2: INTERSECTION ASSESSMENTS

Rangioru Rd / Riverbank Rd Intersection		Development Scenario		Development Scenario	
Turning Movement LOS - Delays (secs/veh)		No Development	With ALL Development (195 dwgs)	No Development	With ALL Development (195 dwgs)
Approach	Turn				
Rangioru (E)	Left	5	5	5	5
	Ahead	0	0	0	0
	Right	5	5	5	5
	Approach	3	4	0	2
Riverbank (S)	Left	5	5	5	5
	Ahead	5	5	5	5
	Right	5	5	5	5
	Approach	5	5	5	5
Rangioru (W)	Left	5	5	5	5
	Ahead	0	0	0	0
	Right	5	5	5	5
	Approach	3	4	3	3
INTERSECTION		4	4	3	4

KEY: Level of Service	
A	
B	
C	
D	
E	
F	

Rangioru Rd / Tasman Rd / Te Rauparaha St / Main St Intersection		AM Peak Period, 2025		PM Peak Period, 2025	
Turning Movement LOS - Delays (secs/veh)		Development Scenario		Development Scenario	
Approach	Turn	No Development	With ALL Development (195 dwgs)	No Development	With ALL Development (195 dwgs)
Te Rauparaha St (N)	Left	5	5	5	5
	Ahead	6	7	6	7
	Right	9	9	8	8
	Approach	6	6	6	6
Main St (E)	Left	3	3	2	2
	Ahead	1	1	0	0
	Right	4	4	3	3
	Approach	2	2	1	1
Rangioru Rd (S)	Left	5	6	5	5
	Ahead	6	7	6	6
	Right	9	10	8	9
	Approach	9	9	8	8
Tasman Rd (W)	Left	5	5	5	5
	Ahead	3	3	3	3
	Right	6	6	6	6
	Approach	3	3	3	3
INTERSECTION		3	4	2	3

KEY: Level of Service	
A	
B	
C	
D	
E	
F	