

Appendix 3 – Transportation Analysis (Gray Matter Limited)

Proposed Private Plan Change 35 – Te Awamutu Large Format Retail Centre

20 July 2026

7 July 2026

Alice Morris
Waipā District Council



Sent via email: alice.morris@waipadc.govt.nz

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Dear Alice,

WAIPĀ PRIVATE PLAN CHANGE 35 (PPC 35) – TRANSPORT REVIEW

1. SUMMARY

We have reviewed the transport effects of PPC 35. In principle, we support a signalised intersection at Access 1 as the preferred solution, provided that the layout is supported by robust traffic modelling and is updated to include a left-turn lane and appropriate pedestrian facilities. However, the current transport assessment does not yet provide enough information to confirm that all transport effects can be appropriately managed.

Key outstanding matters include:

- = Strengthening the robustness and transparency of the traffic modelling.
- = Confirming and appropriately justifying the trip generation assumptions for Area A.
- = Undertaking a comprehensive transport effects assessment based on worst-case trip generation scenarios to demonstrate the safe and efficient operation of both Access 2 and the private road (Access 1).
- = Assessing the suitability and long-term capacity of the private road to accommodate future traffic demands.
- = Securing the necessary intersection and pedestrian infrastructure upgrades through the plan change process, including provision of a left-turn lane.

Some of these matters can be addressed at detailed design given that activities within the Te Awamutu Large Scale Retail Development¹ are controlled activities. Where detailed design is to occur at a later stage, appropriate plan provisions should be included to ensure these issues are robustly addressed and the required transport outcomes are achieved.

2. BACKGROUND

Waipā District Council is currently processing Private Plan Change 35 (PPC35). This letter outlines our transportation review of the proposed plan change and summarises the key transportation matters arising from the information provided.

This review has been prepared based on the following information:

- = Transportation Assessment (Traffic Engineering & Management Ltd (TEAM), 26 September 2025)
- = Summary of decisions requested in submissions to Proposed Private Plan Change 35 – Te Awamutu Large Format Retail Centre (dated February 2026)
- = Further information response (Traffic Engineering & Management Ltd (TEAM), dated 18 September 2025)
- = Revised Te Awamutu Large Format Retail Centre plan (May 2026)

3. PROPOSAL

PPC 35 seeks to amend the Operative Waipā District Plan as follows:

- = Rezone 638 Cambridge Road (Lot 1 DPS 10271) from Medium Density Residential Zone to Commercial Zone with associated amendments to planning maps

¹ Waipā DC Rule 6.4.1.2

- = Amend Appendix S1 – Te Awamutu Growth Map to remove 638 Cambridge Road from the T11 Residential Growth Cell
- = Replace the existing Appendix S6 – Te Awamutu Large Format Retail Site Plan with the revised plan shown below
- = Amend performance standards and assessment criteria within Sections 6 (commercial zone) and 21 (assessment criteria and information requirements).

The proposed layout is shown in the figure below.



Figure 1: Proposed site layout

For the purposes of this review, we have maintained the access numbering used in the Transportation Assessment as shown in the image below.

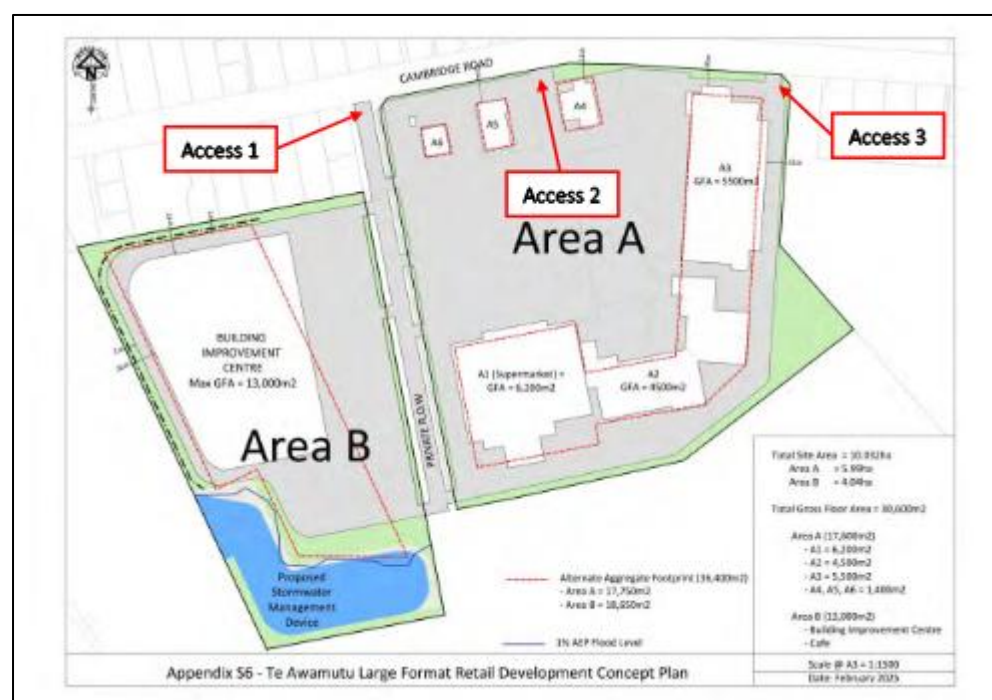


Figure 2: Existing access locations and transport assessment referencing

4. TRANSPORTATION REVIEW

We have reviewed the Transportation Assessment provided by the Proponent as well as the further information response. The Transportation Assessment concludes that traffic signals are required at Access 1 to accommodate development traffic. Our review of the Transportation Assessment is summarised in the sections below.

4.1. Compliance with ITA Requirements

The Proponent has not provided an ITA that complies with all requirements for an Integrated Transport Assessment as set out in the Waipa District Plan. The ITA focuses on intersection selection to demonstrate that access provisions are appropriate.

The proposal is likely to generate more than 1,500 veh/day which requires a Broad Integrated Transport Assessment. We note that an ITA is likely to be required at resource consent stage to address the following:

- = Internal access arrangement
- = Loading and servicing requirements on-site
- = Parking effects

Attachment A includes a summary of the Proponent's transport assessment against Waipā District Plan requirements for a Broad ITA. In summary, the Transportation Assessment is incomplete. We have identified areas where more information and assessment is required including:

- = Further assessment of trip generation relating to Area A and effects at access 2
- = Further design and analysis of access 1
- = Updated sidra modelling including:
 - Networked scenarios
 - Site layouts
 - Phasing information

4.2. Existing Transport Environment

4.2.1. Crash History

Section 3.1 of the Transportation Assessment includes a summary of crashes. We agree that there does not appear to be a significant crash issue within the vicinity of the site.

4.2.2. Traffic Volumes

Section 3.2 of the Transportation Assessment provides a summary of traffic surveys conducted at the three vehicle crossings. The Transportation Assessment states that the surveys were undertaken on Thursday 18 May 2023 and Saturday 20 May 2023 and were repeated on Thursday 20 March 2025 and Saturday 22 March 2025 to determine the following:

- = Traffic growth on Cambridge Road
- = Existing data for vehicle movement to and from the site
- = Pedestrian movements

The surveys and diagrams included in the Transportation Assessment provide a reasonable level of detail regarding traffic movements at Accesses 1 and 2 and on Cambridge Road. Vehicle Access 3 was not resurveyed in 2025 as it was assumed that vehicle movements were unlikely to have changed significantly. This is considered an appropriate approach.

The Transportation Assessment compares the survey against Council collected survey data from the following week. The survey times differ slightly, as summarised in the table below, particularly for the Saturday peak survey. The biggest difference between the surveyed volumes is around 10% in the AM peak, which is considered within daily fluctuations. We agree that the surveyed data is appropriate as a record of the existing environment. Therefore, we have not completed additional surveys at the vehicle crossings/access or Cambridge Road to validate the Proponent's survey information. We have relied on the Proponent's survey data.

Peak period	Proponent Survey		Council Survey		Comments
	Survey period	Total volumes	Survey period	Total volumes	
AM Peak	08:15-09:15	901 veh/hr	08:00-09:00	992 veh/hr	Council survey approximately 10% higher
PM Peak	16:30-17:30	1,220 veh/hr	16:00-17:00	1,188 veh/hr	Team survey around 3% higher than Council survey
Saturday	10:15-11:15	1,169 veh/hr	11:00-12:00	1,117 veh/hr	Team survey is around 5% higher than Council survey

Table 1 Survey comparison

The Transportation Assessment does not include a summary of existing daily traffic volumes or a description of the surrounding road hierarchy. For the purposes of this review road hierarchy classifications have been determined using NZTA and Waipa DC GIS information.

