

IN THE MATTER of the Resource Management Act 1991
("RMA" or "the Act")

AND

IN THE MATTER of an application under section 88 of the
Act to **NAPIER CITY COUNCIL** (ref
RMA19006) by **DURHAM PROPERTY
INVESTMENTS LIMITED** to subdivide
and develop the Main Residential Zone
at 16 and 38 Willowbank Avenue, Te
Awa, Napier.

**STATEMENT OF EVIDENCE OF IAN PHILIP CONSTABLE
TRAFFIC ENGINEER**

1. INTRODUCTION

- 1.1 My full name is Ian Philip Constable. I am a consulting traffic engineer and director of the consulting engineering practice, Traffic Solutions Limited.
- 1.2 This evidence is given in respect of resource consent application RMA19006 ("Application") by Durham Property Investments Limited ("Applicant") to Napier City Council ("Council") for the development of 162 dwellings and a staged subdivision to form 181 residential lots, at 16 and 38 Willowbank Avenue, Napier ("Site").

Qualifications and experience

- 1.3 I am registered as a Member of Engineering New Zealand (MEngNZ). I have a Masters in Engineering Studies (Transportation) degree from the University of Auckland (2006).
- 1.4 I have been involved in road engineering for the past 44 years, specialising in traffic engineering for the past 32 years.
- 1.5 Of particular relevance to this application is my past experience providing traffic engineering consultancy services for residential subdivisions and senior living developments over many years.
- 1.6 Some of the more recent projects I have been involved with that include residential and retirement housing developments are:
- (a) Bethlehem Shores Retirement Village, Bethlehem Road, Bethlehem, Tauranga (296 retirement units consented);

- (b) Residential Land Subdivision, 312 Upper Harbour Drive, Greenhithe, Auckland (98 residential lots);
- (c) East Urban Lands, Wharewaka, Taupo (1,700-2,000 residential lots, a local shopping centre and a retirement village);
- (d) Bupa Care Services Retirement Village, Ulyatt Road, Napier (118 retirement units and a care home);
- (e) Bupa Care Services Retirement Village, Corks Road Whangarei (94 retirement units and a care home);
- (f) Residential Development, 19 Lyon Avenue, St Lukes, Auckland (121 units);
- (g) Parewaitai Retirement Village, 718 Grenada Street, Papamoa, Tauranga (177 retirement units and a care home); and
- (h) Grand View Estate Subdivision, Grand Drive Orewa, Auckland (575 residential lots and a local shopping centre).

1.7 All the above projects, and other land developments I have dealt with, are of a similar size or are larger than the proposed development.

1.8 In each of the above cases my role was to provide traffic expertise, carry out traffic and parking surveys where necessary, provide input during the designs of the proposals relating to access, parking and site layout, liaise with the clients and other professionals on the project teams, prepare the necessary reporting for resource consent applications, and follow-up work.

Involvement in the project

1.9 I have been involved with this proposal since October 2018. My role has been to provide traffic engineering input into the design of the proposal, in particular relating to access to the development from the existing transport network, and the design of the internal roading within the development.

1.10 I have carried out site investigations and assessed the suitability of the proposal in relation to the transport environment, and I prepared the initial Traffic Impact Assessment (Issue A dated 14 December 2018) that was included with the original consent application.

1.11 Subsequently I updated the Traffic Impact Assessment report (Issue B dated 15 January 2020) ("Traffic Report") following changes to the original proposal.

Site visits and background material

- 1.12 I visited the site and its surrounds in:
- (a) October 2018;
 - (b) December 2018; and
 - (c) May 2021.
- 1.13 During those visits I inspected the transport network immediately surrounding the site, and I assessed the appropriate locations for access to the site, having regard to the transport environment.
- 1.14 Following the changes to the proposed development, I subsequently checked for any changes that may have been made to the transport network since the original application was lodged.
- 1.15 I also obtained traffic count data from the Council and accident records from the official crash database held by the New Zealand Transport Agency. I have used these data and known traffic generation characteristics of residential and retirement developments to form my opinion about the traffic effects of the proposal on the operation of the surrounding streets.
- 1.16 In preparing this evidence I have read and I am familiar with the Council Officer's report, and submissions received following notification of the proposal. I understand all three submissions received have subsequently been withdrawn.

