

**BEFORE THE HEARING COMMISSIONERS
AT WAIKATO DISTRICT COUNCIL**

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

AND

IN THE MATTER of submissions and further submissions on the Proposed
District Plan

**STATEMENT OF EVIDENCE OF JUDITH VICTORIA MAKINSON FOR
SUBMITTER #387: DIAMOND CREEK FARM LIMITED
17 February 2021**

Harkness Henry
SPECIALIST LAWYERS

www.harknesshenry.co.nz

Phone (07) 838 2399
Fax (07) 839 4043
Address Level 8, KPMG Centre,
85 Alexandra Street, Hamilton 3204
Mail Private Bag 3077, Hamilton 3240,
New Zealand, DX GP 20015

Submitter Solicitor:
Dr J B Forret
(joan.forret@harkness.co.nz)

Counsel Acting:
P Kaur
(pervinder.kaur@harkness.co.nz)

INTRODUCTION

- 1 My full name is Judith Victoria Makinson. I am the Transportation Engineering Manager for CKL.
- 2 I hold a Bachelor's degree in civil engineering and a Master's degree in transport engineering and planning from the University of Salford (UK). I am a Chartered Professional Engineer and am a Chartered Member of Engineering New Zealand. I am also a Chartered Engineer in the United Kingdom and a Member of the Institution of Civil Engineers. I have over 20 years' experience working as a transportation engineer in both New Zealand and the United Kingdom with Arup, WSP Group, Gifford, TDG, Stantec and CKL. I am also qualified as an Independent Hearing Commissioner and recently sat on the panel considering the Te Ahu a Turanga State Highway 3 Manawatu Gorge Road replacement project.
- 3 I confirm that I have read and am familiar with the Code of Conduct for Expert Witnesses in the current (2014) Environment Court Practice Note. I agree to comply with this Code of Conduct in giving evidence to this hearing and have done so in preparing this written brief. The evidence I am giving is within my area of expertise, except where I state I am relying on the opinion or evidence of other witnesses. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed. I understand it is my duty to assist the hearing committee impartially on relevant matters within my area of expertise and that I am not an advocate for the party which has engaged me.
- 4 I have undertaken a site visit and am familiar with the site and its surrounds.

SCOPE OF EVIDENCE

- 5 I supervised the preparation of the Integrated Transport Assessment ("ITA") report on behalf of Diamond Creek Farms ("DCF") to assess the traffic and transportation effects from potential future residential use of the site. My evidence focuses on:
 - a) the scale of residential development assessed;

- b) consultation with Waka Kotahi NZTA; and
- c) my conclusions arising from the assessment.

6 The ITA is attached as Appendix 1 for ease of reference.

SCALE OF DEVELOPMENT ASSESSED

- 7 The submission by DCF requested that their sites at Te Uku (legally described below) are re-identified on WPDP Planning Maps from Rural Zone to Country Living Zone:
- (a) Part Lot 1 DPS 23893 (42.418 ha)
 - (b) Allot 218 Parish of Whaingaroa (0.3715 ha)
 - (c) Lot 4 DP 437598 (0.0730 ha)
- 8 As outlined in the Legal Submissions from Dr Forret, as a result of discussions with WDC staff, DCF were encouraged to explore the possibility of establishing a Village Zone on the site instead of Country Living. Upon receipt of the s42A Framework Report, DCF made the decision to revert back to pursuing a Country Living zone. Notwithstanding that, DCF would support any decision in relation to submissions at Hearing 12 (Country Living Zone) that reduces the minimum lot size in the Country Living Zone as this would enable a more efficient use of land.
- 9 It is feasible that the Country Living Zone could allow for 50 houses, or potentially 82 houses at a higher density assuming the minimum lot sizes for an un-serviced Village Zone (refer to Dave Mansergh Evidence in Chief paragraphs 40 - 43). DCF also investigated a fully serviced Village Zone concept that could give rise to up to 200 dwellings. The ITA was undertaken to assess the potential traffic and transportation of the 200 dwelling option as the scenario likely to result in the highest effect. Consultation with Waka Kotahi NZTA was also primarily undertaken on this basis.
- 10 I note that that scheme plans for the 50 lot Country Living Zone and 200 lot fully serviced Village Zone follow the same basic structure in terms of access location, roading provision, connectivity to adjacent lots and footpath / cyclepath connectivity.

CONSULTATION

- 11 Waka Kotahi NZTA was consulted in relation to the proposed rezoning on a number of occasions including:
- (a) a meeting held on 7th November 2019
 - (b) Initial comments provided back to project team by Waka Kotahi NZTA on 11th November 2019
 - (c) email dated 5th August 2020 seeking feedback on a revised scheme plan
 - (d) response from Waka Kotahi NZTA dated 18th August 2020
 - (e) provision of ITA to Waka Kotahi NZTA for review
 - (f) formal confirmation that Waka Kotahi NZTA does not oppose the proposed rezoning dated 26th November 2020.
- 12 A record of the key consultation discussions and feedback are attached to the Appended ITA as Appendix A of that document. I have summarised the key points raised by Waka Kotahi NZTA in their formal response to consultation in the following sections.

Access Location

- 13 As set out in Section 7.2 of the ITA, the location of the access identified in the scheme plans was identified based on consideration of Waka Kotahi NZTA visibility requirements and District Plan (Operative and Proposed) requirements for separation from accesses and intersections.
- 14 It was not possible to satisfy both requirements because of the existing spacing of vehicle crossings serving other sites, typically single dwellings or fields. The visibility requirement was given more weight as it relates more directly to safety outcomes.
- 15 The identified location for a future access to site is approximately 150m east of the Surfside Church. It is within the 80km/h speed zone but can provide appropriate visibility for a 100km/h environment (282m), subject to vegetation trimming within the road reserve to the west. Waka Kotahi NZTA supported any future new intersection with SH23 being located within the 80km/h zone.

- 16 It is noted that vegetation to the south may impede visibility in that direction but this can be easily addressed through berm maintenance.
- 17 The combination of the existing traffic volume on SH23 and the volumes expected from the plan change meet the thresholds set out in the Austroads design standards for providing a right turn bay treatment. I recommend that the requirement to provide a right turn bay on SH23 is included to support the proposed rezoning. Waka Kotahi NZTA agrees with this recommendation subject to it being designed to the appropriate Austroads and Manual of Traffic Signs and Markings design guides, the inclusion of street lighting, trimming of vegetation to protect visibility, completion of suitable Road Safety Audits and engineering approval by Waka Kotahi NZTA.