Mobile Roads indicates that the average daily traffic (AADT) of Cambridge Road is 4,954 veh/day. As a comparison we have averaged the morning and afternoon peak counts provided by the Proponent and assumed those peak hours represent about 10% of the day's total traffic. On this basis, Cambridge Road carries about 6,900 vehicles per day. Under the future development scenario, this is expected to increase to about 10,000 vehicles per day. For the purposes of this review we have used the estimated ADT based on survey volumes.

Cambridge Road is classified as an Urban Connector outside the subject site using the ONF and a Major Arterial Road based on Waipa DC transportation maps². The posted speed limit is 50 km/h. The One Network Framework (ONF) map is shown in the figure below.

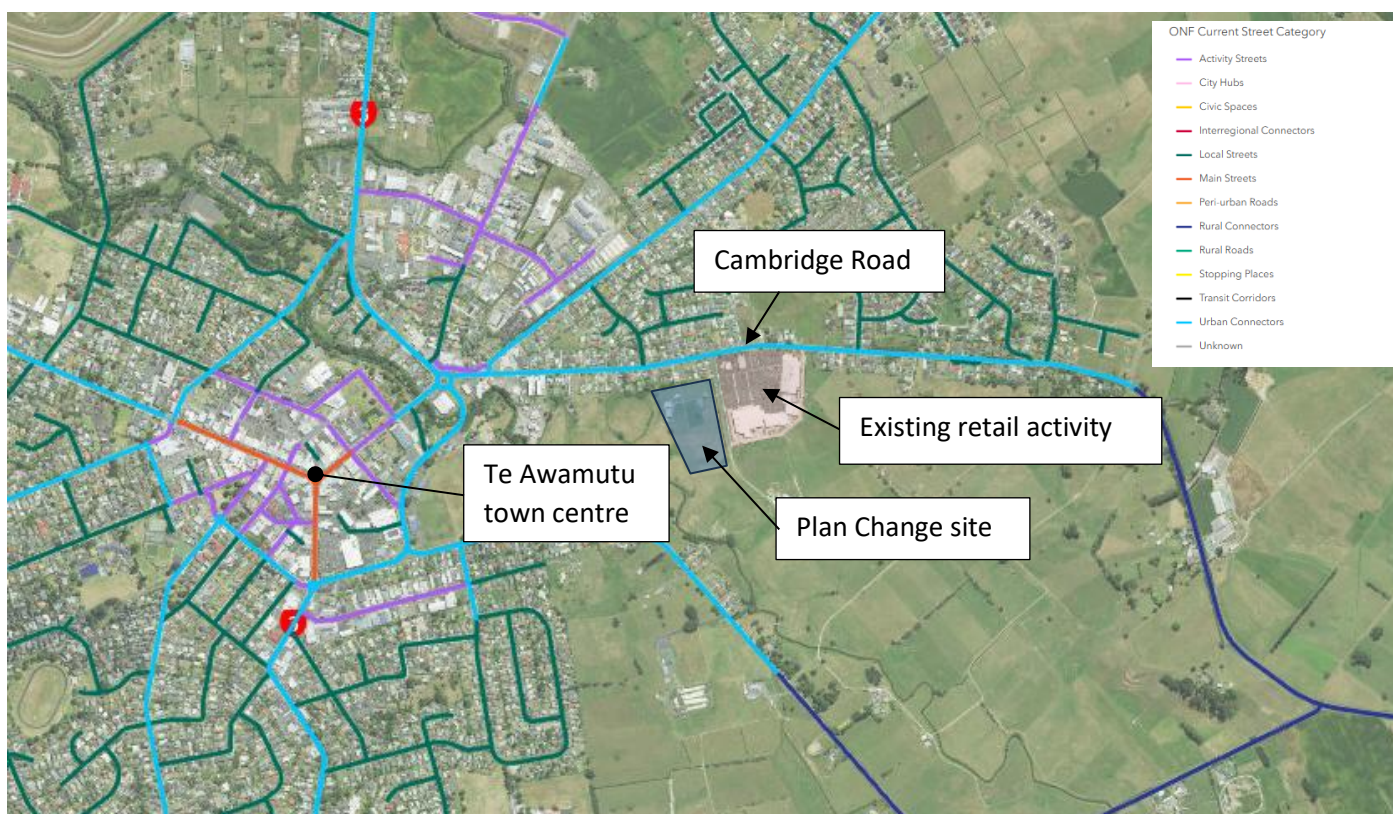


Figure 3: One Network Framework map³

4.2.3. Pedestrian Counts

² <https://www.waipadc.govt.nz/our-services/mapsonline>

³ <https://nzta.maps.arcgis.com/apps/mapviewer/index.html>

The Transportation Assessment includes pedestrian and cyclist count data (section 3.2.4), which indicates a noticeable level of demand for crossing Cambridge Road (north-south) during peak periods. Specifically, the observed peak-period crossings were:

- = Approximately 81 pedestrian and cyclist crossings on a Thursday, and
- = Approximately 33 pedestrian and cyclist crossings on a Saturday.

Based on the information and survey provided in the Transportation Assessment, there were approximately 69 pedestrians crossing Access 1 during the Thursday survey.

Based on these figures, there is a clear and high demand (1 movement per minute) for pedestrian and cyclist movements across both Cambridge Road and across Access 1.

4.3. Traffic Generation and Distribution

The Transportation Assessment (Section 3.4) states that the trip generation assessment is based on the following assumptions:

- = Calculates the likely traffic movements and distribution generated by the future development located within Area B.
- = Distributes the additional traffic generated by the Area B development to the Area B access (Access 1).
- = Given that the existing Mitre 10 development located in Area A will be replaced by a similar large format retail activity, the existing traffic movements at Access 2 have been assumed to remain unchanged.

The Proponent's trip generation is based on surveys for a Mitre 10 store in Warkworth. The assessment states that this is common practice for Mitre 10 developments elsewhere in New Zealand. The survey was undertaken during Labour Weekend 2022. We note that survey data collected during a public holiday period does not necessarily reflect typical day-to-day travel patterns (likely to be higher than typical).

There is a risk that the trip generation does not reflect site-specific travel characteristics. A survey of the existing site would have been helpful to confirm current patterns. We also note that the existing site is smaller than the proposed development, which may influence the applicability of the survey data.

No validation of the Mitre 10 trip generation against trips generated by the existing site has been completed. There is a risk that the trip generation used in the assessment may not reflect how the existing site operates.

It is unclear what type of activity will replace the existing Mitre 10 in Area A. The Commercial zoning would allow for wide range of activities to be established within the existing building, noting that any development in general accordance with the Te Awamutu Large Scale Retail development would be a controlled activity.

Different retail activities such as multiple smaller retailers housed within the existing site will have different trip generation characteristics to the Mitre 10. There is a risk that the transport assessment underestimates the potential trips entering and exiting Access 2. This could result in:

- = Safety and efficiency effects at Access 2 which have not been mitigated
- = Internal queueing effects at Access 2
- = Adverse transportation effects at the Cambridge Road /Access 1 intersection as a result of increased trip generation from the retail activities in Area A.

We have assessed the potential trip generation associated with repurposing the existing Mitre 10 building in Area A for a more general retail activity. Our summary of the estimated trip generation is provided in the table below.

Land use	Area	Peak hour trip generation	Trips
Transport Assessment Mitre 10 trip generation	5,500m ²	4.5 trips/100m ²	248 veh/hr

Land use	Area	Peak hour trip generation	Trips
85 th %ile retail trip generation RR453 ⁴		17.2 trips/100m ²	946 veh/hr

Table 2 Area A retail trip generation

Based on the assessment above, there is a risk that trip generation from retail activities within Area A may be significantly underestimated. This means the assessment of effects at Access 2 may not be sufficiently robust to provide confidence that the effects can be managed to an acceptable level.

In our view the following remains unresolved:

- = Survey trip-generation data may not reflect existing travel patterns at the current Mitre 10. No validation against existing Mitre 10 activity has been undertaken.
- = The effects at Access 2 may be underestimated by relying on existing trip generation for the current large-format retail activity as a basis for future retail trips when more intensive retail activities could take place.

4.4. Intersection Selection

The Transportation Assessment (Section 3.5) summarises the options analysis used to determine the preferred intersection form for Access 1. We understand that maintaining safe pedestrian connections to the retailers, along with the management of the existing accesses, was a key consideration. The following three options were assessed:

- = Option 1: existing intersection control with the addition of a shared path on Cambridge Road
- = Option 2: roundabout with shared path on Cambridge Road
- = Option 3: traffic signals with a shared path on Cambridge Road

The assessment includes SIDRA modelling, but it does not include a multi-criteria analysis to compare the different intersection forms. The assessment is high level and appears to focus on providing the best level of service for pedestrians. While the methodology is not fully supported, in principle the traffic signals option appears to be the appropriate solution for this location.