Purpose and scope of evidence

- 1.17 The purpose of this evidence is to present an updated assessment of the transportation effects of the proposed development on the transport network.
- 1.18 My evidence will include:
- (a) A brief description of the existing site (Section 3);
 - (b) A brief description of the proposal of relevance to transportation (Section 4);
 - (c) A description of the existing transport environment (Section 5);
 - (d) A description of the future transport environment (Section 6);
 - (e) A summary of traffic effects of the development (Section 7);

(f) Comment on issues raised by the Council Officer's report relevant to transportation (Section 8); and

(g) Conclusions (Section 9).

1.19 A summary of my evidence is contained in Section 2.

1.20 My evidence should be read together with the:

(a) Planning evidence, prepared by Matthew Holder (Development Nous Limited); and

(b) Landscape and urban design evidence, prepared by Gemma Guilford (Development Nous Limited).

Expert Witness Code of Conduct

1.21 I have been provided with a copy of the Code of Conduct for Expert Witnesses contained in the Environment Court's 2014 Practice Note. I have read and agree to comply with that Code. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

1.22 I understand and accept that it is my overriding duty to assist the Independent Commissioner in matters which are within my traffic engineering expertise.

2. SUMMARY OF EVIDENCE

2.1 In my traffic report I concluded that the traffic flows that will be generated by proposed development will not affect network capacity or traffic safety.

2.2 Eriksen Road adjoining the site will be upgraded to provide a wider carriageway, kerb, channel and footpath as part of the development. This will all be carried out in accordance with the Te Awa Structure Plan.

2.3 Two vehicle crossings to the development are proposed, both of which will be located on Eriksen Road. In the Traffic Report, I concluded that the vehicle crossings proposed will be appropriately located where they will not cause adverse traffic effects. I also concluded they will be constructed to appropriate widths to accommodate the numbers and types of vehicles that will use them, and that sight distances will be adequate to enable the accesses to operate safely.

2.4 The gates to be erected at each entry will be set back into the site to accommodate entering vehicles waiting for the gates to open without obstructing the road or footpath.

- 2.5 Three pedestrian footpaths will be provided to the site, one adjacent to the northern vehicle access and one on each side of the southern vehicle access. No formal pedestrian footpaths will be provided to Willowbank Avenue, which is a high speed rural road with no footpaths and a 100 km/h posted speed limit.
- 2.6 No vehicle access will be provided to Willowbank Avenue.
- 2.7 The amount of parking proposed will be well above the minimum required in the Napier City District Plan. In my opinion, it is most unlikely there will be any adverse off-site parking effects.
- 2.8 The Council Officer's report and associated statements of evidence from Council's specialists oppose the development, in particular in relation to the proposed private ownership arrangement and the security gating. A number of arguments have been provided to support this position. In my opinion, all of the transportation related reasons for declining resource consent are either not correct, or could be resolved during the Engineering Approval stage.
- 2.9 Thus, my opinion remains the same as that which is in my Traffic Report, which is that the traffic and parking effects of the proposed development will be less than minor.

3. **SITE DESCRIPTION AND EXISTING ENVIRONMENT**

- 3.1 The site has road frontage to Eriksen Road and Willowbank Avenue. It presently contains two residential dwellings with associated outbuildings. The site is otherwise undeveloped.
- 3.2 The existing site generates very little traffic. The dwellings are both accessed from Willowbank Avenue. The existing buildings and the existing vehicle accesses will be removed.

4. **DESCRIPTION OF PROPOSAL**

- 4.1 The proposed development will contain 181 residential lots. Each of these lots will contain one dwelling. The dwellings will be targeted to residents aged 55 years and above. The development will be gated.
- 4.2 The development will be served by two vehicle crossings and three pedestrian footpaths off Eriksen Road. Additional pedestrian connections will also be available to an adjacent reserve along the southern and western site boundaries to Willowbank Road, although these will be informal through drainage reserves (i.e. not all-weather footpaths).
- 4.3 A public footpath will also be provided in the adjacent reserve, along the full length of the southern and western site boundaries.

- 4.4 There will be no direct vehicle access to Willowbank Avenue.
- 4.5 A network of internal roadways and footpaths will provide access to the individual dwellings within the development.
- 4.6 As part of the development, Eriksen Road will be kerbed and channelled along its western side adjacent to the site frontage, and a new public footpath will be provided along the western side of Eriksen Road.
- 4.7 Each dwelling will have a double garage attached. Additional parking will also be provided for visitors and for other vehicles such as boats and campervans. There will also be room for parking on the driveway aprons in front of each garage. A total of 745 parking spaces will be provided.