Connectivity for all Travel Modes

- 18 The proposed internal road network features a central road corridor that is predominantly parallel to SH23. Provision has been made for this road to be connected through the adjacent site to the west to allow for a future connection through to Okete Road. Similarly, it is possible for this road to be continued through to the site in the east should further development occur there. Waka Kotahi supports this potential future connectivity, subject to an assessment of their effects at the time they are brought forward for development.
- 19 The internal public roads in the concept scheme plan for both a Country Living and Village Zone are shown as 22m wide with the road intersecting SH23 being 30m wide. These widths are sufficient to provide a suitable carriageway, on-street parking, footpaths and berms in accordance with the standards of both the Operative and Proposed District Plans. These roads are also suitable to allow for potential future bus service provision.
- 20 A number of short cul-de-sacs, private rights-of-way and a public crescent road branching off the main internal road may be required to serve the future lots. The exact number and design of these roads and accesses will be confirmed when a resource consent application is lodged for subdivision of the site.
- 21 It is my recommendation that a rule is included specifically for this site which states that no dwellings within the site can gain direct access to SH23. This protects the arterial function of SH23 and is in accordance

with the requirements of the both the Operative and Proposed District Plans which require property access to be provided to roads of a lower hierarchy status considered appropriate for the site. Waka Kotahi NZTA makes the same recommendations.

- 22 An off-road walkway/cycleway is proposed around the northern and eastern boundaries of the site. This will connect to SH23 in the east and can potentially be extended through to Okete Road through the adjacent site to the west if that land is developed in future. Footpaths are also anticipated along both sides of SH23 west of the site adjacent to Te Uku village.
- 23 The path on the southern side of SH23 may connect to a future farm shop/café and may deviate away from the existing road reserve. Such details will be confirmed at the resource consent stage and the potential shop/café is outside the Plan Change site.
- 24 There are direct connections provided to Te Uku Village along with a grade-separated location for pedestrians and cyclists to cross SH23 to the east. The proposed walking and cycling connections are considered to be suitable for development within the proposed Plan Change site while also promoting the use of the public transport mode as a way to travel between Raglan and Hamilton.
- 25 Waka Kotahi NZTA requires that a footpath linking the site to Te Uku village be constructed at the same time the access road is constructed. They also require that the underpass design be subject to a safety audit to ensure that it is suitable for pedestrian and cyclist use.

Wider Network Upgrades by Waka Kotahi NZTA

- 26 Waka Kotahi NZTA is reviewing speed limits along SH23. The speed limit on SH23 in and around Te Uku may be reduced. This would not affect my recommendations in relation to the potential future site location. Similarly, the proposed site access location would have no detrimental effect on any Waka Kotahi NZTA plans to reduce the speed limit.
- 27 Waka Kotahi NZTA also advised that they were considering installing a flush median near the intersection between SH23 and Okete Road. There is some clear separation, albeit only a short distance, likely between this median and the right turn bay to the site. This short

distance makes it feasible that the median could readily integrate with the right turn bay to the site. Therefore, the proposed Plan Change is not considered to prohibit the inclusion of a median near Okete Road and similarly, a potential median would not affect the subject site.

CONCLUSIONS

- 28 Section 9 of the ITA presents an assessment of the proposed rezoning plan change against the objectives and policies of the PDP, and the relevant rules of the ODP and PDP. I conclude that the traffic and transportation elements of the proposed future residential use of 50 to 200 dwellings is consistent with and supportive of the relevant objectives and policies and can achieve a high degree of compliance with these rule frameworks.
- 29 I also conclude that the potential use of the site for residential purposes and the provision of associated transportation infrastructure would not impede the current Waka Kotahi NZTA considerations in relation to speed limit and the suitability of a flush median at the nearby Okete Road / SH23 intersection.
- 30 Following consultation with Waka Kotahi NZTA, I recommend the following rules should be applied to either a Country Living Zone or Village Zone applied to the site:
 - (a) A right bay should be provided on SH23 to facilitate vehicles turning right into the site. This right turn bay should be designed to the appropriate standards, including Road Safety Audits and be subject to approval by Waka Kotahi NZTA.
 - (b) The vegetation within the SH23 road reserve to the west of the access is trimmed back or removed to provide at least 282m of visibility to the west.
 - (c) No vehicle crossings to individual lots should be provided directly to SH23.
 - (d) A footpath linkage to the village should be provided at the time the access road is constructed.
 - (e) The underpass east of site should be assessed for suitability of use by pedestrians and cyclists and should be subject to appropriate design considerations and approvals.

- 31 With these above rules in place, I conclude that the transportation effects of the proposed rezoning will be less than minor for either around 50 dwellings under a Country Living Zone, 82 dwellings in an un-serviced Village Zone or up to 200 dwellings in a fully serviced Village Zone.

A handwritten signature in black ink, appearing to read 'JM', with a stylized flourish at the end.

Judith Makinson

CKL

17 February 2021

Appendix 1 - CKL Integrated Transportation Assessment



Planning | Surveying | Engineering | Environmental

Integrated Transportation Assessment

Diamond Creek Farm Ltd

Te Uku, New Zealand

DOCUMENT CONTROL

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AUTHOR	Michael Hall Transportation Engineer 
AUTHORISED BY	Judith Makinson Transportation Engineering Manager 
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1 Introduction

- 1.1.1 CKL has been engaged by Diamond Creek Farm Limited to assess the effects of a proposed Plan Change for the site known legally as Part Lot 1 DP 23893 which is located in Te Uku, approximately 10km east of Raglan. It was originally proposed to rezone the site to the site from its current Rural Zone, as stipulated in the Operative Waikato District Plan, to Country Living Zone. It is understood that Waikato District Council suggested that Village Zone may be more consistent with their policy thinking in relation to expansion of residential development. It is understood that this is now not supported by Waikato District Council, however the Village Zone assessments remain relevant in the context of submission to the District Plan review that seek to reduce the minimum lot size in the Country Living Zone.
- 1.1.2 It was originally envisaged that the site could ultimately be developed into approximately 160 single residential dwellings along with supporting reserves, internal roads and walkways/cycleways. To ensure that a robust assessment is undertaken, this report allows for up to 200 dwellings to be constructed within the site.
- 1.1.3 Given the Country Living Zone would support only around 50 dwellings on site, the assessments presented within this report are extremely robust. The conclusions drawn remain valid, particularly given there has been no change to the proposed means of access, roading, pedestrian connections, or the general overall layout originally assessed. In summary, it is concluded that there are no traffic or transportation reasons to preclude approval of the proposed Plan Change.

2 Site Location

- 2.1.1 The site is located on the site known legally as Part Lot 1 DP 23893 as highlighted in red in Figure 1. which is taken from the Waikato District Council's (WDC) IntraMaps database. The site has frontage to SH23 only.



Figure 1: Site Location

- 2.1.2 The site is currently undeveloped and is used for pastoral grazing. The surrounding activities are also rural in nature. The Te Uku Village which includes a convenience store, community hall and a school is approximately 300m to the west. Surfside church and a lookout car park to a windfarm are located adjacent to the southwestern corner of the site.

3 Existing Road Network

3.1 Physical Environment

- 3.1.1 SH23 is a two-way, two-lane road that connects Raglan to Hamilton. From the eastern extent of the site, the posted speed limit is 100km/h and this reduces to 80km/h approximately 300m from the western site boundary. A horizontal curve just west of the eastern property boundary has an advisory speed of 75km/h.
- 3.1.2 The shoulder along each side of the carriageway is typically 1m wide. This widens in the vicinity of Surfside Church and No Stopping At All Times (NSAAT) Lines are provided on both sides of the road. While parking is technically permitted elsewhere along SH23, it is unlikely that vehicles will park on the road given the rural environment and nearby lookout car park. The typical cross section of SH23 is shown in Figure 2.