4.4.1. Sidra Intersection Modelling

The Transportation Assessment includes SIDRA intersection modelling to assess the efficiency effects of each option. The SIDRA models have been networked for Accesses 1 and 2, which is appropriate.

Further modelling was completed in response to the further information request from WDC. The further information appears to be based on single-intersection analysis rather than the network analysis provided in the Transportation Assessment. This is discussed further below. It is also unclear which layouts were used to model the intersection.

No signal phasing information has been provided for Option 3. As a result, it is not possible to confirm whether the traffic modelling assumptions are appropriate or representative of the proposed operation. The intersection is reported to operate at Level of Service (LOS) C, which is an acceptable level of operation for signalised intersections on arterial roads. In practice, road controlling authorities such as Hamilton City Council (HCC)⁵ aim for intersections on arterial routes to operate better than LOS E during peak periods, corresponding to average delays of approximately 55 seconds or less per vehicle.

The assessment demonstrates that the signalised intersection operates at an appropriate level. However, the following information is required to confirm that the modelling is robust:

- = Network analysis for the updated scenarios used in the further information response, including 40% growth applied to turning movements
- = SIDRA layouts showing turn-lane lengths
- = SIDRA signal phasing and timing data

⁴ Based on medium shopping centre trip generation rate – Table C.1,

⁵ Hamilton City Council Rule 25.14.4.3 e (i) (a)

4.4.2. Intersection Selection

The assessment does not include a multi-criteria options analysis and appears to focus primarily on vehicle efficiency and pedestrian level of service. Other effects, such as safety outcomes, are not addressed in the assessment.

While Cambridge Road is not a state highway, we have tested Access 1 against the recently released State Highway Access Provisions⁶ as a guide to intersection form selection based on traffic volumes. The selection graphs combine Austroads turning warrants with broader guidance on intersection form selection.

Using the NZTA State Highway Provisions DSI risk chart and 10,000 veh/day on Cambridge Road, the minor road traffic volumes would need to be around 8,500-9,000 veh/day for a roundabout to have greater DSI savings than a priority-controlled intersection (shown as yellow dashed line). Based on the expected trip generation of around 7,000 veh/day an intersection with a right turn bay is likely to have a lower DSI compared to a roundabout based on the NZTA guidance (blue lines in the figure below).

While a signalised intersection is not an option on this graph, the Guide states that “Larger (>250 vpd) urban development accessways which effectively create a T-intersection, Figure 8-3 below provides the approximate major and minor road AADTs in urban areas where the installation of a roundabout will likely provide the best outcomes in reducing DSI. For larger developments, the use of traffic signals may be appropriate depending on the mix of traffic and vulnerable user volumes.”

In principle we agree that traffic signals are the appropriate intervention for this location, given the traffic volumes and assessment against NZTA guidance for access provision in a 50km/h zone.

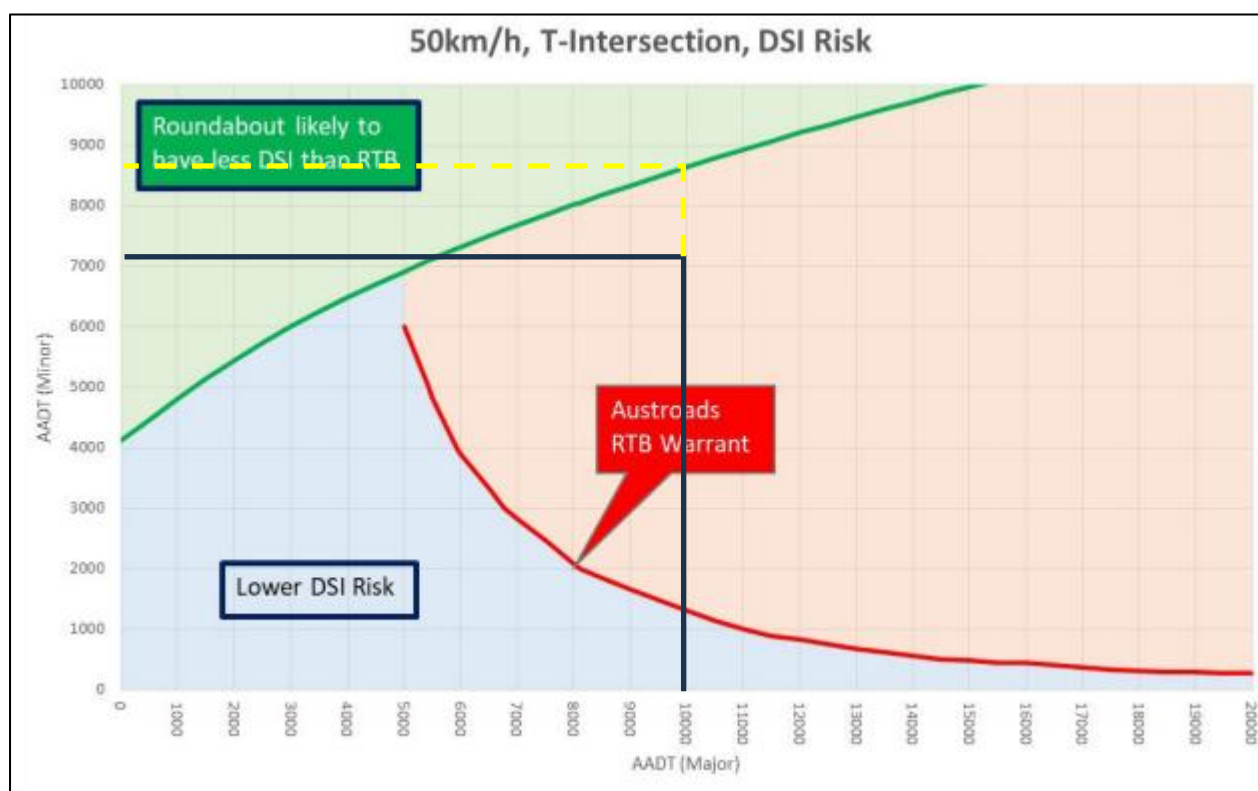


Figure 4: DSI Risk Urban 3 Leg T intersection⁷ (future volumes on Cambridge Road)

4.4.3. Pedestrian Demand

⁶ <https://www.nzta.govt.nz/assets/resources/planning-policy-manual/docs/PPM-access-onto-the-state-highway-guide-from-private-property.pdf>

⁷ <https://www.nzta.govt.nz/assets/resources/planning-policy-manual/docs/PPM-access-onto-the-state-highway-guide-from-private-property.pdf> - Figure 8.3

As described above, there is currently a high demand for crossing Cambridge Road both north-south and across Access 1. With the proposed development and potential retail activity within Area A, pedestrian crossing demand is likely to increase. The NZTA Pedestrian Network Guidance (PNG) sets out how crossing types relate to One Network Framework (ONF) street categories.

The PNG indicates that for an urban connector either a signalised crossing or a pedestrian refuge island is appropriate.

The PNG notes that pedestrian refuges are generally only appropriate on urban connector roads where there are nearby priority crossing facilities. In this location, there are no nearby priority crossings which means that a signalised facility is the most appropriate solution.

ONF street category	Non-priority crossings aids					Priority crossings				
	Kerb crossings	Kerb extensions	Pedestrian refuges	Pedestrian platforms	Courtesy crossings	Zebra crossing	Raised zebra crossing	Signalised crossing	Raised signalised crossing	Grade separation
Local street										
Activity Street										
Main street										
City hub										
Urban connector										
Transit corridor										

Notes:

Civic spaces – By definition these have high place function, involve low vehicle speeds and low vehicle volumes, and should be designed to allow users to share the space. Therefore, it is highly unlikely that a formal crossing treatment will be necessary.

Activity streets – pedestrian refuges, kerb extensions and kerb crossings may only be appropriate where there is a priority crossing treatment nearby, ie, within an acceptable distance to provide adequately for less able or less confident or slower pedestrians (eg mobility impaired people).

Main streets and urban connectors – pedestrian refuges may only be appropriate where there is a priority crossing treatment nearby, ie, within an acceptable distance to provide adequately for less able or less confident pedestrians (eg visually impaired people).

Figure 5: NZTA PNG Crossing Selection Guidance⁸

4.4.4. Preferred Option

We have reviewed the information provided by the Proponent and in principle agree that a signalised intersection is the preferred layout, subject to ensuring that a left turn lane is provided on Cambridge Road (refer to discussion below).

