BEFORE THE NEW PLYMOUTH DISTRICT COUNCIL

UNDER	the Resource Management Act 1991 ("RMA")
IN THE MATTER	of PC18/00049 being a request under section 73(2) of the Act by **HAREB INVESTMENTS LIMITED** to the **NEW PLYMOUTH DISTRICT COUNCIL** for a Private Plan Change to rezone 2 Johnston Street, Waitara from Rural (FUD) to Residential A and Open Space.

STATEMENT OF EVIDENCE MARK GRANT GEORGESON ON BEHALF OF HAREB INVESTMENTS LIMITED (TRANSPORT)

1. INTRODUCTION

1. My full name is Mark Grant Georgeson. I am a Chartered Professional Engineer and hold a Bachelor of Civil Engineering degree from the University of Auckland. I am:

(a) a Member of Engineering NZ and its specialist Transportation Group;

(b) an International Professional Engineer;

(c) a Member of the Institute of Transportation Engineers USA;

(d) a Member of the Institute of Public Works Engineering Australasia;

(e) a Member of the NZ Parking Association; and

(a) an Associate Member of the NZ Planning Institute.

1.2 For the last 28 years I have worked as a traffic engineer with Stantec New Zealand (previously Traffic Design Group Ltd), practicing as a traffic engineering specialist throughout New Zealand. I am currently the Transportation Group Manager.

1.3 This evidence is given in support of the Private Plan Change application by Hareb Investments Limited ("HIL"), to rezone approximately 11.5 hectares of land at 2 Johnston Street, from Rural Environment Area (with Future

Urban Development overlay) to Residential A Environment Area and Open Space B.

1.4 I am authorised to give this evidence on behalf of HIL.

2. INVOLVEMENT IN THE PROJECT

2.1 I have been personally involved in the current proposal since 2018, when my company was approached by HIL to provide traffic and transport advice on the proposed rezoning of the plan change site ("Site").

2.2 I was responsible for preparing the 'Integrated Transport Assessment Report' ("ITA Report") submitted with the residential plan change application, dated 19 November 2018, and the subsequent response to Council's Section 92 Request for Further Information on transportation matters ("Section 92 Response") dated 25 January 2019.

2.3 I confirm I have visited the proposal site on a number of occasions since my involvement began and am familiar with the traffic-related characteristics of the local transport network.

2.4 I am also familiar with the Application material, including;

(a) the original application dated 22 November 2018;

(b) the revised application dated 13 March 2019, which was the version notified on 25 June 2019;

(c) further information provided to the NPDC on 24 February 2020; and,

(d) further information provided to the NPDC on 16 June 2020.

3. CODE OF CONDUCT

3.1 I confirm that I have read the Code of Conduct for expert witnesses contained in the 2014 Environment Court Practice Note and that I agree to comply with it. I confirm I have considered all the material facts that I am aware of that might alter or detract from the opinions I express.

3.2 Unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

4. PURPOSE AND SCOPE OF EVIDENCE

4.1 In this matter, I have been asked by HIL to present my views and findings in respect of the transportation related needs and effects of the proposal to rezone land at 2 Johnston Street, that would enable residential subdivision to occur. My findings draw from the work undertaken by myself and my company since our involvement began.

4.2 I confirm that I have read the submissions received in response to notification of the Application, and the Council's Section 42A Report. The assumptions, assessment and conclusions set out in my ITA Report and as amended by the s92 information remain valid, except in relation to the assumptions made in respect of the Raleigh Street intersection with State Highway 3 (SH3).

4.3 Except where my evidence relates to contentious matters, I propose to only summarise the conclusions set out in my expert technical report.

4.4 I have structured my evidence as follows:

(a) to summarise the findings and conclusions of the ITA Report (Section 5);

(b) to address matters raised in submissions (Section 6);

(c) to respond to the Council Officers' reports (Section 7); and

(d) to refer to the Proposed Plan Amendments (Section 8) and to comment as relevant.

4.5 I then present my final conclusions and, by way of summary here in my evidence, confirm the conclusions of the ITA Report that development enabled by the Proposed Plan Change can be achieved in an efficient and safe manner, from a transportation perspective, with the controls enabled through the Proposed Plan Amendments.

5. INTEGRATED TRANSPORT ASSESSMENT REPORT

5.1 I was responsible for the 19 November 2018 ITA Report submitted as part of the Proposed Plan Change Request to New Plymouth District Council.

5.2 I do not intend to repeat the detail of the ITA Report here, but will summarise the key points as relevant to my response to the submissions and Section 42A Report.