Figure 2: SH23 Looking East

3.2 Traffic Volumes

- 3.2.1 The latest traffic volumes on SH23 have been sourced from the Waka Kotahi NZTA database at a count location approximately 3km to the west of the site. Traffic volumes between the count location and those passing the site are unlikely to vary greatly given the surrounding rural environment. SH23 is reported as carrying an average of 5,252 vehicles per day (vpd) with a peak hour of 538 vehicles per hour (vph).
- 3.2.2 Approximately 75% of vehicles are eastbound in the morning peak heading towards Hamilton. This trend reverses in the evening peak with approximately 75% of vehicles westbound towards Raglan.

3.3 Road Safety

- 3.3.1 A search was made of the Waka Kotahi NZTA's Crash Analysis System for all crashes that had been reported within 100m of the site frontage along SH23 within the last five-year period. The search found that five crashes had been reported within the subject area. One of these resulted in serious injuries and the other four were damage to property only.
- 3.3.2 The crash that resulted in serious injuries was due to a motorcycle travelling at speed on the curve near the eastern boundary of the site and swinging wide into a fence. Alcohol was also suspected.

- 3.3.3 The factors in the non-injury crashes were varied and occurred at different locations within the study area. No crashes were reported that involved pedestrians or cyclists. As such, no specific safety issues have been identified in the vicinity of the subject site.

4 Sustainable Travel Modes

4.1 Walking and Cycling

- 4.1.1 Currently there are no specific provisions for pedestrians or cyclists in the area around the proposed site which is expected in a rural setting. It is proposed to add a footpath across the frontage of the site as part of the proposed subdivision.

4.2 Public Transport

- 4.2.1 There is a regional bus service that operates between Raglan and Hamilton. While there is no formally marked bus stop, it is possible to hail this service outside Te Uku School on SH23. This service operates only five times per day in each direction.
- 4.2.2 No other public transportation services operate in the vicinity of the site.

5 Committed Environmental Changes

- 5.1.1 No future projects are known to be committed or planned in the vicinity of the site that would affect the transportation environment in the area. It is noted that Waka Kotahi NZTA is expected to commence consultation to reduce the speed limits along SH23 in October 2020. The potential adjustment to speed limits is intended to increase the safety of road users along the SH23 road corridor and are unlikely to affect travel patterns or traffic volumes in the vicinity of the site. However, at this time, the timeframe for completion of this project and the potential outcomes as they relate to Te Uku are not known.

6 Development Proposals

6.1 Development

6.1.1 This transportation assessment has considered the traffic and transportation effects of up to 200 dwelling which could be constructed on site, depending on the final zoning.

6.1.2 Figure 3 below shows a concept scheme plan for the site based on a Village Zone. Figure 4 shows the same layout based on a lower density Country Living Zone outcome.

6.1.3 This scheme plan has been assessed to determine the likely traffic effects associated with the proposed Plan Change.