While a roundabout may perform better in efficiency terms and may offer benefits by reducing vehicle crashes if designed in accordance with Austroads guidance, it would not provide pedestrian priority which is considered important in this busy urban environment.

4.5. Access 1/Cambridge Road Intersection

The Proponent’s proposed layout is provided in the figure below.

⁸ <https://www.nzta.govt.nz/assets/Walking-Cycling-and-Public-Transport/docs/pedestrian-network-guidance/docs/3.4-crossings-v1.2-feb-2026.pdf> - Appendix A



Figure 6: Proposed layout

The proposed intersection includes separate through and right-turn lanes on the eastbound Cambridge Road approach and on the Access 1 approach. The concept plan shows only a single lane on the westbound Cambridge Road approach. In our view this limits the ability for signal optimisation. For example, it would not allow simultaneous operation of the westbound Cambridge Road left turn into Access 1 while vehicles are exiting Access 1. The absence of a dedicated left-turn lane means that a left-turn arrow cannot be used to hold traffic at the beginning of the pedestrian crossing phase, increasing the potential for a vehicle-pedestrian crash to occur.

We note that the modelling of 20-year assessment-period indicates that a left-turn lane is required to minimise queuing to Access 2. The Broad ITA requirements for Waipa DC require trip generation assessment for a 30-year period. NZTA guidance⁹ states *“For plan changes, a much longer assessment year should be considered. Other studies may be relied upon confidently regarding a 20- or 30-year time frame. However, where that technical forecast information is not available, or if the plan change or variation has a limited area of influence, then a minimum time of 10 years may be appropriate.”* We consider the 20-year assessment period to be appropriate for this location and should be used as a basis of determining effects.

We understand that Council’s preference is to provide the dedicated left-turn lane on the westbound approach now, subject to design feasibility and any impacts on adjacent access points. The Proponent has commented that this can be achieved within the current road reserve boundaries but have stated that the left turn lane is not included as part of this plan change.

In our view, a left turn lane is required to ensure safe and efficient operation of the intersection. Council have asked us to determine whether a modified intersection with left turn lane can be accommodated within the road reserve. Our concept plan for this layout is shown in the figure below (a larger version is provided at Attachment B).

⁹ NZTA Research Report 422 - <https://www.nzta.govt.nz/assets/resources/research/reports/422/docs/422.pdf>

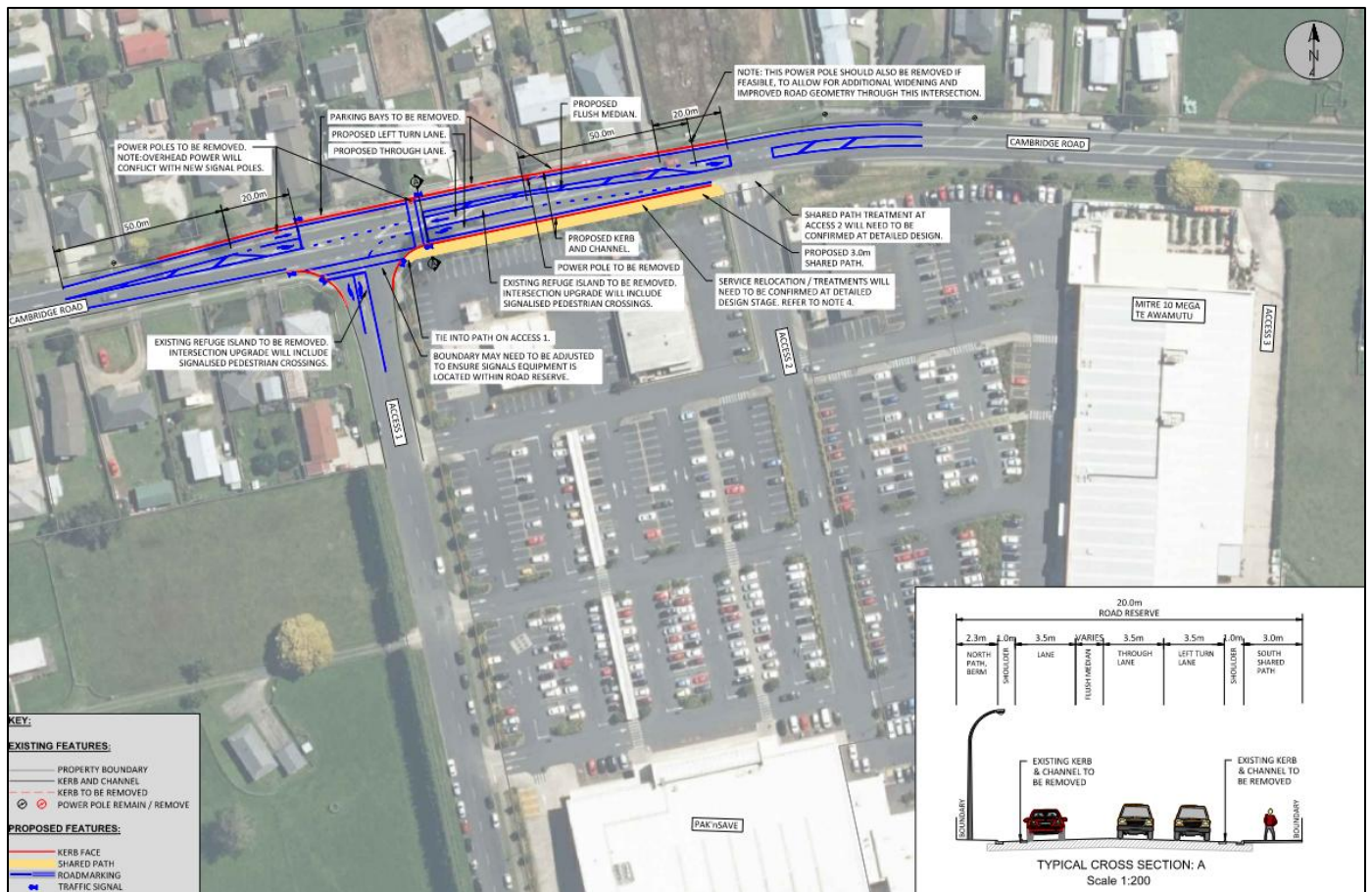


Figure 7: Access 1 concept layout

The intersection is constrained and while a left turn lane can be accommodated it results in the following compromises:

- = Shared path is located against the boundary which results in safety issues at the Access 2. Visibility splays will need to be protected at Access 2
- = Narrowing/ removal of the flush median on Cambridge Road reducing space for vehicles turning right to access the development and properties on the northern side of Cambridge Road
- = Removal of parking bays on Cambridge Road
- = Reduced right turn capacity into Access 2 (shorter length of full width flush median)
- = Signal poles located within the footpath, reducing width of footpath.
- = Minimises the berm space on the northern side which reduces flexibility for Council to provide shared path on both sides of Cambridge Road in the future. Reduced separation between driveways and footpath.
- = Removal/underground of power poles to ensure signals equipment can be established (higher costs).

As demonstrated in the concept above accommodating a signalised intersection with a left-turn lane within the existing road reserve requires the Cambridge Road flush median to be narrowed. This reduces the effective storage length for vehicles right-turning into Access 2, increasing the risk of queues extending into the eastbound through lane.

Most vehicles arriving from the west are expected to use the signalised Access 1 intersection. However, if some vehicles turn right into Access 2 from Cambridge Road, the reduced storage length may require them to wait partly within the through lane. While undesirable, the concept design provides approximately 5.5 m from the centreline to the kerb, which should allow vehicles to pass at low speeds.

The reduced median width affects access to existing residential properties on the northern side of Cambridge Road. Vehicles turning right into these properties will need to wait in the through lane, rather than within the flush median, which is undesirable.

Retaining a 2.5–3.0 m flush median, while also providing the left-turn lane and shared path, would likely require widening on the southern side and encroachment into Area A. This indicates that the current road reserve may be

insufficient to accommodate all desired elements while maintaining adequate right-turn storage, particularly for existing residential accesses.

The final layout of the intersection will be subject to detailed design, safe system audit and Council approval. Further design development and consultation are required to identify a layout that provides an appropriate flush median to accommodate both retail and existing residential access, safely manages right-turn movements, and avoids queue spilling into the through lane, particularly given the uncertainty around future traffic demand at Access 2.

There are existing services on the southern side of Cambridge Road which may need to be relocated to accommodate the shared path. Service treatments will need to be confirmed at detailed design.