5.3 My ITA Report concludes that:

(a) the proposed residential land use can be established in a manner that aligns with the relevant best practice industry standards for subdivision development, from a traffic and transportation perspective;

(b) the proposed new subdivision access arrangements, including the new intersections on Raleigh Street, can be designed in general accordance with the relevant District Plan Rules and Standards in a manner that will ensure they operate safely and efficiently;

(c) assessment of the likely traffic generation levels associated with the residential subdivision indicates additions of around 1-2 vehicles per minute will be added to the network during the peak hours, once the Site is fully developed. With an appropriate mechanism at resource consent stage to assess the effects of subdivision traffic that could be added to the network at respective stages, and the extent of network improvements required (or not), residential development at the Site can be achieved in a manner that will be satisfactory to the Council and to Waka Kotahi NZ Transport Agency (NZ Transport Agency);

(d) the speed limit on Raleigh Street can reduce from the current 80kph in response to development of the Site. This will be subject to a separate process with Council and will facilitate the ability to achieve a good design outcome for the area commensurate with extension of the current Waitara urban fringe;

(e) good quality pedestrian and cycle connections are included as a purposeful component of the Outline Development Plan ("ODP").

5.4 The matters raised by submitters, the Section 42A Report and by Council's Traffic Engineer, do not give me cause to amend my findings or conclusions. That said, some of the matters raised require my further comment, as described through the evidence.

5.5 Before doing so, I briefly highlight the key matters of my ITA Report.

Site Location and Road Environment

5.6 Located at 2 Johnston Street, the Site has frontage to both Johnston Street and Raleigh Street, and encompasses approximately 11.5 hectares of land which is currently undeveloped.

5.7 The aerial photograph below shows the location of the Site, coloured orange, in the context of the local transport network and land use.

5.8 As shown, the Site is located to the immediate south of the existing Waitara urban boundary, and is ideally positioned to facilitate a natural extension of the current residential area, as evidenced by its inclusion within the 'New Plymouth Land Supply Review 2007-2027[1]', being identified as one of the 'Future Urban Development' areas.

5.9 Raleigh Street is classified as an Arterial Road and runs generally north-south past the site. The carriageway comprises an approximately 6.5m sealed width, accommodating a single traffic lane in each direction with marked edge lines and a centreline, and grass berms on either side of the road. The carriageway alignment in the vicinity of the site is generally straight and level. Approximately two-thirds of the way along the Site boundary, heading north, the Raleigh Street posted speed limit changes from 80kph to 50kph, just south of the existing urban Waitara area.

5.10 Approximately 800m south of the Site, Raleigh Street connects with SH3 via a stop-controlled T-intersection. The intersection arrangement provides for separate left and right turns from Raleigh Street, with dedicated left and right turn lanes included on SH3 for vehicles entering Raleigh Street. SH3 operates with a posted speed limit of 100km/h.

[1] 'New Plymouth Land Supply Review 2007-2027' – Addendum Waitara Map 4

5.11 Johnston Street is classified as a Local Road and comprises a sealed 4m carriageway with grass berms on either side. The road provides access to around half a dozen residential dwellings and a farm.