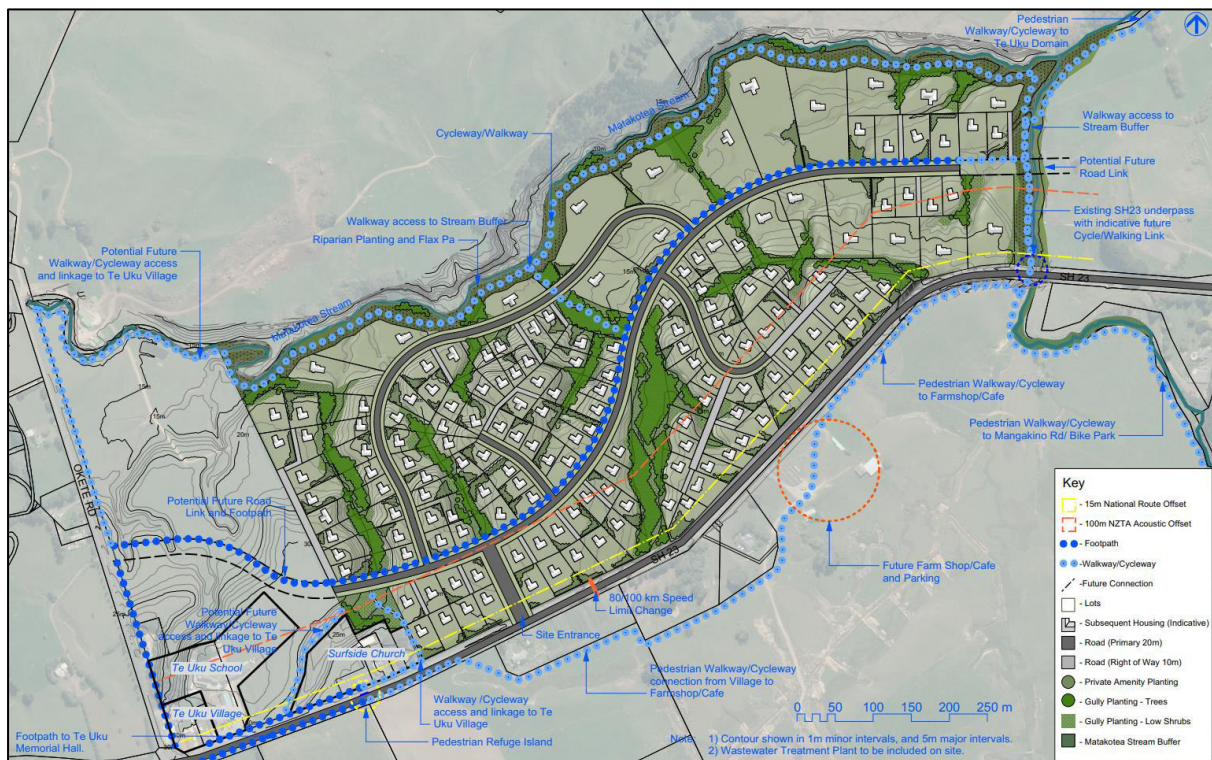


Figure 3: Village Zone Scheme Plan

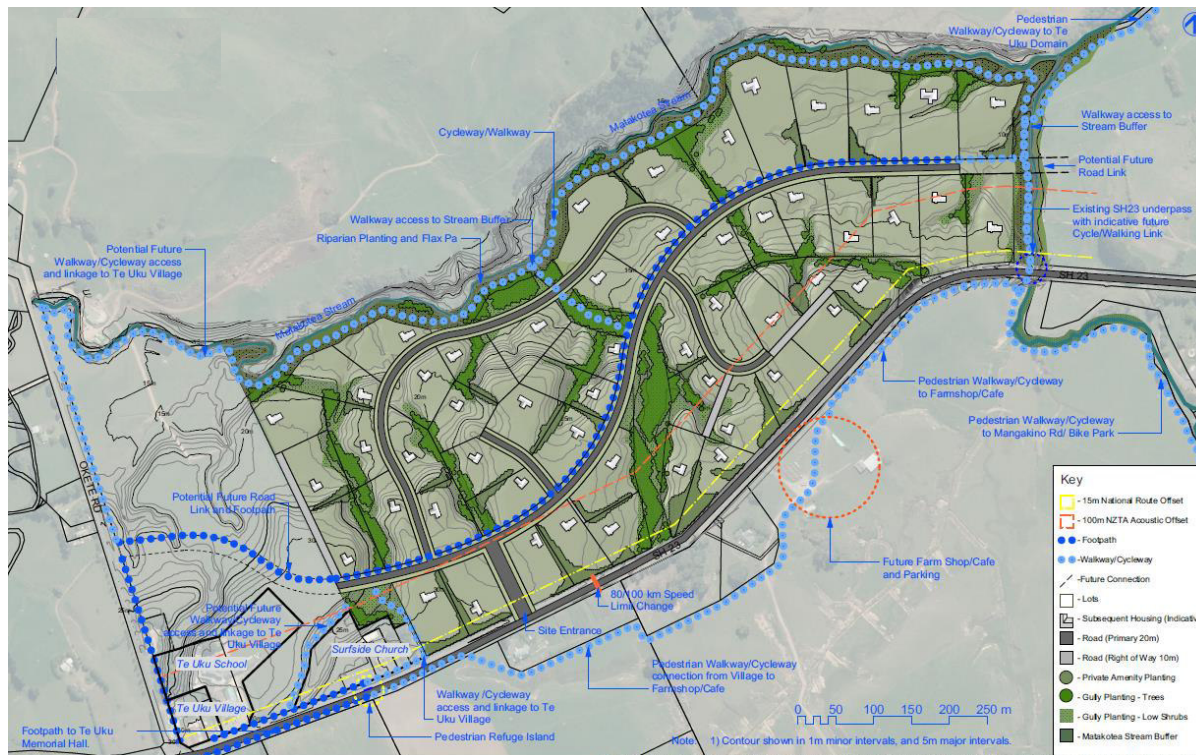


Figure 4: Country Living Zone Scheme Plan

- 6.1.4 These scheme plans have been prepared for assessment purposes only. They include an internal road network that features a road that is predominantly parallel to SH23 with a connecting road provided approximately 150m east of the church site. Provision has been made for the road to be connected through the adjacent site to the west to allow for a future connection through to Okete Road. Similarly, it is possible for this road to be continued through to the site in the east should further development occur on that site.
- 6.1.5 A number of short cul-de-sac roads, private rights-of-way and a public crescent road branching off the main internal road are likely to be required to serve the future lots. The exact number and design of these roads and accesses will be confirmed when a resource consent application is lodged for subdivision of the site.
- 6.1.6 An off-road walkway/cycleway is proposed around the northern and eastern boundaries of the site. This will connect to SH23 in the east and can potentially be extended through to Okete Road through the adjacent site to the west. Footpaths are also proposed along both sides of SH23 west of the site adjacent to Te Uku village, linking to the site. The path on the southern side of SH23 may connect to a future farm shop/café and may deviate away from the existing road reserve. Such details will be confirmed at the resource consent stage and the potential shop/café is outside the Plan Change site.

7 Assessment of Effects

7.1 Traffic Effects

- 7.1.1 The number of trips expected to be generated by the test case 200 lot subdivision has been derived from Waka Kotahi NZTA Research Report 453 Trips and parking related to land use (RR453). The rate provided for residential dwellings in a rural setting is 1.4 trips per unit in the peak hour and 10.1 trips per unit over the course of the day. Therefore, 200 dwellings would be expected to generate some 280vph in the peak hour and 2,020vpd.
- 7.1.2 SH23 is reported as carrying an average of 5,252vpd with a peak hour of 538vph. A single lane of traffic typically has a capacity of 1,400vph. The addition of 280 vehicles in the peak hour to the existing 538vph would therefore still be well within the capacity for single lane despite these volumes being two-way flows. As such, it is assessed that the surrounding road network is able to accommodate the traffic volumes associated with the proposed Plan Change.
- 7.1.3 The Plan Change provides for only one access from the site to the wider network, which will be provided directly onto SH23, and hence all vehicles generated by the site would gain access via this intersection. Future allowance has been made for external roading connections to the east and west however this is dependent on development occurring within the neighbouring sites. If a connection to Okete Road to the west is established, it is still likely that most vehicle movements generated by the site would still head towards SH23. The primary benefit of a second roading connection therefore lies in improving the resilience of the road network rather than having to address any congestion effects given it has been assessed that the surrounding road network is able to accommodate the likely future traffic demands associated with the site.

7.2 External Access

- 7.2.1 The proposed concept scheme plans for a future subdivision of the site both show an intersection to SH23 located approximately 150m east of Surfside Church. This is located where the speed limit on SH23 has reduced to 80km/h. It is assessed that locating the intersection in the slower speed setting is more appropriate than within the 100km/h setting as this will reduce any potential road safety risks.
- 7.2.2 The intersection to the site is likely to take the form of a T-intersection. Visibility at this likely access location has been measured in accordance with Appendix 5B of the Waka Kotahi NZTA

Planning Policy Manual (PPM). It is noted that while the speed limit to the west of the site is 80km/h, the visibility assessment has considered the operating speeds to still be 100km/h as at present there are no clear and obvious visual clues to drivers that there is a change in the speed limit aside from the speed limit signs themselves signs. Development within the site may change the perceived speed environment of the road as the adjacent land use would be more built up rather than land used only for pastoral grazing.

7.2.3 For a 100km/h posted speed limit, the PPM requires a minimum of 282m visibility to be provided. This reduces to 203m for an 80km/h posted speed.

7.2.4 Figure below illustrates the locations along the site frontage where sufficient visibility is available in both directions.