5. **EXISTING TRANSPORT ENVIRONMENT**

- 5.1 Eriksen Road is a two-laned road. The road is mostly unkerbed although there is a kerb and footpath along the eastern side south of Hurunui Drive, which were installed as part of another residential development.
- 5.2 The road has a straight and level alignment, with clear visibility along it, although there is a slight curve in the horizontal alignment near the northern site boundary.
- 5.3 There are two speed thresholds adjacent to the site, which effectively narrow the road to one lane at a time at those two isolated locations. These consist of kerbed side islands and paint hatching.
- 5.4 There are no footpaths or cycle facilities, excepting the footpath mentioned above.
- 5.5 Hurunui Drive intersects with Eriksen Road directly opposite the site. It is a two-laned local residential street. The intersection at Eriksen Road has a "Give Way" control.
- 5.6 The legal speed limit on Eriksen Road and Hurunui Drive is 50 km/h.
- 5.7 Willowbank Avenue adjacent to the site is a high speed rural road with a 100 km/h legal speed limit. It has a straight and level alignment. Further north the speed limit reduces to 50 km/h as it enters urban development, and the road includes kerbs, footpaths, and speed humps to control vehicle speeds.
- 5.8 Existing traffic flows on Eriksen Road near the site are presently very low, estimated to be no more than 200 vehicles per day. There is a considerable amount of unused capacity on this road, even in its present form.
- 5.9 In the Traffic Report I included an assessment of crash history on the transport network surrounding the site. That assessment shows that 3 accidents were recorded on Eriksen

Road north of Kenny Road during the 5-year period 2015 to 2019. These all involved lost control vehicles.

- 5.10 Since the Traffic Report was prepared, accidents for the year 2020 have become available. No accidents were recorded on this part of Eriksen Road in 2020. My conclusion in the Traffic Report that there are no existing traffic safety issues of relevance to the proposed development, remains unchanged.
- 5.11 A small number of accidents have been recorded at the intersection of Kenny Road with Eriksen Road, located 450m south of the site. These involved collisions at 90-degrees. This type of accident is common at cross-intersections such as this one. The proposed roundabout at this intersection referred to in Design Outcome 12 in the Te Awa Structure Plan will address this traffic safety issue.

6. **FUTURE TRANSPORT ENVIRONMENT**

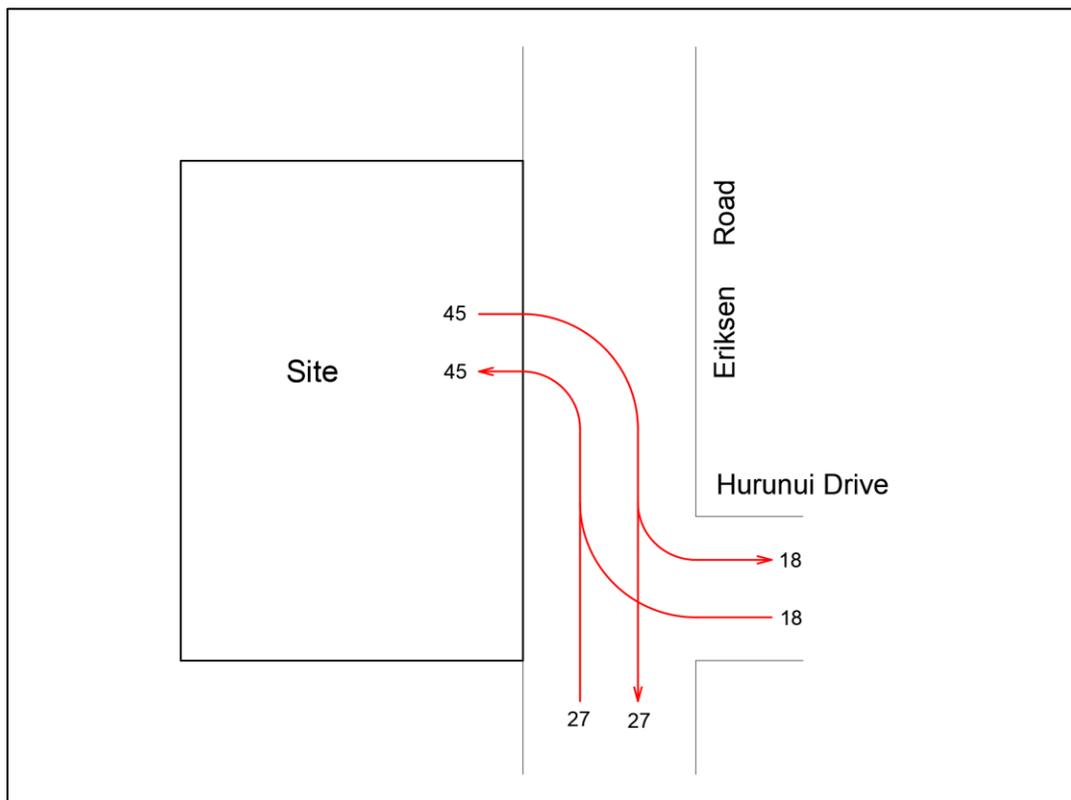
- 6.1 A new kerb and channel, and a footpath, will be installed along the western side of Eriksen Road adjacent to the site. The roadway width between the proposed kerb and the existing kerb where it is already installed on the eastern side will be 10m.
- 6.2 This work will be carried out as specified in Design Outcome 12 in the Te Awa Structure Plan, which requires that *"road upgrading proceeds in conjunction with staging of development within the Te Awa Development area."*
- 6.3 The northern end of Eriksen Road intersects with Willowbank Avenue some distance north of the site. The intersection is presently barriered off, so Eriksen Road is effectively a cul-de-sac. Design Outcome 12 in the Te Awa Structure Plan indicates that Eriksen Road will be realigned at its northern end to intersect with Willowbank Avenue directly opposite Geddis Avenue, and a roundabout control installed at the intersection at some future time.
- 6.4 As already mentioned, Design Outcome 12 also seeks a roundabout at the intersection of Kenny Road with Eriksen Road, to the south of the site.
- 6.5 The proposed footpath will be provided through the reserve areas adjoining the southern and western site boundaries. This will fulfil the requirement for such a footpath, which is shown indicatively on the Te Awa Structure Plan map Appendix 29B.