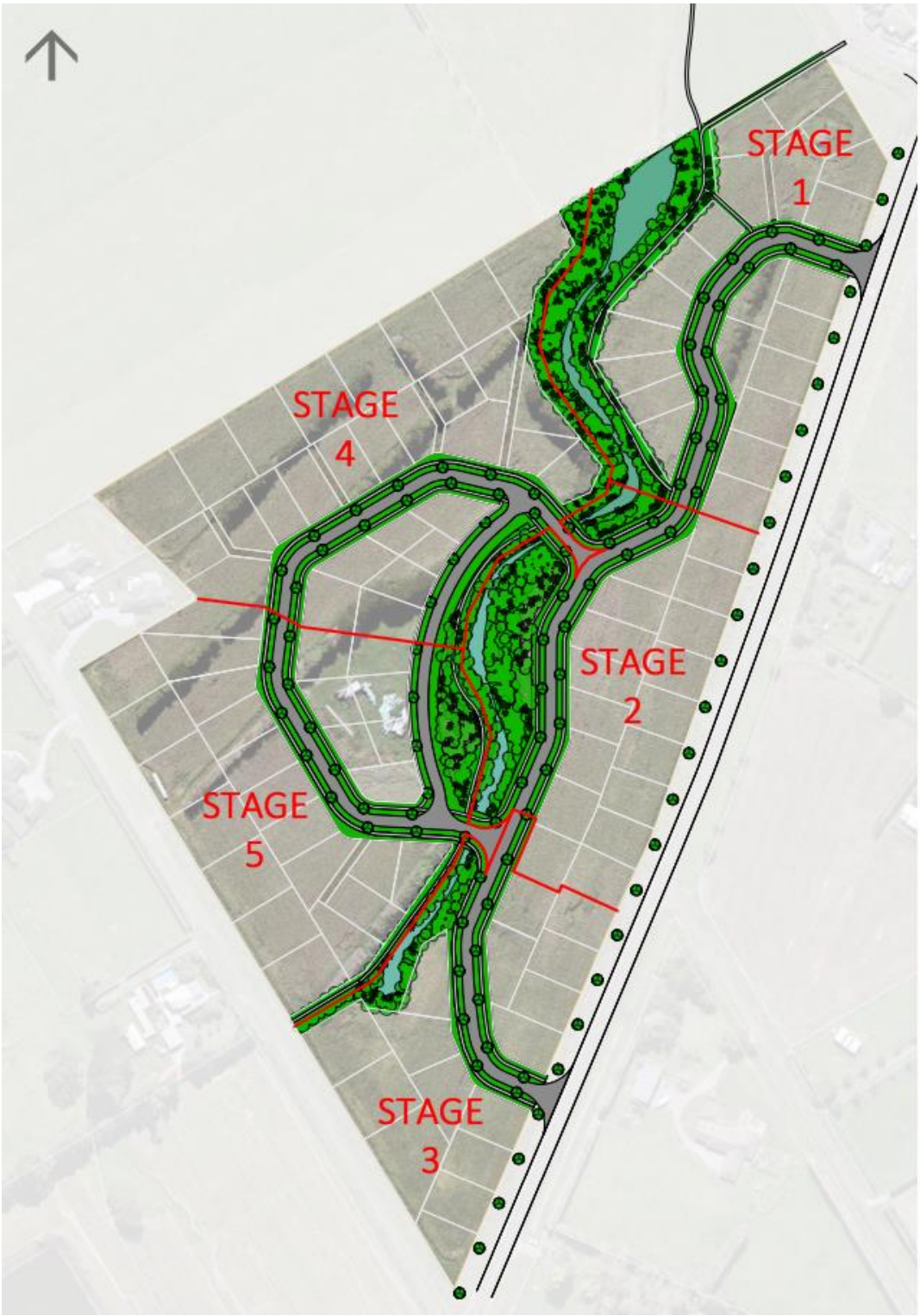
5.12 To understand the existing traffic patterns on the road network adjacent to the site, I have summarised the latest available traffic count data in the table below, alongside count data reported in the 2018 ITA Report.

Road	Location	2018 ITA Report		Latest Data	
		Count	Date	Count	Date
Raleigh Street	Between Johnston & Stafford Streets	2,700	March 2015	3,240	January 2019
Johnston Street	West of Raleigh Street	25	July 2013	25	July 2013
SH3	East of SH3A (ID:00300227)	15,500	2017	16,500	2020

5.13 Whilst traffic volumes on Raleigh Street and SH3 have increased from those reported in the ITA Report (which captured the latest available count at that time), these later traffic flows are, in my opinion, entirely in keeping with the form and function of the respective roads. At these existing levels, in my view both Raleigh Street and Johnston Street have capacity to accommodate additional traffic.

Proposed Plan Change Activity

5.14 The proposed ODP included in the Plan Change application sets out a vision for developing the Site to accommodate approximately 100-120 residential lots. A copy of the ODP is provided below, showing an indicative staging plan for development at the site.



5.15 I note the above version of the ODP included in the Plan Change application has been updated slightly from the version included in the ITA Report, in that it shows approximately 10 lots (rather than six) accessed off Johnston Street, and a slightly lesser total of 108 lots compared with the 120 lots I assumed when assessing the traffic and transport impacts of the development. I have continued to assume a possible yield of 120 lots.

Site Access

5.16 As shown within the ODP, access to the Site will be achieved principally off Raleigh Street via two new priority give-way intersections. This is in keeping with good practice wherein:

(a) vehicles are not required to route long distances internally, before accessing the external road network;

(b) demand is spread across more than one intersection to assist efficiency for access/egress to and from the site;

(c) vehicles can route via the most convenient Site intersection, in consideration of their wider network trip.

5.17 As proposed, the locations for the new Site intersections are, in my opinion, appropriate and logical, and through development of suitable detailed design are capable of providing safe access and egress on Raleigh Street.

5.18 Lots fronting Raleigh Street will be accessed via individual vehicle crossings, helping to establish the transition to a more residential road environment along the Site frontage, on the inbound approach to the Waitara urban area. No new road connections on to Johnston Street are proposed, with only the ten lifestyle lots having direct frontage to the street.

Site Traffic Generation and Assessment of Effects

5.19 The expected traffic generation of the completed subdivision development is set out in Chapter 10 of the ITA Report, and assuming full development of 120 residential lots draws from a combination of industry sources[2] for residential dwellings. The analysis concludes that the Site could be expected to generate total trips of:

(a) 102 vehicles per hour during the AM and PM weekday commuter peaks; and

(b) 1,080 vehicles per day.