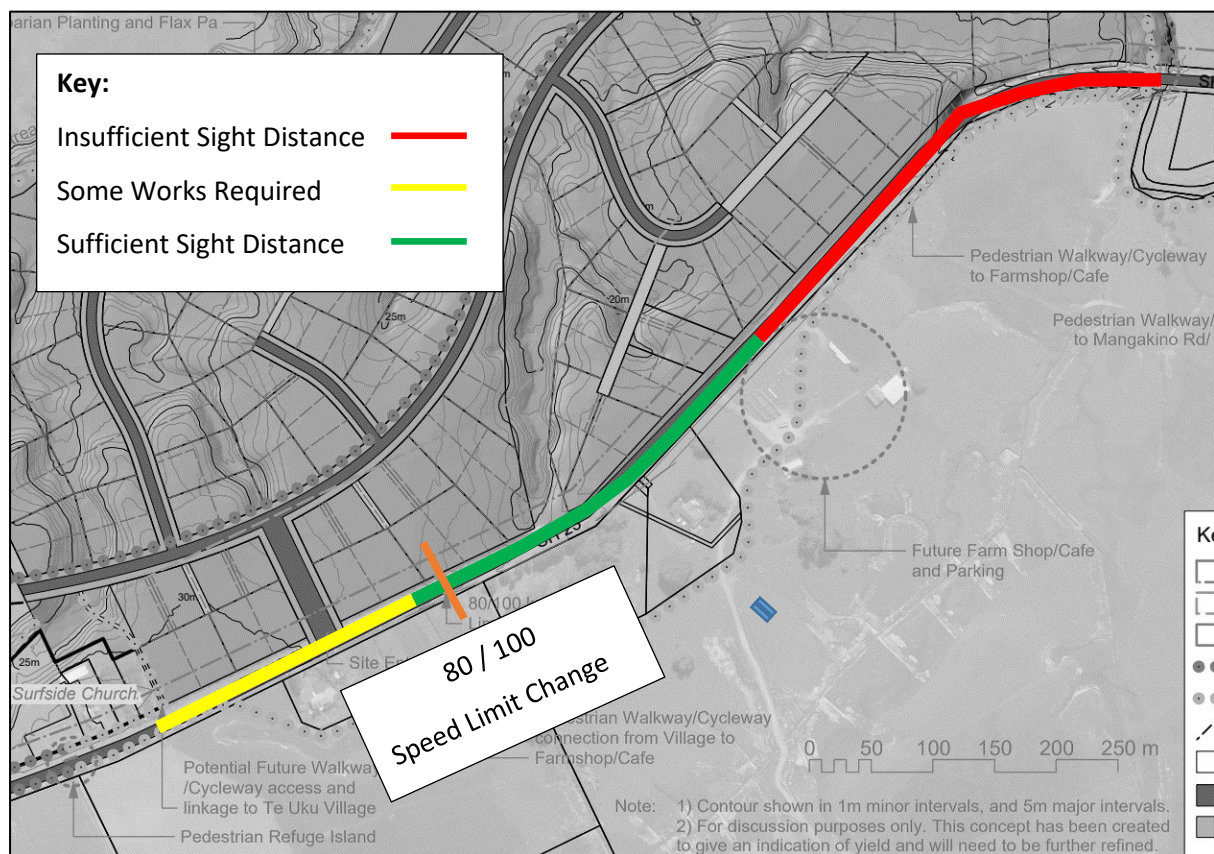


Figure 5: Visibility Diagram

7.2.5 Some vegetation within the road reserve in front of Surfside Church and within the SH23 road reserve limits visibility to the west. This affects the frontage coloured yellow on the above figure. If this vegetation is removed, then an intersection with sufficient sight distance can be provided in this area. The curve at the eastern end of the site limits visibility to the east and therefore it is not considered appropriate to locate an access near the eastern end of the site,

as indicated by the area in red. In order for sufficient visibility to be provided at the intersection, it is recommended that a rule is included as part of the Plan Change that states the vegetation must be trimmed or removed in order to provide at least 282m of visibility to the west of the intersection.

- 7.2.6 There is a slight trough in SH23 just east of the change in speed limit signs. This trough results in the surface of the road not being fully visible however the change in elevation is not enough to hide vehicles as they approach.
- 7.2.7 Both the Operative and Proposed District Plans require there to be at least 120m separation between vehicle crossings and intersections. There is an existing vehicle on the opposite side of the site approximately 120m east of Surfside Church. Providing an access to the subject site where there is suitable visibility would result in this vehicle crossing being within 120m of the intersection. Therefore, full compliance with the visibility and separation standards is not possible. Given that the nearby vehicle crossing is on the opposite side of the road there is less likely to be confusion caused as to whether vehicles are turning left or right. The vehicle crossing only serves a single dwelling and therefore would only cater for low volumes of traffic. It is assessed that providing an access with good visibility is of a higher priority than locating that access more than 120m from any other vehicle crossing.
- 7.2.8 Appendix A8 of Part 4 the AUSTROADS Guide to Road Design *Intersections and Crossings – General* includes warrants for when a right bay should be provided for an intersection. Given that the peak hourly traffic volumes on SH23 are over 500vph and that the site may generate over 200vph, a right turn is warranted. It is therefore recommended that a rule is included as part of the proposed Plan Change that requires a right turn bay to be provided for the intersection to the site.
- 7.2.9 The road reserve in the vicinity of where an access could be provided that provides sufficient visibility is over 20m wide and therefore providing a right turn is not expected to require any land take. The exact design of such a right turn bay can be undertaken at the resource consent stage. In the unlikely event that some land take is required, this would come from within the subject site.
- 7.2.10 The presence of a right turn bay would further emphasise that there is in a change in operating speed environment while also separating out traffic turning right from the main traffic stream. It would also provide additional lateral separation between vehicular flows reducing any safety risks associated with vehicle turning into the nearby private vehicle crossing.

- 7.2.11 From the assessment above it has been identified that an access can be provided with suitable visibility in both directions however it is not possible to provide an access that is fully compliant with the separation criteria of the District Plan. It is recommended that a right turn bay is provided for this intersection which will assist in mitigating any adverse effects of providing an intersection near the vehicle crossing and that the vegetation to the east is trimmed or removed to ensure that sufficient visibility to the west is available.

7.3 Internal Accesses

- 7.3.1 The internal public roads in the concept scheme plan are shown as 22m wide with the road intersecting SH23 being 30m wide. These widths are sufficient to provide a suitable carriageway, on-street parking, footpaths and berms in accordance with the standards of both the Operative and Proposed District Plans. Internal intersections are likely to be give-way controlled T-intersections which are common in residential settings. Detailed visibility assessments of the intersections will be undertaken at the resource consent stage and it is expected that sufficient visibility can be provided.
- 7.3.2 There are no notable differences between the rules of the Operative District Plan and the Proposed District Plan in relation to vehicular access design or location. Compliance is expected to be achieved in terms of access design to the individual future lots and a full assessment will be undertaken at the time a resource consent application is submitted.
- 7.3.3 It is noted that the Operative District Plan requires separation between vehicle crossings to consider crossings on both sides of the road. Under a more intensive development, it is likely that there may be some non-compliance with this rule as vehicle crossings in most residential subdivisions are within 15m¹ of another vehicle crossing. Generally, this has no adverse effect on the safety or performance of the road network so long as there is clear visibility available to the crossings and that they cater for low volumes of traffic. A detailed assessment of exact vehicle crossing locations will be reviewed at the resource consent stage for a future subdivision. It is expected that sufficient distance between vehicle crossings and intersections can be achieved. It is less likely that there would be non-compliances in relation to separation distances under a Country Living Zone assuming larger lot sizes. Regardless, the same

¹ Waikato Operative District Plan, Waikato Section, Part 3 Appendices, A Traffic, A14 Access and vehicle entrances, Table 5 and Figure 6

requirement occurs within the Proposed District Plan² and applies to the Village Zone by way of Chapter 24 Village Zone, 24.4 Subdivision, 24.4.1 Subdivision General or the Country Living Zone by way of Chapter 23 Country Living Zone and the same subdivision sections as noted.

- 7.3.4 It is proposed that the lots fronting SH23 are provided access to the internal road network and have no direct connection to SH23. This protects the arterial function of SH23 and is in accordance with the requirements of the both the Operative and Proposed District Plans which require property access to be provided to roads of a lower hierarchy status considered appropriate for the site. It is recommended that a rule is included as part of the Plan that states that no dwellings within the site can gain direct access to SH23.
- 7.3.5 Overall, the internal road and access are likely to be suitable for a future subdivision of the site with further analysis and design to be undertaken at the resource consent stage.