7. SUMMARY OF TRAFFIC EFFECTS OF THE DEVELOPMENT

Traffic Generation Effects

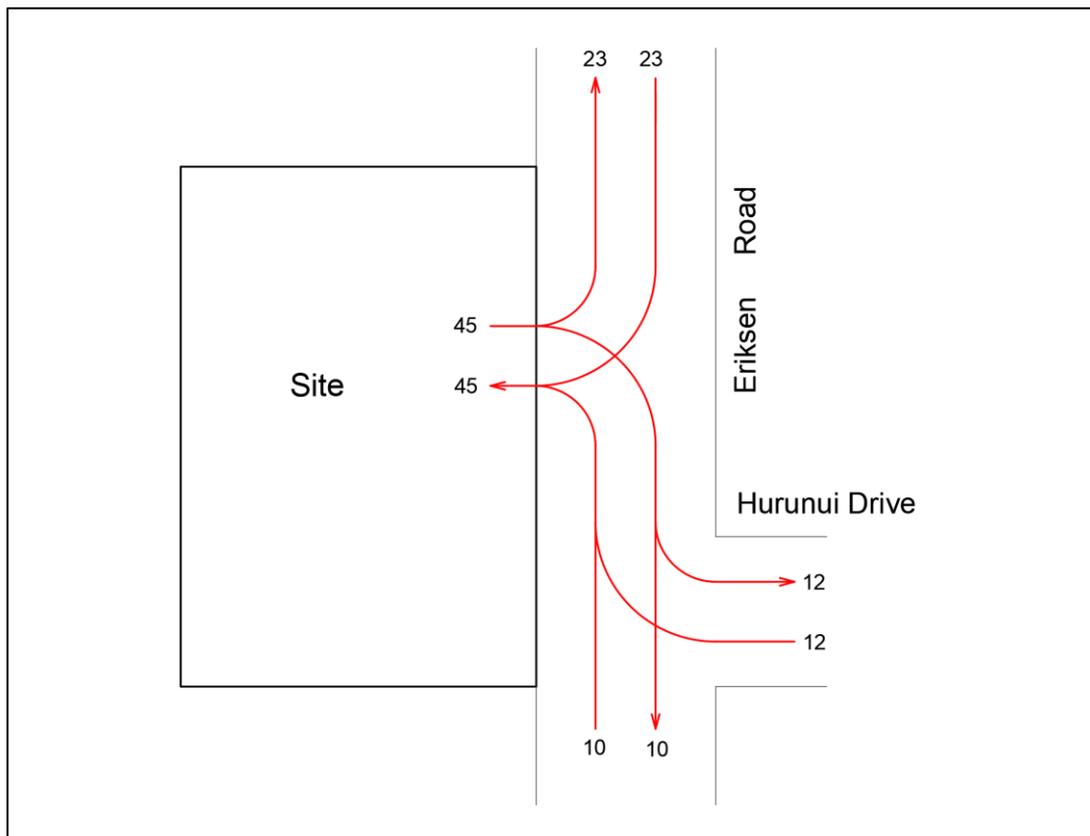
- 7.1 In the Traffic Report, I estimated that future housing within the proposed development would generate 900 vehicle movements per day, and 90 vehicle movements in a peak hour.
- 7.2 If the development becomes operational prior to Eriksen Road connecting to Willowbank Avenue at its northern end, then it should be expected that the peak hour traffic flows the development will generate will be distributed on the network as indicated in Figure 1.