5.20 Of these, it is predicted that around 30% would be local trips to and from Waitara to the north, with the balance routing to and from SH3 to the south. Such volumes translate to around 1-2 additional vehicle movements being

[2] Including the 'RTA Guide to Traffic Generating Developments' and 'Trips Database Bureau' surveys for residential developments in New Plymouth – peak hour rate of 0.85vph and daily rate of 9vpd

generated on the adjacent road network, during the peak hours, noting that these will occur gradually over time as the Site is developed.

5.21 In my view, the traffic additions are not large, and are capable of being appropriately accommodated on the immediate road network noting that daily flows on Raleigh Street are shown to sit well within the typical volumes for an Arterial route.

5.22 In my assessment, the resultant traffic additions at the SH3 intersection will give rise to on average around 1 extra vehicle turning to or from Raleigh Street per minute, during the peaks. Whilst in my view such volumes are not large, and sit well within the day to day fluctuations that routinely occur on this part of the network, I acknowledge there is an existing safety issue that the NZ Transport Agency is currently seeking to address along the SH3 corridor between Waitara and Bell Block. As I understand it, these improvements include:

(a) a permanent speed limit reduction from 100kph to 80kph on SH3 from Mahoetahi Road intersection north to Waitara; and

(b) the current give-way intersection of Raleigh Street SH3 will be closed, and a new roundabout introduced at the Tate Road / Waitara Road intersection with SH3, providing a safer connection between the highway and local road network.

5.23 The NZ Transport Agency has indicated the speed limit change will be physically implemented by the end of 2020, whilst construction of the roundabout is expected to begin in 2022.

5.24 Noting that if the proposed plan change were approved, and allowing for subsequent applications for staged resource consents, it is possible that some residential activity at the Site be completed and occupied prior to 2022. As I describe at Section 6, the NZ Transport Agency has expressed a safety concern as to the risk of adding traffic to the existing Raleigh Street/SH3 intersection. As described by Ms. Hooper in her evidence, I agree that traffic activity of subdivision staging could be adequately controlled through the proposed Plan Amendments that would see early stages of the development considered as a controlled activity, with later stages a restricted discretionary activity, subject to it being demonstrated that associated traffic additions can be adequately and safely accommodated on the network, prior to the SH3 roundabout being constructed.

5.25 Such a mechanism is, in my opinion, entirely appropriate as a means of safeguarding the operation of the Raleigh Street connection to SH3, as sought by the NZ Transport Agency.

Pedestrians and Cyclists

5.26 The ODP includes provision for good pedestrian and cycle connectivity between the Site and the established Waitara urban area to the north, including a new footpath and berm that extends along the Raleigh Street site frontage. Dedicated internal walking and cycling connections are also proposed to extend to and provide through-site connectivity to Ranfurly Street to the north, and Johnston Street to the south.

5.27 I consider that active mode connections between the site and the existing Waitara residential extent are appropriately provided for within the ODP.

6. SUBMISSIONS

6.1 I have reviewed the submissions received from nearby residents and the NZ Transport Agency.

6.2 A number of submissions raise transportation matters, which can be grouped as relating to:

(a) Traffic speeds on Raleigh Street;

(b) The effects of additional traffic on the local intersections along Raleigh Street;

(c) The suitability of Johnston Street for the traffic proposed;

(d) The appropriateness of sections having street frontage onto Raleigh Street;

(e) The need for footpaths on Raleigh Street;

(f) The effects on the intersection of Raleigh Street and SH3.

6.3 I address these matters in turn next.

<u>Traffic Speeds on Raleigh Street</u>

6.4 Several submitters have raised concerns around the current speed limit on Raleigh Street needing to be reduced to safely accommodate the proposed subdivision.

6.5 My ITA Report (at Chapter 7) included an assessment of the existing speed environment on Raleigh Street, as follows:

"the NZTA's Speed Management Guide ("SMG") requires that a Road Controlling Authority ("RCA") must review a speed limit when "there is significant change in the nature, scale and intensity of land use adjacent to a road". The proposed Plan Change, in comprising a development of more than 100 dwellings, can be considered to trigger such a requirement to reassess the speed limit along the adjacent section of Raleigh Street."

6.6 It is my opinion therefore that the environment of Raleigh Street will inevitably change because of the subdivision development, prompting a downward revision of the current 80kph speed limit which extends across the southern portion of the Site. I note there are good outcomes that can be achieved by this, including in particular the ability to integrate with the surrounding environment, rather than developing an inward-facing subdivision as would be the case with retention of the current 80kph limit. The details of this speed limit change will be the subject of a separate process to be advanced by the Council, in which respect I understand this section of Raleigh Street adjacent to the Site has already been identified for such a review[3].