7.4 Parking Effects

- 7.4.1 The Operative District Plan requires a minimum of one car park to be provided per bedroom within each dwelling. It is likely that most dwellings that could be constructed within the site would comprise four bedrooms and therefore would technically need to allow for at least four vehicles to park within each site. Given the minimum size of the lots permitted within both the Village Zone or Country Living Zone, it is considered likely that this requirement can be met.
- 7.4.2 The notified version of the Proposed District Plan states that only two car parks are required for dwellings with two or more bedrooms. For the same reasons as above, it is likely that this requirement will be met in any subdivision. There are no other notable changes between the Operative District Plan and the Proposed District that would affect parking.
- 7.4.3 The parking requirements of the Proposed District Plan are less onerous than that of the current Operative District Plan and assuming no significant changes as part of the Proposed Plan hearing process, it is considered that future subdivision of the site will be able to comply with the parking rules of the Proposed District Plan.

² Proposed District Plan, Section C Rules, Chapter Table 14.12.2.5.1 Separation Distances and Figure 14.12.5.2 Separation Distances.

7.5 Walking, Cycling and Public Transport

- 7.5.1 The proposed concept scheme plans shown in Figure 3 and 4 previously includes a number of extra paths for walking and cycling. Footpaths will be provided on both of the new roads within the site and an off-road path is proposed along the eastern and north site boundaries. With provision made for future roading connections to adjacent sites, the footpath network can similarly be connected to and through the adjacent sites should they be developed at some stage in the future.
- 7.5.2 The off-road path along the northern boundary follows the stream and connects through to Okete Road. The path on the eastern side of the site crosses SH23 via an underpass and will be continued west to connect to Te Uku Village. Footpaths are proposed within the SH23 road reserve in the vicinity of Te Uku village. The footpath on the southern side of SH23 diverts away from the road reserve however there is not a significant difference in distance travelled if the path were to be within the road reserve.
- 7.5.3 With the Raglan bus service stopping at Te Uku Village, there is potential for formal bus stops to be added either within a subdivision in the Village Zone or on SH23, subject to consultation with Waikato Regional Council and Waka Kotahi NZTA to further promote use of this service by future residents within the site. An increased patronage may allow for increased service frequency which would also increase attractiveness for other potential patrons along this route.
- 7.5.4 Overall, there are direct connections provided to Te Uku Village along with a grade-separated location for pedestrians and cyclists to cross SH23 to the east. The proposed walking and cycling connections are considered to be suitable for development within the proposed Plan Change site while also promoting the use of the public transport mode as a way to travel between Raglan and Hamilton.

8 Consultation

- 8.1.1 Waka Kotahi NZTA has been consulted in relation to the proposed Plan Change and are in general support of the proposed Plan Change. This consultation was carried out in relation to the proposed Village Zone. Given a Country Living Zone would have significantly lesser effects, this consultation is still considered to be valid. The comments received are summarised below

and relevant email correspondence is attached as Appendix A. This includes an affected party approval letter:

- Waka Kotahi supports the potential future road links.
- It is requested for the potential future walkway/cycleway access and linkage to Te Uku Village to be constructed prior to the development being completed, and not in the potential future.
- The proposed location of the pedestrian refuge island appears to be within the seal widening for the church accessway, and the sightlines to the east may be obstructed by the vegetation outside the church.
- Waka Kotahi is currently designing a flush median from 240m east of Okete Road to 130m west of Okete Road, which may impact the proposed footpaths in this area. The construction of this project is not currently funded, and the timing cannot be confirmed at this time.
- Waka Kotahi is currently developing a speed management programme, which includes reviewing the current speed limits on State Highway 23. This review may include lowering the speed limits at Te Uku Village and some rural sections of State Highway 23. Consultation on any speed limit changes has been delayed is currently planned to take place in October 2020.
- Waka Kotahi understands the future Farm Shop/Café and Parking is indicative only, and has not provided comments for that proposal.

8.1.2 The request from Waka Kotahi NZTA to construct the footpaths prior to any development being completed can be accommodated and we recommend that a rule to this effect is included in the provisions for the Structure Plan area.

8.1.3 As discussed in item 7.2.5, it is proposed to remove and trim back the vegetation in front of Surfside Church which will also address concerns raised in terms of ensuring that there is sufficient visibility to any pedestrian median islands.

8.1.4 The potential speed limit reductions on SH23 are likely to benefit from the proposed Plan Change as an increased surrounding urban environment is likely to indicate to drivers a change in environment from rural to urban and that drivers should adjust their speeds accordingly thereby increasing compliance with the speed limit changes. The Plan Change is therefore not considered to adversely affect any changes to the speed limits and similarly the change in speed limits are not considered to adversely affect the proposed Plan Change.

- 8.1.5 It is noted that a flush median may or may not be proposed near the intersection between SH23 and Okete Road. This is not yet confirmed by Waka Kotahi NZTA and has not been taken into consideration at this stage. There is some clear separation, albeit only a short distance, likely between this median and the right turn bay to the site. This short distance makes it feasible that the median could readily integrate with the right turn bay to the site. Therefore, the proposed Plan Change is not considered to prohibit the inclusion of a median near Okete Road and similarly, a potential median would not affect the subject site.

9 Planning Framework

9.1.1 Table 1 below summarises the compliance of the proposed development with the relevant transportation criteria from the Operative District Plan.

Table 1: Operative District Plan Compliance

Rule	Requirement	Proposed	Compliance
A11 Parking, Loading Bays, Services Lanes and Manoeuvring Space			
A11.1(a)	Parking and Loading bays are provided that complies with Table1 and Figures 1, 2 and 3, and Appendix B (Engineering Standards)	Parking to be confirmed at resource consent stage	Compliance achievable
A11.1(b)	Bicycle spaces are provided that comply with Table2	Parking to be confirmed at resource consent stage	Compliance achievable
A11.1(c)	Parking, loading bays and manoeuvring spaces are sealed, drained and permanently marked if 5 or more parking spaces are required, excluding parking spaces required for a dwelling.	Parking to be confirmed at resource consent stage	Compliance achievable
A11.1(d)	Parking, loading bays are not located on a shared access or living court and are not obstructed when in use	Parking to be confirmed at resource consent stage	Compliance achievable
A11.1(e)	Parking, loading bays and manoeuvring spaces are located on the same site as the activity for which they are required.	Parking to be confirmed at resource consent stage	Compliance achievable
A11.1(f)	In Business Zones, a service lane is provided that complies with Table 4 and Appendix B (Engineering Standards) and so that a vehicle is not required to reverse to or from a road, shared access or across a footpath.	Site is not in Business Zone	N/A
A12 Manoeuvring Space			
A12.1(a)	No vehicle is required to reverse to or from a road or a shared access	Parking to be confirmed at resource consent stage	Compliance achievable
A12.1(b)	A 90 percentile car, as defined in Figure 2, can enter and exit all parking spaces without making more than one reverse manoeuvre, excluding spaces required for a dwelling.	Parking to be confirmed at resource consent stage	Compliance achievable
A12.1(c)	A 90 percentile car, as defined in Figure 2, can enter and exit one parking space per dwelling, without making more than one reverse movement	Parking to be confirmed at resource consent stage	Compliance achievable
A12.1(d)	A 90 percentile truck, as defined in Figure 2, can enter and exit all loading spaces required under Table 1 without making more than one reverse movement.	Parking to be confirmed at resource consent stage	Compliance achievable
A13 Queuing Space			