Figure 1: Distribution of Generated Traffic – Existing Network



- 7.3 Hence, I predict that additional traffic flows up to a maximum of 54 vehicles per hour (two-way) will occur on Eriksen Road south of the site, and 36 vehicles per hour (also two-way) will occur on Hurunui Drive. In both cases these flows add up to less than 1 additional vehicle per minute in a peak hour, and less at other times. Such flows are well within network capacity and will have negligible effect.
- 7.4 After Eriksen Road is connected to Willowbank Avenue at its northern end, as the Te Awa Structure Plan anticipates, then it should be expected that the traffic generated by the development will be distributed on the network as indicated in Figure 2.

Figure 2: Distribution of Generated Traffic – Future Network



- 7.5 In the future network, I predict additional traffic flows up to 46 vehicles (two-way) on Eriksen Road north of the site, in a peak hour. Traffic flows on Eriksen Road south of the site and on Hurunui Drive will reduce accordingly, compared to my predictions in Figure 1 on the existing network, due to the provision for the third approach route that will spread the traffic. Again, the flows on any one approach will be well within network capacity and will have almost no effect.

Site Access

- 7.6 The northernmost vehicle access will be 6m wide at the site frontage boundary, which is sufficient to cater for simultaneous two-way vehicle flow, and service and emergency vehicles.
- 7.7 The southern access will be the main access of the two, and will likely be most used. It will have an overall 12.5m width, which will comprise separate entry and exit carriageways each 4m wide with a kerbed median separating them. It will also cater for simultaneous two-way vehicle flow and will accommodate larger vehicles such as emergency vehicles and service vehicles. The median separation will act as a refuge to provide safety and better amenity for passing pedestrians.

- 7.8 Both accesses will be located sufficiently remote from any intersections, including the intersection at Hurunui Drive. I consider there will be no adverse traffic effects arising from the location of either access on the road network.
- 7.9 Security gates will be erected at both accesses. These will be located inside the site boundary to allow for queuing by entering vehicles waiting for the gates to open, without obstructing the road footpath or Eriksen Road itself. I consider that the gates will be appropriately located at both accesses and will not cause adverse effects off the site.
- 7.10 Due to the straight and level alignment of Eriksen Road, sight distances from the proposed access locations will exceed recommended minimums by a significant margin. The sight lines from the accesses will enable both accesses to operate safely.
- 7.11 Subsequent to my assessment of visibility at the accesses that I provided in the Traffic Report, it is now proposed to install a wastewater pump station at the corner of the southern site access (i.e. in a new Lot 500). Lot 500 is inside the site and is at least 8m behind the proposed road kerb. Such a location is well clear of the line of sight from a driver exiting from the site access. In my opinion the presence of a pump station within Lot 500 will have no effect on sight lines or traffic safety at the site access.
- 7.12 Two pedestrian footpaths will be provided into the site adjacent to the main southern vehicle access, and one footpath will be located into the site adjacent to the northern vehicle access. These will all connect to the new public footpath to be provided along Eriksen Road. It will also be possible to walk between the site and the reserve along the southern and western site boundaries, through the various drainage reserves. These links will provide access to a proposed new public footpath along the full length of the reserve.
- 7.13 I consider that the proposed footpaths will provide safe and convenient routes on and off the site for pedestrians, separate from motor traffic, and will provide good connectivity for wider community use.