6.7 Notwithstanding the above, initial development of the Site's northern portion, as illustrated in the ODP indicative staging plan I included earlier at Paragraph 5.14, provides for establishment of the subdivision's first new intersection within the existing 50kph limit. This will allow early changes to the current roading environment to be initiated, to support the future speed limit reduction on Raleigh Street to the south.

<u>The effects of additional traffic from the development on the local intersections along Raleigh Street</u>

6.8 Submitters have raised concerns around the existing Raleigh Street intersection arrangements with Johnston Street and Borthwick Street, on the basis that neither currently have formal right turn lanes for traffic entering these side streets, and on the basis of their proximity and interaction with the proposed new Site intersections.

6.9 As I have described earlier (at Paragraph 5.19), the completed subdivision development is forecast to generate around 100vph during the peaks, equating to approximately 1-2 additional vehicle movements on Raleigh

[3] S42A Report (paragraph 11.85)

Street per minute. The associated increase in traffic on Johnston Street is assessed as amounting to an additional 8-9vph.

6.10 Such additions will not, in my view, fundamentally change the existing traffic characteristics of Raleigh Street, and do not trigger the need for any changes to the established intersection arrangements at Johnston Street or Borthwick Street. By way of context, I note that dedicated right turn provisions are typically only required when the quantum of through traffic volumes and turning traffic reach specific thresholds, as identified in the industry standard Austroads[4]. For roads with peak hour volumes equivalent to Raleigh Street, regular peak period right turning volumes of up to 20 vehicles can be adequately accommodated without dedicated right turn bays. Even with development traffic added, neither Johnston Street nor Borthwick Street are considered to generate this level of demand.

6.11 In my view the existing arrangements at these two existing intersections will continue to operate safely with development traffic added to the network, in the same manner that they have to date.

6.12 In regard to the effects of the proposed new Site intersections on the safe and efficient performance of these established side road accesses, I gave specific consideration to the form, separation distances and current speed limit on Raleigh Street in advising the proposed new Site intersection arrangements, the final designs for which will be developed in due course and will be subject to approval by Council. In my opinion, there will be no adverse effects or confusion between drivers turning at the new Site intersections and the established intersections nearby.

<u>The Suitability of Johnston Street for the Traffic Proposed</u>

6.13 Several submitters raise concerns around the current narrow sealed width of Johnston Street and its associated ability to accommodate additional subdivision traffic, including in respect of its current use by occasional larger agricultural vehicles.

6.14 As described in my ITA Report, Johnston Street has a current sealed width of around 4m and, on occasion where two opposing vehicles meet, use of the grass berms outside of the carriageway is typically required for vehicles to pass. Such practice is not uncommon for low trafficked rural roads.

6.15 The introduction of approximately ten new dwellings that connect off Johnston Street would lead to around 8-9 additional vehicle movements on

[4] Austroads 'Guide to Road Design Part 4: Intersections and Crossings: General' (2017)

this road during the peak hours, with such flows expected to be predominantly tidal in nature (i.e. exiting to Raleigh Street in the AM, and entering in the PM).

6.16 In my opinion, whilst the addition of this development traffic could result in a small increase in the frequency of occasions whereby opposing vehicles on Johnston Street could meet, this would manifest as a minor loss of convenience rather than introducing any adverse safety impact.

6.17 By way of quantifying this change, I have undertaken a probability analysis[5] of the frequency at which opposing vehicles would meet on the section of Johnston Street fronting the Site, for both current traffic flows and the future scenario where development traffic associated with ten new dwellings is added to the carriageway.

6.18 This analysis shows that for the AM and PM peak hours, the existing traffic flows would result in a vehicle typically meeting an opposing vehicle approximately once a fortnight. With development traffic added, this frequency would change to approximately once a week. In such cases vehicles would incur a small delay as they manoeuvre past each other, as currently happens safely at present, as evidenced by the lack of any reported crashes on Johnston Street. Again, in my opinion the traffic additions generated by the proposed development can be adequately accommodated within the existing Johnston Street carriageway.

6.19 My views aside, HIL has volunteered to widen Johnston Street in the manner I describe from Paragraph 7.12.

<u>The Appropriateness of Sections Having Street Frontage onto Raleigh Street</u>

6.20 A number of submitters have raised concerns around the proposed direct driveway access on to Raleigh Street, for those lots fronting the street.