A13.1(a)	On-site queuing space is provided in accordance with Table 3 for vehicles entering or exiting the parking, loading, manoeuvring or service area.	No vehicle control mechanisms likely.	Compliance achievable
A14 Access and Vehicle Entrances			
A14.1(a)	The site has Vehicles access to a formed road that maintained by Council	All future lots will have access to a public road	Complies
A14.1(b)	No more than 3 activities share a private access	Only one activity within the site	Complies
A14.1(c)	No access, access leg or right-of-way runs parallel to any road within 30m of the road	No access expected to be parallel to adjacent roads	Complies
A14.1(d)	Every access and road entrance is laid out and constructed to comply with relevant standards	Potential for some non-compliance in terms of driveway separation under Village Zone, but less likely under a Country Living Zone. However unlikely to have any practical adverse effects	Non-compliance
A14.1(e)	No new entrance is created from a limited access road	No access proposed to limited access road	Complies
A14.1(f)	No access or entrance within 10m of a road has a gradient steeper than 12 degrees	The driveway has a maximum angle less than 8 degrees	Complies

9.1.2 A future subdivision of the proposed Plan Change site is likely to generally comply with the standards of the Operative District Plan. Some non-compliances may arise in relation to vehicle crossing separation however non-compliance is common in residential areas and is unlikely to result in any practical adverse effects.

9.1.3 Table 2 below summarises the proposed Plan against the transportation criteria from Section 14.12 of the notified version of the Proposed District Plan.

Table 2: Proposed District Plan Compliance

Rule	Requirement	Proposed	Compliance
14.12.1.1 Vehicle Access for All Activities			
1a	The site has a vehicle access to a formed road that is maintained by a road controlling authority	All sites are expected to have access to a formed public road	Compliance achievable
1b	The site has a vehicle access that is constructed to comply with the relevant requirements of Table 14.12.5.1, Figure 14.12.5.2, Table 14.12.5.3 and Figure 14.12.5.4	Vehicle crossings expected to comply to these standards	Compliance achievable
1c	No new vehicle access shall be created from Newell Road (south of Birchwood Lane)	Newell Road not near site	N/A

1d	No access, access leg or right-of-way shall run parallel to any road within 30m of the road	No parallel access roads expected	Compliance achievable
1e	On a site with legal access to two roads, the activity only accesses the road with the lower classification in the road hierarchy in Tables 14.12.5.5 and 14.12.5.6 (where the roads have the same classification, access is only to the road with the lower average daily traffic movements)	Sites with dual frontage will gain access from the road with the lower hierarchy classification	Compliance achievable
1f	New vehicle accesses/entrances are not to be constructed to any site from the following roads	No listed roads are near site	N/A
1g	No new vehicle access shall be created within 30 metres of a railway level crossing	No nearby level crossings	N/A
14.12.1.2 On-Site Parking and Loading			
1a	The parking requirements in Table 14.12.5.7 and 14.12.5.11,	Parking spaces expected to meet requirements	Compliance achievable
1b	On-site bicycle space requirements in Table 14.12.5.10,	Parking spaces expected to meet requirements	Compliance achievable
1c	Any on-site car parking spaces for non-residential activities within the Residential Zones must be set back at least 3m from the road boundary of the site and screened by planting or fencing	No non-residential activities proposed	N/A
1d	On-site car parking spaces and loading bays are to be provided in accordance with the requirements of Table 14.12.5.7, Figure 14.12.5.8 and Table 14.12.5.11 and be located on the same site as the activity for which they are required;	Parking spaces expected to meet requirements	Compliance achievable
1e	On-site car parking spaces and loading bays are formed	Parking spaces expected to meet requirements	Compliance achievable
1f	On-site car parking spaces and loading bays are to be permanently marked if five or more parking spaces are required;	Parking spaces expected to meet requirements	Compliance achievable
1g	On-site car parking spaces and loading bays are not to be located on any shared access or residential court;	Parking spaces expected to meet requirements	Compliance achievable
1h	Vehicles occupying any on-site car parking or loading spaces must have ready access to the road (or relevant access or right of way) at all times, without needing to move any other vehicle occupying other on-site car parking or loading spaces;	Parking spaces expected to meet requirements	Compliance achievable
1i	On-site car parking spaces and loading bays are not required on sites with sole frontages to the following	No listed roads are near site	N/A
14.12.1.3 On-Site Manoeuvring and Queuing			

1a	On-site manoeuvring space shall be provided to ensure that no vehicle is required to reverse onto a road	Future sites expected to meet requirements	Compliance achievable
1b	A 90 percentile car, as defined in Figure 14.12.5.8, can enter and exit all parking spaces without making more than one reverse movement, excluding spaces required for a dwelling	Future sites expected to meet requirements	Compliance achievable
1c	On-site manoeuvring space for any heavy vehicle shall comply with the tracking curve (relevant for the type of activities to be carried out on the site and trucks to be used),	Future sites expected to meet requirements	Compliance achievable
1d	On-site manoeuvring space shall be formed	Future sites expected to meet requirements	Compliance achievable
1e	On-site queuing space shall be provided in accordance with Table 14.12.5.12 for vehicles entering and exiting any on-site car parking, loading or manoeuvring space	Future sites expected to meet requirements	Compliance achievable
1f	On-site manoeuvring and queuing spaces are not required on sites with vehicle accesses/entrances to the following:	No listed roads are near site	N/A
14.12.1.4 Traffic Generation			
1a	Within the Residential, Village or Country Living Zones there is a maximum of 100 vehicle movements per day, and no more than 15% of these vehicle movements are heavy vehicle movements;	No individual site is expected to generate more than 100 movements per day	Compliance achievable
1b	Within the Rangitahi Peninsula Zone	Site not in this zone	N/A
1c	Within the Business Zone Tamahere, Business Zone or Business Town Centre Zone	Site not in these zones	N/A
1d	Within the Rural Zone	Site not in this zone	N/A
1e	Within the Industrial Zone and Heavy Industrial Zone (excluding the Huntly Power Station and Huntly Quarry)	Site not in this zone	N/A
1f	From the Huntly Power Station	Site not in this zone	N/A
1g	From the Huntly Quarry	Site not in this zone	N/A
1h	Within Precincts A and B of the Te Kowhai Airpark Zone	Site not in this zone	N/A
1i	Within Precincts C and D of the Te Kowhai Airpark Zone	Site not in this zone	N/A
14.12.1.5 Operation, maintenance and minor upgrading of existing public roads			
1a	The works occur within the road or unformed road	Upgrade works expected to occur within road reserve	Compliance achievable
1b	Works within the road must be: i) Incidental to, and serve a supportive function for, the existing public road; or ii) Required for the safety of road users; or	Upgrade works will be support future development	Compliance achievable