Site Layout

- 7.14 The internal roading within the site will be wide enough to accommodate simultaneous two-way vehicle flow, and emergency and other larger vehicles that may access the site from time to time.
- 7.15 Most of the internal driveways will be cul-de-sacs and will carry very little traffic. Each cul-de-sac will include turning heads that will accommodate turning cars.
- 7.16 Cross intersections within the site will be controlled by small diameter roundabouts. In my opinion, roundabout controls are an appropriate way to manage traffic at these

intersections. The central islands will be mountable, which will enable larger vehicles to drive over them if necessary.

- 7.17 Internal footpaths will be provided through the site, along one side of every internal roadway. Pedestrians will also be able to walk around the site easily and safely, separate from motor traffic.
- 7.18 Ample parking will be provided within the site, for use by each individual dwelling, and for general use. It is most unlikely that any parking will occur off the site as a result of inadequate parking supply.
- 7.19 Parking spaces will be provided in accordance with, or better than, the Council's minimum dimension requirements.

8. **COUNCIL OFFICER'S REPORT**

- 8.1 I have read the Council Officer's report, and the statements of evidence prepared by the Council's Transportation Development Engineer, Wastewater Engineer and Director of Infrastructure. The conclusions in the Council Officer's report are that the internal roading within the development is generally in accordance with the design requirements specified in the Council's Development Code, and the form of the development is generally consistent with the expected Design Outcomes listed in the Te Awa Structure Plan as they relate to internal road layout and footpath linkages.
- 8.2 However, the Council's planning and transportation specialists have raised the following specific issues:
 - (a) The proposed wastewater pump station in Lot 500 will affect sight lines from the adjacent site access, reducing safety to motorists, especially those turning out of the site access, operations and maintenance staff associated with the pump station, and the general public;
 - (b) Lot 500 is not suitable for a wastewater pump station because it is too small, will have no provision for vehicle access or parking for maintenance personnel, and will have insufficient buffer zones around it;
 - (c) Council's refuse collection contractors will not be able to access the site due to the private road ownership arrangement;
 - (d) Mail deliveries will not be carried out on private roads;
 - (e) Potential delays to emergency vehicles attending a callout from one of the privately owned residences resulting from negotiating the gates to enter the development;

- (f) The private road network and proposed gates are inconsistent with Design Outcome 7 because they preclude the future provision of public transport;
- (g) No evidence has been provided to show parking and manoeuvring space is compliant within the northern entry road adjacent to Lot 24. Also, no assessment of visibility between users of the entry road and users of the parking has been provided.

8.3 Generally, the Council Officer's report concludes that *"the proposal will be an efficient and appropriate use of the existing land resource in a way that is consistent with the physical layout and design intent of the Te Awa Structure Plan"*. However, the gated entry/exits and private roading arrangement could result in a reduced degree of environmental quality, and as a result the Council Officer's report has recommended that resource consent for the development be declined.

8.4 I deal with each of the above matters in the following paragraphs.

Wastewater Pump Station

8.5 I have addressed visibility effects in paragraph 7.11 above. A wastewater pump station located within Lot 500 will be set well back behind the sight lines needed for drivers to exit the site safely.

8.6 It is agreed that Lot 500 is too small to accommodate the pump station, and the required access, parking and buffer zones. However, I note on page 25 of the Council Officer's report that reconfiguration could be achieved and confirmed through the Engineering Plan approval process, noting that Lot 8 immediately adjacent has a 583m² site area. I consider this is a practicable and appropriate way to resolve this matter to achieve compliance with the Development Code.

Refuse Collection and Mail Delivery

8.7 If the Council's refuse collection service is not able to include the development, then refuse collection will be carried out by private contractor.

8.8 Mail delivery to residents within the development will occur whether or not the development is gated. NZ Post has advised me:

8.9 *"Mail will still be delivered to a community complex or retirement village, this will depend if the community or retirement village has a reception area, it will be delivered there, otherwise, it will be delivered to their mailbox just like normal mail. If the area is gated, usually the Delivery Agent will have access to get into the complex."*

- 8.10 I am aware of a number of privately owned roads where NZ Post delivers mail in this manner. NZ Post also delivers mail to apartment complexes all over New Zealand and therefore must enter private property to carry out their deliveries.
- 8.11 According to NZ Post, the street number, street name, town/city and postcode, and easily identifiable and accessible letter boxes, are the essential elements for mail delivery. Providing that these have been given, NZ Post will deliver mail, whether or not the street is public or private.