6.21 Due to the nature of the development Site location, it is dependent on Raleigh Street for its primary access. In this regard I note that it is important that Raleigh Street balances its "place and link" function as an Arterial Road, whilst creating opportunities for residential development at the Site to activate the street frontage, commensurate with the shift to a more

[5] This analysis uses a Poisson distribution test to determine the probability of two independent events occurring simultaneously, i.e. the probability of a vehicle travelling west along Johnston Street meeting an opposing vehicle travelling east within the development site frontage, and adopts the following assumptions: operating speed = 40km/h; section of one-lane carriageway = 330m; peak hour movements on carriageway assuming 10 new dwellings; peak hour directional splits as per ITA Report Section 10.2

"suburban" environment. There are a number of ways to enable good frontage without providing undue traffic conflict, including provision for vehicles to turn on-site and removing the need for reverse manoeuvres onto Raleigh Street, facilitating safe and convenient access to and from individual lot driveways.

6.22 Further, and as I described earlier (Paragraph 6.6), the changing environment on Raleigh Street over time will support a downward revision of the speed limit, ensuring that Raleigh Street can continue to function as an Arterial Road within the emerging suburban environment, in an equivalent manner to that achieved on Raleigh Street to the north of the site within the existing Waitara urban area. That expanding urban extent will be reflected in changes to the built form of Raleigh Street, as I describe more from Paragraph 7.15, and also including with a footpath, as I describe next.

Footpaths on Raleigh Street

6.23 Several submitters advocate that footpaths should be provided on Raleigh Street along the Site frontage.

6.24 As I described earlier (at Paragraph 5.26), the ODP includes provision for a new footpath along the length of the Site's frontage to Raleigh Street, to provide safe and convenient connectivity for pedestrians between the Site and the urban boundary of Waitara to the north. Such provision would therefore accommodate both new demand generated by the development, as well as providing a marked improvement to safety and amenity for those pedestrians currently using the berm on this part of Raleigh Street.

The Effects on the Intersection of Raleigh Street and SH3

6.25 A number of submitters (including the NZ Transport Agency), have raised concerns that the additional development traffic would put further pressure on the Raleigh Street / SH3 intersection to the south of the Site, which is already experiencing capacity and safety issues.

6.26 I note that at the time of preparing my ITA Report, it was assumed that improvements would have been made in relation to the Raleigh Street intersection as part of the NZ Transport Agency's 'SH3 Waitara to Bell Block' works by the time of subdivision, such that subdivision traffic would be added into this improved roading environment. The latest indication from the NZ Transport Agency is that the roundabout at Tate Road could now be programmed for 2022. Notwithstanding this, and as described in my ITA

Report[6], *"it is recognised there is some ability to revisit the effects of development traffic on the Raleigh Street intersection with SH3 to the south, if NZTA's programmed improvement works are delayed. Such a contingency could appropriately be provided for at the resource consent stage, through implementation of associated consent conditions which required assessment of the intersection's performance over time, relative to the levels of subdivision traffic that could be added to the network".*

6.27 Again, as described by Ms. Hooper in her evidence, changes to the proposed Plan Amendments have been made that would see early stages of the development considered as a controlled activity with later stages a restricted discretionary activity, until such time as improvements in the form of a roundabout are in place at the SH3 intersection, as planned by the NZ Transport Agency.

6.28 I consider this is an appropriate mechanism to ensure that an appropriate level of assessment of development traffic is undertaken to quantify effects, to the satisfaction of the Council and the NZ Transport Agency, prior to consent being granted.

7. RESPONSE TO OFFICERS' REPORTS

7.1 I have reviewed the Section 42A Report (**S42A Report**) prepared by Messrs Horrell and Wesney, consultant planners for the Council, and the Technical Review of Transport Matters (**Peer Review**) prepared by AECOM contained at Appendix 6. I will comment on these reports separately as follows.

Transport Peer Report from AECOM

7.2 The Peer Review report addressing transport matters prepared by AECOM raises the following points that I wish to address:

(a) subdivision intersection spacing and design;

(b) speed limit on Raleigh Street and individual lot access;

(c) widening of Johnston Street and Raleigh Street to accommodate subdivision traffic.