The Proponent's concept plan does not show the location of traffic signals and other equipment in relation to road reserve boundaries. Implementing signal equipment at the intersection may require the boundary at the private road to be adjusted so that the signal equipment and crosswalk are located within road reserve. For example, at The Base Parade in Hamilton the crosswalks and signals equipment are located within road reserve. We recommend that the boundaries are modified to ensure that signals equipment and the crosswalk is located within the road reserve.

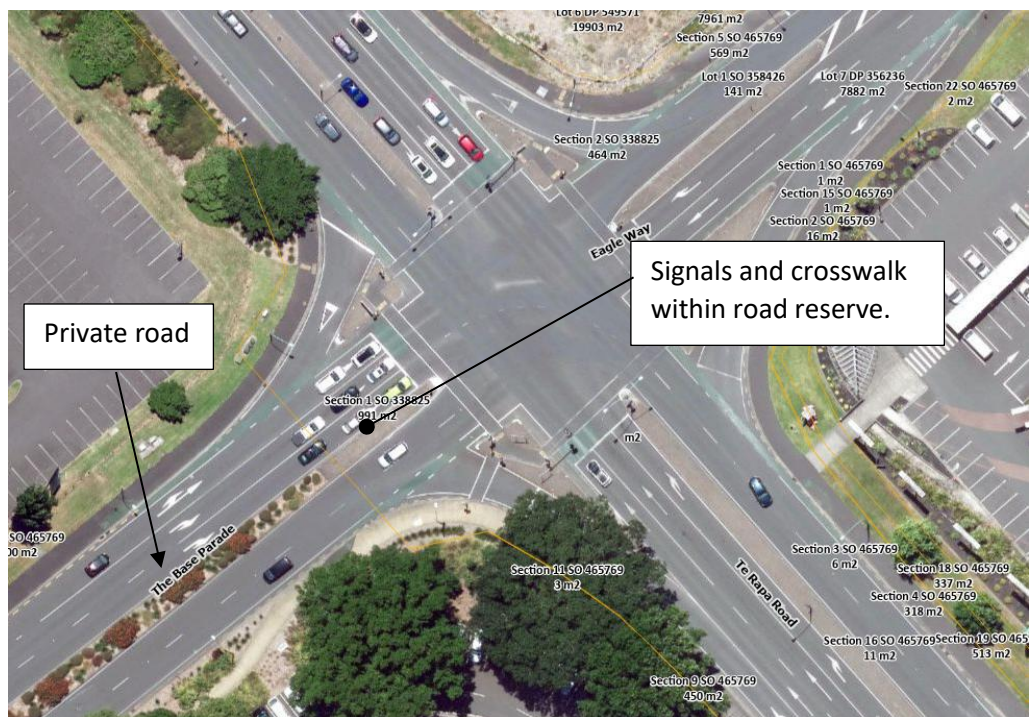


Figure 8: The Base Parade/Te Rapa Road boundaries

We understand that the Proponent has discussed this with Foodstuffs and has proposed a plan provision which requires the Applicant (at the time of resource consent) to acquire any land required for the intersection upgrades by way of agreement with relevant landowners. Any land acquisition should be the responsibility of the Applicant and should not require Council to facilitate or undertake the acquisition.

5. EXISTING PRIVATE ACCESS

5.1. Internal Access Road

The Transportation Assessment does not provide detail whether the current private access is appropriate to accommodate the increased traffic associated with the proposal. The carriageway of the private access is approximately 10m wide.

The projected traffic vol is around 7,000 veh/day which indicates that the access will operate, more like a road rather than a ROW. If the private road was assessed as a public road under the District Plan (Appendix T4) for a road greater than 150m

Cross-Section Element	District Plan – Public Road	Current Private Road	Comment
Road reserve	24m	20m	Does not comply. However, 20m is considered acceptable.
Carriageway	13m - with 2x 4m wide lanes (5m provided for on-street parking)	10-11m	Our preference is to provide 3.5m wide lanes minimum which would mean around 3-4m will be left for parking. Parking management may be required to ensure sufficient clearance between parked vehicles and opposing through vehicles.
Footpath	2.5m shared path on one side and 1.5m path on the other side	1.8m on one side only	Does not comply – recommend a shared path on one side (Area A side) and footpath on the other side
Parking bays	2.5m parking bays on both sides.	Parking within carriageway.	Risk that in some areas two-way movement with sufficient clearance may be restricted. Based on a 10m wide carriageway and 3.5m lanes only 1.5m each side is left for parking which is undesirable. 2.5m wide bays provide sufficient space for door swing and clearance and would comply with the District Plan. Other Councils such as Hamilton City accept a 2.1m wide parking bay.

Table 3 *Cross section comparison*

Based on aerial photos, vehicles currently park on the private road. We are concerned that this may reduce the effective trafficable width, meaning two vehicles may not be able to pass with sufficient clearance. A clearance of 1 m between opposing vehicles is desirable¹⁰.

The concept plan does not show a pedestrian crossing on the private road that will be necessary for pedestrians to safely move between Area A and Area B.

Given the proposed traffic volume, widening to comply with the District Plan is the preferred approach. However, the effects can be managed to an acceptable if the following measures are implemented on the private road:

- = Recommend a minimum 3.5m wide traffic lanes (4m desirable) and minimum 2.1 parking space (2.5m desirable). Parking management is likely to be required to ensure sufficient clearance between lanes and parking.
- = Footpath is provided on both sides of the road. Our preference is for the existing path (eastern side) to be upgraded to 2.5m wide shared path, and a 1.5m footpath on the western side.
- = A safe pedestrian crossing (e.g. pedestrian refuge island or raised pedestrian crossing) be provided and that the concept plan be updated to show its location.
- = Streetlighting

5.2. Area B layout

As shown on Figure 1 above, the concept plan shows the proposed vehicle crossings to Area B would be located nearly opposite the existing vehicle crossings to Area A. This results in a crossroads type of arrangement which is undesirable as it increases the number of conflict points and increases the likelihood of confusion between drivers.

While through movements from Area A to Area B via vehicle are likely to be infrequent the risk of 90-degree impact crashes would be avoided by increasing the vehicle crossing separation. The District Plan does not specify the minimum separation between vehicle crossings located on the opposite side of the road, we recommend that the concept layout be updated to ensure the proposed vehicle crossings are located at least 20m away from the existing vehicle crossings.

¹⁰ Austroads Guide to Road Design – Part 4, Section 5.6.3

We note that at subdivision consent stage further information in regard to parking, internal pedestrian circulation and loading/servicing will be required.

6. FURTHER INFORMATION RESPONSE

Our review of the Proponent's further information response is summarised in the table below.

Requested information	Summary of Proponent's further information	Comments
a. From the analysis and modelling in the Transport Assessment dated July 2025 prepared by Traffic Engineering and Management Limited it is shown that 20-year growth of 40% in traffic on Cambridge Road has been added to the through traffic at the existing access points; and the new Mitre10 store traffic in Area B has been added to Access 1. However, some of that 40% growth on Cambridge Road also needs to be applied to turning movements in and out of the two access points. This is because as the town and district population grows there will be more customers entering / exiting Access 1 and 2 for trips to the supermarket, doctors and other retail outlets at the centre. i. Please provide further analysis regarding this matter when adding the effects of the 20-year growth onto Cambridge Road to the turning movements in and out of Access 1 and 2.	The Proponent has provided updated Sidra modelling based on growth applied to the turning movements.	Not resolved The Transportation Assessment includes Access 1 and Access 2 as networked intersections, but the intersections were not assessed as a network in the further information response. The Proponent should re-run the updated traffic volumes through the same networked model.
b. The analysis and modelling also currently assumes there will be no growth in trips to the centre other than for the new Mitre10 store and this is not a realistic assumption. Note that at different times of the day 35-48% of the traffic travelling on Cambridge Road turns into the existing centre and those proportions of traffic entering will likely continue or even grow. i. Please review and provide further analysis on the effects of the repurposing of the existing Mitre 10 building, based on what the proposed provisions associated with PC35 would allow, and the potential expansion increase in traffic of the retail activities on Area A.	Further analysis has been completed by the Proponent.	Not resolved – comment as per item above.
a. The SIDRA modelling for option 2 indicates average speeds through the proposed roundabout intersection of 42-47km/hr. This seems excessive for a small roundabout. i. Please provide further analysis on this matter.	Updated modelling based on lower speeds has been provided.	Resolved Average speeds are unlikely to have a significant impact on modelling in this scenario.
a. The critical traffic movements for queuing and lower levels of service are in the evening peak, west approach and right turning queues averaging 55m, east approach and left turning queues 44m and these are exacerbated on a Saturday. Once the traffic growth question above is resolved, and more turning traffic is added in and out of Access 1 the Sidra modelling would likely to show a lower level of service and greater queues. It is important that the correct average queue length and 90 percentile queuing on Cambridge Road is known to determine how far from the access the traffic	Updated SIDRA modelling has been provided. However, the exact lane lengths modelled have not been provided.	Not resolved While SIDRA modelling has been provided, the length of the modelled left-turn lane length and queuing have not been provided. As discussed above, Access 1 has not been networked with Access 2. We are concerned that the effects assessment is not consistent with the initial Transportation Assessment.