Emergency Vehicle Access

- 8.12 For emergency vehicle access, the gated access arrangement will be the same as if the development were a retirement village or an aged care home. This could be by providing emergency services with an access code, which is usually done, or by some other agreed arrangement between the service and the facility management or Residents' Society. Retirement villages and aged care facilities are often gated for security reasons, and they are capable of accommodating such vehicles, particularly ambulances. I am unaware of any issues arising as a result of an inability of these vehicles to enter these developments. The proposed development will be no different.

Public Transport

- 8.13 In my opinion it is most unlikely that passenger transport services would be provided within the site, whether or not the development is gated. A fundamental purpose of public transport is to provide an efficient service to its passengers. If passenger transport services were to be provided within the Site then to be consistent, the same would need to occur within other residential developments in the surrounding area. Such services result in difficult routes and would provide a poor level of service by taking too long to transport passengers to where they want to go.
- 8.14 For passenger transport services, it is commonly accepted in the transportation industry that a 400m walk to a bus stop is reasonable. If Eriksen Road were to become a bus route at some future time then this guideline could be easily met, depending on where the Council locates its bus stops.
- 8.15 Therefore, I disagree with the conclusion in the Council Officer's report that the development is inconsistent with Design Outcome 7.

Parking Along Northern Access Road

- 8.16 I disagree that no assessment of the compliance of the parking spaces along the northern access road has been provided. Part 7 on page 11 in my Traffic Report states:

"Some parking will also be provided within the site for additional residents' vehicles and their visitors, and other vehicles such as boat trailers or camper vans. These spaces will be provided along the northern driveway entry and is a separate carpark area on Lot 24 immediately adjacent. Parking spaces will be oriented at 90-degrees to the driveway aisles. All of these spaces will be at least 7m long and 3.1m wide, and available manoeuvring widths will be at least 6.9m. The parking areas will be oversized compared to the dimension requirements specified in Appendix 23 in the District Plan. Vehicle tracking shows that the carpark areas will accommodate vehicles of 6.4m length."

- 8.17 These measurements were derived from scale plans using Autocad draughting software. The parking spaces will exceed the Council's minimum dimension requirements.
- 8.18 There will be 14 parking spaces located along the northern entry road. The arrangement is typical of what commonly occurs in both commercial and residential private developments and is not unusual. Furthermore, as stated in the Traffic Report and on the plans, these spaces will be used for camper van and trailer boat parking. As such, they will have a low turnover of use compared to normal use of parking at a residential development, thus reducing significantly any conflicts that may otherwise occur between vehicles accessing the parking and vehicles on the entry road.

Conclusion

- 8.19 In conclusion, I do not consider that the transportation related reasons stated in the Council Officer's report and supporting evidence are sufficient grounds to decline resource consent for the development as proposed. Most of these reasons are, in my opinion, not correct. The matter relating to the wastewater pump station on Lot 500 can be resolved to mutual satisfaction at Engineering approval stage.

9. CONCLUSIONS

- 9.1 I have concluded already that the proposed development will have almost no adverse effect on the operation of the transport network or traffic safety. This conclusion takes into consideration the matters raised in the Council Officer's reporting and evidence, particularly with regard to sight lines at the site accesses.
- 9.2 I consider that the traffic flows the development will generate will be typical of what should be expected at this site, given the expected Design Outcomes in the Te Awa Structure Plan. In my opinion such flows will not adversely affect network capacity or traffic safety.
- 9.3 I have also concluded that vehicle crossings will be of appropriate width to accommodate the numbers and types of vehicles that will use them, and that sight

distances will exceed commonly accepted guidelines by a significant margin. This includes consideration of a possible wastewater pump station at the southern access corner. With regard to expected usage of the access, and their location and form, my opinion remains unchanged.

- 9.4 The parking proposed will exceed the Council's minimum requirement by a significant margin. I also consider that the parking proposed will easily accommodate future demands. Council officers have not raised any issues relating to inadequacy of parking.
- 9.5 I do not consider that any of the transportation related reasons stated in the Council Officer's report and supporting evidence are sufficient grounds to decline resource consent for the development as proposed. In my opinion the issues the Council has raised are either incorrect, or could be satisfactorily resolved at Engineering approval stage.
- 9.6 For these reasons I consider that from a traffic engineering perspective, the development as presently proposed could be granted resource consent.

Ian Constable
Traffic Engineer

14 May 2021