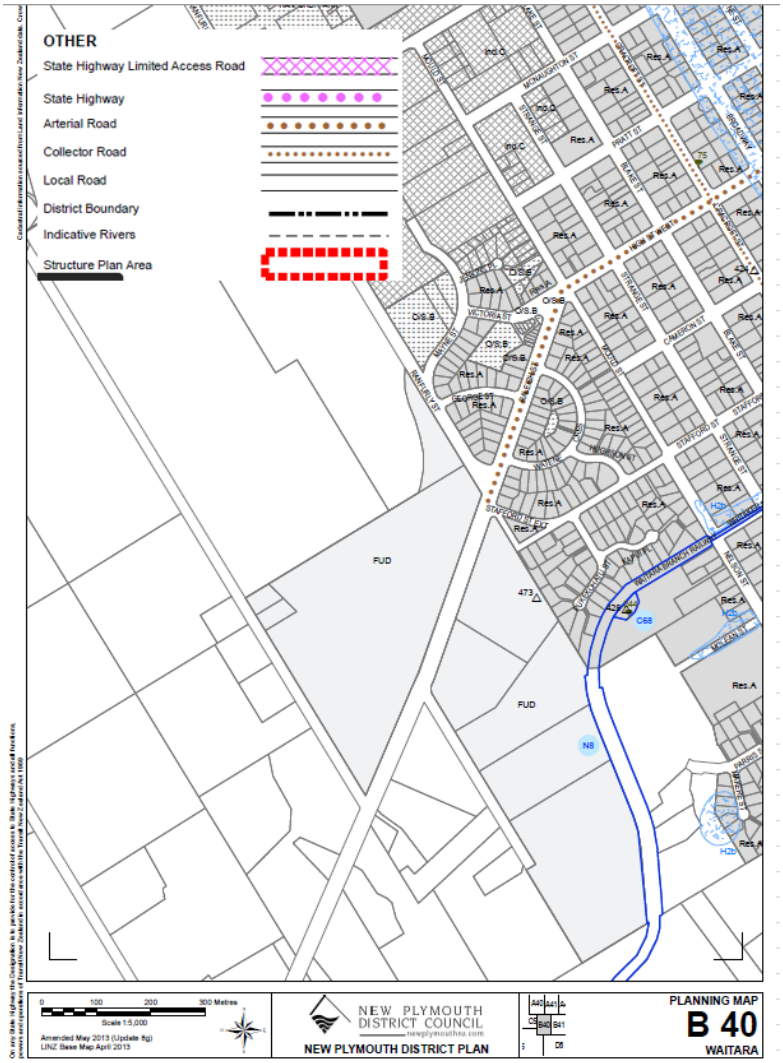
<u>Subdivision intersection spacing and design</u>

7.3 The Peer Review report raises concerns around the locations for the two new proposed Site intersections not satisfying the District Plan spacing

[6] ITA Report, Section 10.3 Pg.15

requirements, relative to the roading classification of Raleigh Street and current posted speed limits in place, and the lack of dedicated provision for traffic turning into the Site.

7.4 I note that both the Council's Reporting Officers' reports describe the section of Raleigh Street adjacent to the Site as a 'Collector' road. However, as shown in the District Plan Map B40 (repeated below), there is no such Collector road classification of Raleigh Street adjacent to the Site frontage, meaning that technically the District Plan defines this section of the network as a 'Local' road, which has reduced separation distances for new accesses under the District Plan standards.



7.5 Notwithstanding this, my ITA Report (Section 9.2) includes detailed assessment of the proposed new intersections, noting the northern access is sited within the existing 50km/h speed environment and whilst deviating slightly from the District Plan separation distance standard (by 10m), it achieves an equivalent separation distance as the existing Ranfurly Street /

Watene Crescent intersection with Raleigh Street just to the north, which to date is shown to operate without any safety issues.

7.6 With regard to the Site's new southern intersection, and adopting the operative District Plan's Local road classification, the proposed location satisfies the separation distance requirements to Johnston Street for the current 80kph speed limit. Notwithstanding this, and noting the Proposed District Plan anticipates the length of Raleigh Street adjacent to the Site will have a future 'Arterial' road classification, appropriate consideration of this intersection design will need to be undertaken at the time of resource consent, including in view of a reduced posted speed limit along Raleigh Street. I note in this regard that the proposed location of the southern intersection has been purposefully selected to be midway between the Borthwick Street and Johnston Street intersections, separated from each by approximately 110m, being a distance substantially greater than the existing and proposed northern intersections, and that would otherwise exceed the requirements for a 50kph speed environment.

7.7 Regarding the formation of these two new intersections, my Section 92 Response included indicative intersection designs that show turn lanes can be accommodated on Raleigh Street to provide for vehicles turning into the subdivision to wait clear of through traffic. In my view it is proper that the exact design be assessed at the resource consent stage as potential changes to the Raleigh Street speed limit and road environment come online, as acknowledged and agreed in the Peer Review.

<u>Speed limit on Raleigh Street and individual lot access</u>

7.8 The Peer Review raises some concern around the ability to safely accommodate individual lot access off Raleigh Street, with the current 80kph speed limit in place.

7.9 As I have described earlier at Paragraphs 6.21 and 6.22, the future changing environment on Raleigh Street including a downward revision of the existing speed limit as currently being progressed by the Council, will present new opportunities for direct lot access to this road frontage. Subsequent resource consent applications will therefore need to establish the ability to achieve safe and efficient direct access for individual lots onto Raleigh Street, on the basis of the emerging road environment at the time.