Requested information	Summary of Proponent's further information	Comments
effects will extend. For instance, all parking on the roadside will need to be banned for the length of likely regular queuing. In addition, if queuing of 70-90m occurs on the Cambridge east approach then it will prevent good operation of the left turn from Access 2 and might also present a risk of nose to tail crashes as west bound traffic rounds the corner on to the back of a queue. To minimise the east approach queuing the option of providing a separate left turn lane from the through lane should be explored. i. Please provide analysis of the provision of a left turn lane into Access 1 and the updated average queuing and 90 percentile queuing in the SIDRA analysis once turning movement growth is represented.		Further clarification is required, as discussed in our comments on SIDRA modelling above.
ii. Please provide a diagram illustrating the intersection design with a dedicated left-turn lane in relation to legal road boundaries.	The proposed diagram does not consider shared path etc. discussed further above.	Resolved in part – Can be addressed through plan provisions requiring a left turn lane
iii. In the event that the diagram above illustrates that any intersection with a dedicated left-turn lane cannot be accommodated within the existing road reserve, please outline how the acquisition of private land necessary to accommodate a left turn lane would occur.	The proposed diagram does not consider shared path etc. discussed further above.	Resolved in part – Can be addressed through provisions requiring shared path at the intersection.
b. The proposed signals turning movement diagram indicates that it is a fairly tight turn and some kerb alteration may well be required. The truck left turn out from Access 1 has not been tracked and as the kerb radii for the left side of the intersection looks tighter this will be a critical movement to understand.	Tracking provided	Resolved in part – can be addressed through provisions which require detailed design of the intersection not ensure that it is appropriate for 19m semi-trailer tracking.
i. Please provide further analysis and a diagram for the truck left turn out of Access 1.	Tracking is provided.	Not resolved While the tracking indicates that this can be achieved, the truck requires both lanes to turn out of access 1. No further mitigation has been proposed to manage this.
c. Minimising the number of large trucks directly entering Access point 1 would be advantageous, particularly with the intended increase of traffic generated by the new Mitre 10 development. Because the intent is for the existing Retail Centre to be expanded to include 638 Cambridge Road, further consideration of the overall integration of all traffic generation within the centre is important to ensure a well-functioning centre. The Transport Assessment should canvas the option of all trucks entering at access point 3 and to circulate behind the stores to minimise interaction with the public.	The Proponent has provided a short summary of reasons relating to easements why this cannot be achieved.	Resolved in part – further info required at future consent/subdivision stage. While there are merits in minimising use of Access 1, we note the existing right-of-way and current easements, and it is unclear how any transfer of easements would work. To minimise impacts, we suggest a loading and servicing management plan for the proposed site. This could be addressed at consent stage and should consider measures such as avoiding deliveries during peak periods.

Table 4 *Review of further information*

7. SUBMISSIONS

The following transport related submissions have been received in relation to the proposed plan change.

- = Waipa DC
- = Foodstuffs
- = NZ Transport Agency, although we understand that NZTA has subsequently withdrawn its submission.

We have reviewed the transport-related matters raised in the submissions (excluding NZTAs) and provide our comments below.

Submitter	Issue/Concern	Response
Foodstuffs	Vehicle Crossings - Proposed vehicle crossings in Area B impacting existing and future use of existing Area A vehicle crossings Proposed Signals - Traffic signals could impact future construction works and day-to-day operation of Pak'nSave e.g. deliveries/servicing activities. Parking - Parking effects have not been assessed, including: - o Proposed Mitre 10 parking demand may exceed Area B supply - o Increased parking demand in Area A - o Exacerbate existing issues where Pak'nSave parking is used by customers of other tenants.	Vehicle Crossings - Agree that further assessment is required to ensure that the vehicle crossings are located to minimise impacts on existing vehicle accesses. This is addressed above. Proposed Signals - Can be resolved through detailed design ensuring that large vehicles are able to navigate the intersection Parking - Further assessment is required to confirmed that the parking effects can be managed to a suitable level. To be addressed at consent/subdivision stage and following detailed design. - Agree with concerns relating to potential for more intensive retail activity within the existing Mitre 10 building in Area A. As discussed above we consider that further assessment of effects associated with the retail activity in Area A is required. - Existing parking issues can be addressed with parking management.
Waipa District Council	Provisions relating to the transport upgrades on Cambridge Road	We have addressed the requirements of this intersection above. Agree that provisions should include left turn lane, tracking requirements, provision of pedestrian facilities and vesting of land to include the intersection upgrades within the road reserve.

8. EFFECTS ASSESSMENT

Our effects assessment is summarised in the table below.

Effect	Potential effects	Mitigation required
Efficiency	The assessment may underestimate trips associated with future retail activity in Area A which could be more intensive than the current large-format activities. This could understate effects at both Access 1 and Access 2. The Warkworth Mitre 10 survey has not been validated against existing site trip generation. Potential consequences include longer queues and delays on Cambridge Road and within the site.	Trip generation needs to be reassessed using a robust worst-case scenario for Access 1 and Access 2, to confirm whether the proposed mitigation is sufficient. We understand that activities within the site are controlled, therefore detailed assessments will be required as part of future resource consent applications.

Effect	Potential effects	Mitigation required
Safety (vehicles)	The assessment focuses on efficiency at Access 1 and provides very limited consideration of vehicle safety effects.	No further information is required at this stage. In our view, signalling the intersection is the most appropriate option, given the high level of pedestrian activity in this location.
Safety pedestrians	The assessment does not include a pedestrian safety assessment. While signalling Access 1 appears appropriate, the Proponent has not assessed the level of demand or safety of pedestrian movement across the private road between Area A and Area B.	We are concerned that the effects on pedestrians crossing the private road between Area A and Area B has not been addressed. Recommend that safe pedestrian crossing is provided on the private road, with adequate separation from existing and future vehicle crossings. The concept plan needs to be updated to include this facility.
Access 1	The assessment concludes that Access 1 should be signalised, but it does not include a detailed safety assessment of the intersection. If trips at Access 2 have been underestimated, effects at Access 1 may also be understated. We understand the Proponent does not propose a left-turn lane as part of the plan change. In our view, it should be included to improve operation and enable the private-road pedestrian phase to run more efficiently. Under the 20-year scenario, queues and delays are likely to extend past Access 2 without a left-turn lane. This is undesirable and could be worsened if trip generation has been underestimated.	No further information is required at this stage. Traffic signals are appropriate, but a left-turn lane on the eastern Cambridge Road approach is required to ensure the intersection operates safely and efficiently.
Access 2	We are concerned that trip generation at Access 2 may be underestimated due to potential for more intensive retail activity in the existing Mitre 10 building. This additional traffic could create unaddressed safety and efficiency effects at Access 2 and within Area A.	Further assessment, including sensitivity testing of Access 2, is required to confirm whether the proposed arrangement is appropriate or whether additional mitigation is needed. We understand that activities within the site are controlled, therefore detailed assessments will be required as part of future resource consent applications.
Private Road	The assessment does not address whether the existing private road can accommodate increased traffic, expected to be approximately 7,000vpd. Parked vehicles appear to reduce the effective carriageway width, and no assessment has been provided to confirm whether two-way movement can be maintained. There is no street lighting on this section of road, and the suitability of the existing lighting levels has not been assessed. The road surface also shows defects that may worsen with increased traffic, and it is unclear whether the pavement was designed for the expected load.	We recommend the following: • minimum 3.5m wide traffic lanes (4m desirable) and minimum 2.1 parking space (2.5m desirable). Parking management is likely to be required to ensure sufficient clearance between lanes and parking. • Ensure pavement and surfacing is appropriate for the increase in traffic on the private road • Provide a pedestrian crossing between Area A and Area B on the

Effect	Potential effects	Mitigation required
	As discussed above no pedestrian crossing is proposed. The private road/Cambridge Road boundary may also need adjustment so that signal equipment and crossings can sit within road reserve rather than on private land.	private road (e.g. refuge island or raised crossing) • Provide a 2.5m wide shared path on the eastern side of the private road • Provide a 1.5m wide footpath on the western side of the private road. • Review and update property boundaries so signal equipment and crosswalk are located within public road reserve.
Mitre 10 access	The current layout shows vehicle crossings opposite existing Area A crossings. These should be relocated to achieve appropriate spacing and sight distance, and the concept plan should be updated accordingly.	Site layout details are not yet confirmed. Further assessment will be required at resource consent stage, including: • Loading and manoeuvring • Parking assessment • Confirmation safe access is provided • Construction traffic effects

Table 5 *Effects assessment*

9. CONCLUSION

We have reviewed the transportation matters arising from the proposed plan change. In principle, we agree that a signalised intersection at Access 1 is the preferred solution to provide safe and efficient access for pedestrians and vehicles to the site. While we have identified uncertainty around the future trip generation and transport effects associated with Area A, we understand that future activities within Area A will be controlled activities. On that basis, the detailed assessment of Area A trip generation and any associated effects at Access 2 can be undertaken at the relevant resource consent stage. However, matters relating to the Access 1 traffic modelling, intersection design, private road upgrades, and the infrastructure that must be secured through the plan change still need to be addressed to ensure the transport effects of the proposal are appropriately managed.

The outstanding matters are summarised below as:

- information to be provided before the plan change is granted;
- matters to be secured through plan provisions; and
- matters to be addressed at resource consent stage.

Information to be provided before the plan change is granted

- Provide updated modelling using the same networked Access 1 and Access 2 approach as the original assessment, so the effects of the proposal can be understood.
- Provide the signal modelling assumptions, including lane layouts, lane lengths, signal phasing, and timing, to confirm that the modelling is robust.
- Update the private road to include the following:
 - A minimum 3.5m wide traffic lanes (4m desirable) and minimum 2.1 parking space (2.5m desirable). Parking management is likely to be required to ensure sufficient clearance between lanes and parking.
 - Provide shared path (minimum 2.5m wide) on the eastern side of the private road
 - Provide footpath on (minimum 1.5m wide) on the western side of the private road

Matters to be addressed through plan provisions

- Include provision requiring a left-turn lane on the eastern Cambridge Road approach to Access 1.
- Include provisions requiring a safe pedestrian crossing on the private road between Area A and Area B, with adequate separation from existing and future vehicle crossings.
- Include provisions that ensure property boundary adjustments or land requirements necessary to accommodate traffic signals, pedestrian crossings, and the left-turn lane will be achieved. Any land acquisition should not be the responsibility of Council
- The concept plan should be updated to show the following changes:

- Changes to the private road boundary to ensure that signals equipment and the crosswalk are located within road reserve.
- Pedestrian crossing on the private road (e.g. refuge island or raised crossing).
- Shared path on the eastern side of the private road and footpath on the western side of the private road
- Provide a minimum 20m separation between vehicle crossings on the private road.

Matters to be addressed at resource consent/subdivision stage

Because activities within Area A are controlled, the following Area A transport matters can be assessed through future resource consent processes:

- Trip generation associated with specific activities within Area A, including whether more intensive retail activity is proposed.
- Assessment of resulting safety and efficiency effects at Access 2 and within Area A due to trip generation in Area A.
- Any additional mitigation required to manage Area A access, parking, loading, servicing, and internal circulation effects.
- Land use consent applications will need to provide an assessment of loading, manoeuvring, parking against the provisions of the District Plan.
- Construction traffic effects should be addressed through an appropriate construction traffic management approach.
- A loading and servicing management plan may be required to address potential conflicts between loading/servicing activities general traffic and pedestrians, including managing delivery times where appropriate.

A summary of the proposed changes the concept plan is provided in the figure below.

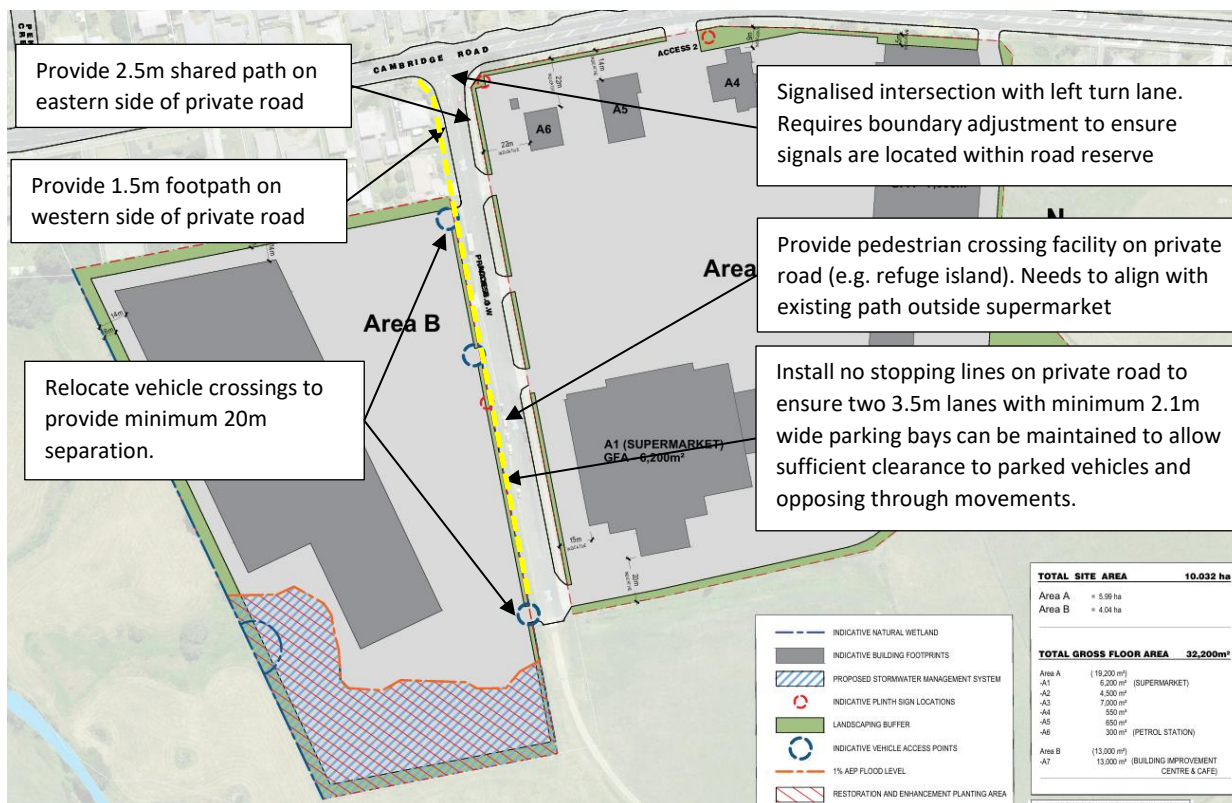


Figure 9: Proposed concept layout and recommended changes

Please contact us if you require additional information.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Vinish Prakash', with a stylized, flowing script.

Vinish Prakash
Transportation Engineer

A handwritten signature in black ink, appearing to read 'AJ Black', with a bold, blocky script.