<u>Widening of Johnston Street and Raleigh Street to accommodate subdivision traffic</u>

7.10 In considering the development Site traffic additions to the network, the Peer Review in referencing NZS4404:2010 Land Development and Subdivision Engineering' ("NZS4404") recommends that consideration be given to widening of the current Johnston Street and Raleigh Street carriageways.

Johnston Street

7.11 The Peer Review notes that NZS4404 generally points to a requirement to provide two-way trafficable widths (of a minimum 5.5-5.7m) for new roads that serve more than 6 dwellings.

7.12 In this respect I note that the application of NZS4404 is not mandatory, and that the provisions are more related to new roads and not to changes to existing roading infrastructure. Like Johnston Street (which is formed to an approximate 4m width), there are a number of rural roads around the District which serve more than 6 dwellings and do not meet the carriageway width requirements set out in NZS4404. This does not mean however that they cannot operate safely and efficiently.

7.13 Such standards in this case relate to a matter of convenience, rather than safety, with my analysis (at Paragraph 6.18) showing the frequency of opposing vehicles meeting on Johnston Street with the additional development traffic added is not significant. In my view, the carriageway can continue to operate in a safe and appropriate manner with the anticipated future traffic flows.

7.14 Notwithstanding my view here, HIL volunteers to upgrade the road to a 5.5m wide carriageway standard in line with the provisions of NZS4404, still in its rural form.

Raleigh Street

7.15 The Peer Review, in noting Raleigh Street currently accommodates more than 2,000 vehicles per day ("vpd"), recommends the current 6.5m width formation be reviewed in the context of NZS4404, which suggests an 8.4m[7] wide carriageway for the current road volumes.

7.16 Whilst I consider it is wholly appropriate for Council to review the current roading formation of Raleigh Street, including the section adjacent to the Site, I do not consider that the additional demands generated by the proposed subdivision triggers the need for wholesale upgrades to be made.

[7] NZS4404 – Table 3.2 'E13' Suburban context Collector Road, 2 x 4.2m movement lanes to accommodate between 2,000-8,000vpd

7.17 Rather, with the proposed internal Site cycling provision and associated connections to the established Waitara urban area to the north, and development of a new footpath along the Raleigh Street Site frontage, I consider provision for active mode demands generated by the Site to be well met, and that any changes to the current Raleigh Street carriageway in response to vehicular traffic additions would be limited to localised widening at the intersections (as illustrated in the indicative designs included in the Section 92 Response).

7.18 Notwithstanding the above, I note the Plan Change provisions as proposed will require appropriate assessment of subdivision traffic to be undertaken at the resource consent stage, ensuring any changes to the existing roading arrangements outside of the development Site are appropriately assessed at that time, prior to consent being granted.

S42A Report

7.19 In drawing from the Peer Review, the Council's section 42A report addresses transport matters from Paragraph 11.72, and finds that (Paragraphs 11.97-11.99):

"…I consider the new internal road layout and new intersections with Raleigh Street as shown on the Proposed Structure Plan is appropriate. This conclusion is made on the basis of the speed limit on Raleigh Street is currently being reviewed and would change to 50kph.

…In terms of the effects related to State Highway 3, at this time, I seek further information from the applicant and Waka Kotahi on potential Plan provisions on how sequencing and timing of subdivision and development in the plan change area can be related to the delivery of State Highway works.

For all other matters, I consider these can be appropriately addressed at the time of subdivision consent application."

7.20 With the exception of development Site traffic impacts on the SH3 intersection to the south which I address in the following section, the S42A Report concludes (at Paragraph 11.110) "*the existing subdivision rules and those proposed in the plan change request appropriately address the traffic effects*." I agree with this conclusion.

7.21 These amendments are reflected in the attachment to Ms Hooper's evidence.

8. CONCLUSION

8.1 My evidence has assessed the transport matters that I am aware of in relation to the Application and I can safely conclude that:

(a) As I have set out and described, further clarity and provision changes have been made since the application was lodged, which confirm a practical and safe transport outcome can be achieved for all non-vehicle and vehicle users.

(b) In consideration of the amended Plan Change provisions as now proposed, there is nothing in the submissions or the S42A Report which suggest to me there are fundamental issues that still need to be addressed or require me to reconsider my findings.

(c) I conclude from a traffic and transportation perspective that the development enabled by the Proposed Plan Change request can be established appropriately and safely in the manner contemplated by the Outline Development Plan and proposed zoning provisions.

Mark Grant Georgeson
Stantec New Zealand

9 November 2020