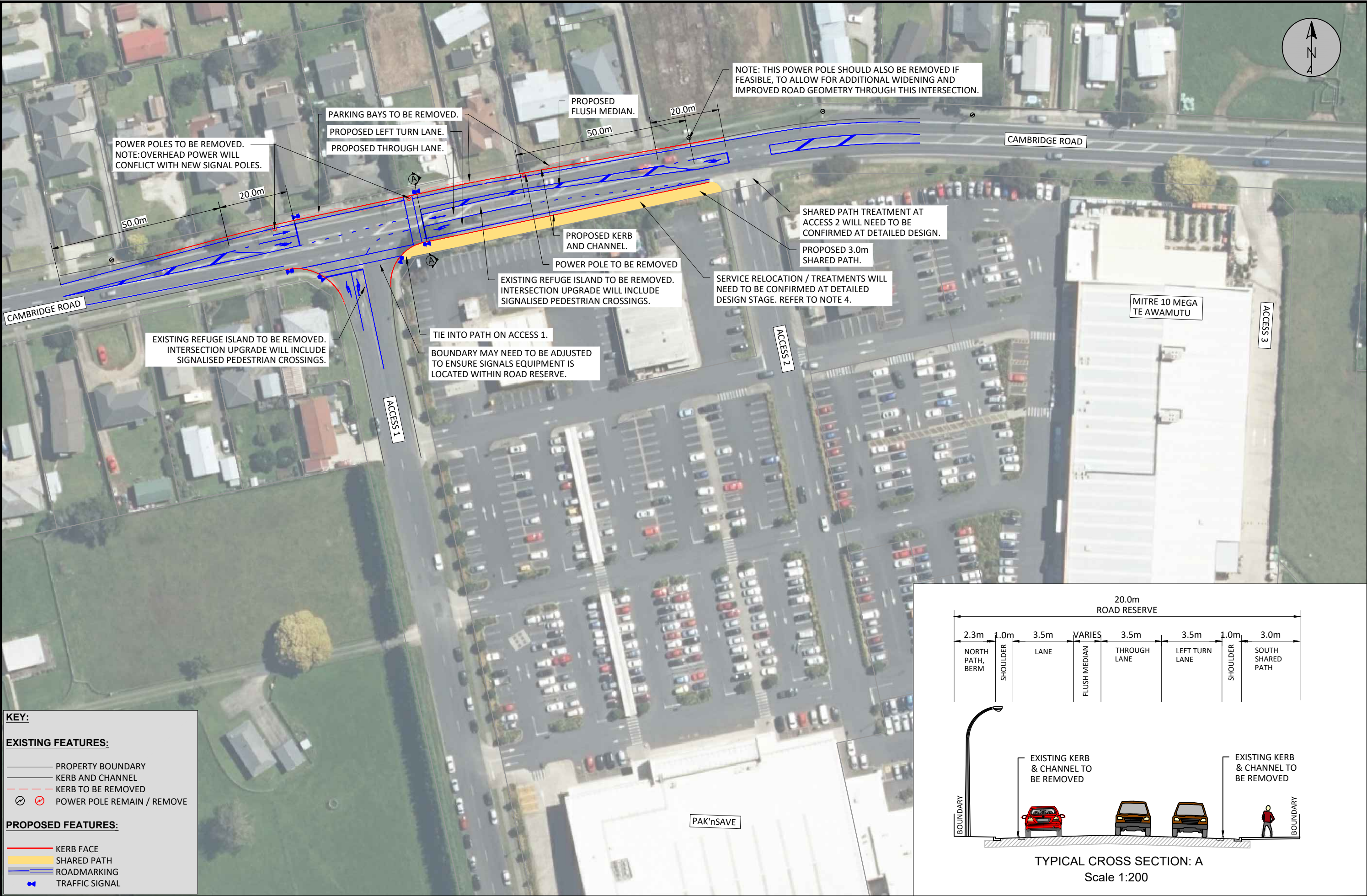
Alastair Black
Senior Transportation Engineer

ATTACHMENT A – WAIPA DC BROAD ITA CRITERIA

Requirements for Broad Integrated Transport Assessment			
Item	Item Description	Details to be included	Comment
1	Background	Description of proposed activity, purpose and intended use of Integrated Transport Assessment, outline of any previous discussions with Council.	Sufficient information provided in the Transportation Assessment
2	Existing land data	Description of location, site layout, existing use and consents (if any), adjacent and surrounding land use.	Sufficient information provided in the Transportation Assessment
3	Existing transport data	1. Description of existing access and service arrangements, onsite car parking (if provided). 2. Description of surrounding road network (including hierarchy, traffic volumes, crash analysis, congestion and intersections). 3. Description of public transport modes, walking and cycling networks.	Discussion in Transportation Assessment is limited. We have included additional data above.
4	Committed environmental changes	Consideration of other developments and land use and transport network improvements (including public transport, walking and cycling).	Limited detail or surrounding committed changes.
5	Existing travel characteristics	Existing trip generation, modal split, assignment of trips to the network.	Sufficient information provided in the Transportation Assessment
6	Proposal details	1. Description of the proposal (site layout, operational hours, vehicle access, on-site car parking (if provided) and drop off, internal vehicle circulation, end of journey facilities, travel demand management). 2. Construction management. 3. Any staging, triggers and thresholds for activities and mitigation measures.	No details on construction management. No staging triggers specified in Transportation Assessment.
7	Predicted travel data	Trip generation of proposal, modal split, trip assignment to the network, trip distribution and trip type proportions. Future traffic volumes and trip generation. Consideration of appropriate assessment year (e.g. 10 year forecast for collector and local roads: 30 year forecast for arterials).	We are concerned that the trip generation assessment may underestimate trips.
8	Appraisal of transportation effects	Assessment of safety, efficiency, environmental, accessibility, integration and economic effects. Sensitivity testing.	Assessment mostly around efficiency of intersection. no specific details on safety assessment of access points or proposed intersection or at the proposed access points. Increased pedestrian activity increases the exposure risk to crashes while level of service of pedestrians is provided safety is not considered. No comments provided on impact of additional traffic on the existing private road.
9	Avoiding or mitigating actions	Details of any mitigating measures and revised effects, including measures to encourage other modes. Travel planning and travel demand management measures and sensitivity testing mitigations.	Discussion mainly limited to new intersection (Access 1). No discussion on potential parking management or construction management, access provisions or pedestrian safety.

Requirements for Broad Integrated Transport Assessment			
Item	Item Description	Details to be included	Comment
10	Compliance with policy and other frameworks	Waipā District Plan objectives, policies and rules. Detailed assessment against Waipā Integrated Transport Strategy principles and objectives. Other relevant local, regional and national strategies.	No assessment of the transport rules provided. Assessment how the proposal aligns with current strategic policy and frameworks should be completed.
11	Discussion and conclusions	Assessment of effects and conclusion of effects. Confirmation of the suitability of the location of the proposal.	Limited to selection of intersection option.
12	Recommendations	Proposed conditions (if any).	Recommendations focus on intersection selection. We have commented on further recommendations in our review.

ATTACHMENT B – ACCESS 1/CAMBRIDGE ROAD INTERSECTION CONCEPT



KEY:

EXISTING FEATURES:

PROPERTY BOUNDARY

KERB AND CHANNEL

KERB TO BE REMOVED

POWER POLE REMAIN / REMOVE

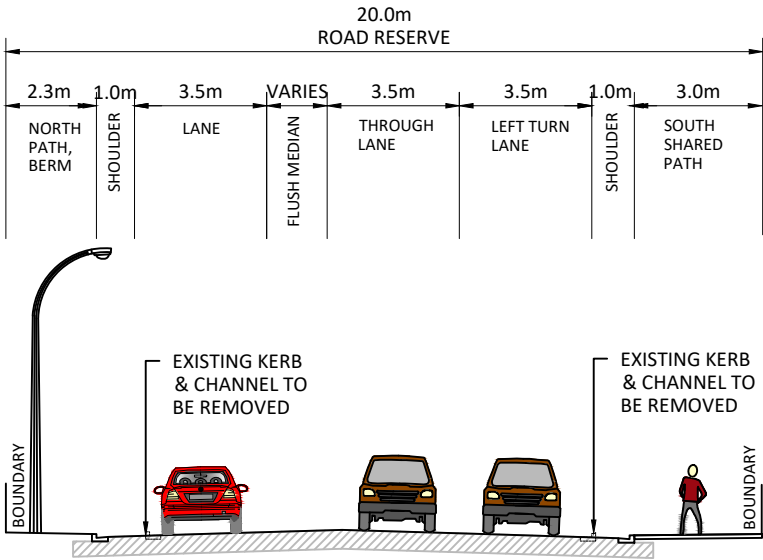
PROPOSED FEATURES:

KERB FACE

SHARED PATH

ROADMARKING

TRAFFIC SIGNAL



TYPICAL CROSS SECTION: A
Scale 1:200

OFFICE:

Gray Matter

PROJECT & SHEET TITLE

PROPOSED PRIVATE PLAN CHANGE 35 (PPC35)
TE AWAMUTU LARGE FORMAT RETAIL CENTRE
CONCEPT PLAN

DRAFT

CLIENT

Waipā
DISTRICT COUNCIL

NOTES:

1. This drawing is a high level concept plan based on aerial photos for feasibility purposes only. some features are not shown completely at this stage (i.e. roadmarkings, traffic signals, cycle connections, streetlight, signage, extents of works, etc). final layout may be subject to topographical survey, detailed design and safety audit.

2. All works shall be in accordance with the Waikato Regional Infrastructure Technical Specifications (RITS) and New Zealand Transport Agency specifications.

3. Signalised intersection layout, signal pole location and lane capacity to be confirmed with traffic modelling at the detailed design stage.

4. Services are not shown. Existing services should be identified and relocation to be resolved at detailed design stage.

DRAWN BY	REA DU PLESSIS	STATUS CONCEPT - NOT FOR CONSTRUCTION	
APPROVED BY	DATE	GEODETTIC HORIZONTAL DATUM	VERTICAL DATUM
V. Prakash	05/06/26	NZGD2000 MT EDEN	N/A
		DATE	PLAN NUMBER
		03/06/2026	05_233_SK_01
		SCALE	REVISION
		1:1000 (@ A3)	RA

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