	iii) Required for the safety of adjacent landowners or occupiers;		
1c	Lighting shall be designed and located to comply with the Australia New Zealand Road Lighting Standard 1158, (series) – Lighting for Roads and Public Spaces: 2005	Lighting expected to comply with these standards	Compliance achievable
1d	Any earthworks must comply with Rule 14.3.1.3	Earthworks expected to comply	Compliance achievable
14.12.1.6 New Public Roads			
1a	The public road is located within road or unformed road	Public road will be within the road	Compliance achievable
1b	The public road is not located within an Identified Area	No roads within Identified Areas	Compliance achievable
1c	The design requirements of Table 14.12.5.14 or 14.12.5.15, based on their function within the Road Hierarchy as set out in Table 14.12.5.5	Road reserves shown are at least 22m wide.	Compliance achievable
1d	Within road or unformed road located within the Tamahere Country Living Zone	Site is not in this zone	N/A
1e	Within road or unformed road located within the Rangitahi Peninsula Zone, the relevant access and road requirements of the Rangitahi Structure Plan take priority over the conditions in Table 14.12.5.14 or 14.12.5.15 in the event of any conflict	Site is not in this zone	N/A
1f	Within road or unformed road located within the Te Kauwhata Structure Plan area	Site is not in this zone	N/A
1g	Any earthworks must comply with Rule 14.3.1.3	Earthworks expected to comply	Compliance achievable
14.12.1.7. Access and New Roads – Te Kowhai Airpark Zone			
1a	Airpark roads which are to be vested in Council must comply with the following conditions: The design requirements of Table 14.12.5.14 or 14.12.5.15, based on their function within the Road Hierarchy as set out in Table 14.12.5.5,	Site is not in this zone	N/A
2	Road alignment and the taxiway network within the Te Kowhai Airpark Zone shall be in accordance with Appendix 9 – The Te Kowhai Airpark Framework Plan	Site is not in this zone	N/A
3	The western boundary of the Te Kowhai Airpark Zone shall provide for future connectivity options (vehicular and / or pedestrian) in accordance with the location identified in Appendix 9 – The Te Kowhai Airpark Framework Plan.	Site is not in this zone	N/A
4	Any earthworks must comply with Rule 14.3.1.3.	Site is not in this zone	N/A
14.12.1.8 Off-Road Pedestrian and Cycle Facilities			
1	Have a minimum 2.0m width	Off-road paths expected to comply with this standard	Compliance achievable

li	Are formed	Off-road paths expected to comply with this standard	Compliance achievable
lii	Comply with the relevant setback standards for the applicable zone	Off-road paths expected to comply with this standard	Compliance achievable
lv	Any earthworks must comply with Rule 14.3.1.3	Earthworks expected to comply	Compliance achievable
v	Are not located within an Identified Area.	Off-road paths expected to comply with this standard	Compliance achievable
14.12.1.9 Stock Underpasses			
1a	Any earthworks must comply with Rule 14.3.1.3	No stock underpasses proposed	N/A
1b	Are not located within an Identified Area	No stock underpasses proposed	N/A

9.1.4 Overall, the proposed Plan Change and subsequent development expected for the site is expected to comply with the standards of the Proposed District Plan.

9.1.5 An assessment has also been made against the transportation objectives and policies outlined in section 6.5 of the Proposed District Plan. This assessment is summarised in Table 3 below.

Table 3: Proposed District Plan Transportation Objectives/Polices Assessment

Objective/Policy	Comment	Compliance
6.5.1 Objective – Land Transport Network a) An integrated land transport network where: i) All transport modes are accessible, safe and efficient ii) Adverse effects from construction, maintenance and operation of the transport network are managed	The proposed Plan Change is considered to align with this objective given that there is safe and efficient access for pedestrians, cyclists, private vehicles and with nearby public transport provision.	Complies
6.5.2 Policy – Construction and Operation of the Land Transport Network a) Promote the construction and operation of an efficient, effective, integrated, safe, resilient and sustainable land transport network through: (i) Corridor, carriageway and intersection design which is appropriate to the road function as specified in the road hierarchy and in accordance with relevant guidelines; (ii) The appropriate design and location of sites accesses; (iii) Traffic signage, road marking, lighting, rest areas and parking as appropriate; (iv) Provision for pedestrians and cyclists that addresses accessibility, including off-road facilities and connections;	The proposed Plan Change is considered to align with this policy given that the scheme plan has allowed for road reserves that comply with the Proposed District Plan standards along with appropriate intersection treatment and mitigation to the existing network.	Complies

<p>(v)Corridor and carriageway design which is sufficient to enable provision of public transport;</p> <p>(vi)Provision for other infrastructure, including where suitable low impact design stormwater facilities;</p> <p>(vii)Provision for stock underpasses where suitable access is not readily available;</p> <p>(viii)Discouraging the installation of new at grade road and pedestrian rail level crossings:</p> <p>A. Controlling the location of buildings and other visual obstructions within the sightline areas of rail level crossings; and</p> <p>B. Railway crossing design in accordance with the requirements of the rail operator.</p>		
<p>6.5.3 Policy – Road hierarchy and function</p> <p>Provide a hierarchy of roads for different functions and modes of land transport while recognising the nature of the surrounding land use within the district.</p>	<p>The Plan Change respects the road hierarchy by not providing direct property access to the state highway network</p>	Complies
<p>6.5.4 Policy – Road standards</p> <p>Ensure that the construction and operation of roads is consistent with their function in the road hierarchy.</p>	<p>The construction of road is expected to be consistent with their function</p>	Complies
<p>6.5.5 Policy - Road safety</p> <p>Ensure that structures, lighting, signage and vegetation are located and designed so as to not compromise the safe and efficient operation of the land transport network, or obscure RAPID numbers.</p>	<p>Lighting, signage etc are expected to be designed to the appropriate standards thereby not compromising the safe or efficient operation of the land transport network</p>	Complies
<p>6.5.6 Policy – Network utility location</p> <p>Encourage the location of network utility infrastructure within transport corridors where the function, safety and efficiency of the transport network will not be compromised.</p>	<p>The road reserves widths include provisions for services.</p>	Complies
<p>6.5.7 Policy – Vehicle access</p> <p>Control the location of new vehicle accesses to sites adjacent to other accesses and rail level crossings to improve the safety and efficiency of the land transport network.</p>	<p>Vehicle access control mechanisms are proposed to protect SH23.</p>	Complies

9.1.6 Overall, the proposed Plan Change is considered to align with the objectives and policies of the Proposed District Plan.

10 Conclusions and Recommendations

10.1.1 A Plan Change is proposed to rezone the site known legally as Part Lot 1 DP 23893 in Te Uku from the Rural Zone to Village Zone. It is feasible that the rezoning could allow for 50 houses or potentially 82 lots at higher density assuming minimum lot sizes equivalent to those for an un-serviced Village Zone development (refer to Dave Mansergh EIC paras 40-43). The submitters have also investigated a fully serviced Village Zone concept that could give rise to up to 200 dwellings. All of those options have been considered and were the subject consultation with Waka Kotahi NZTA.

10.1.2 Based on the assessment of potential traffic and transportation effects associated with up to 200 dwellings on site, undertaken it is concluded that:

- The site may generate some 280 vehicles in the peak hour and potentially over 2,000 vehicles per day. The surrounding road network is able to accommodate these traffic volumes.
- The parking requirements of the Proposed District Plan are likely to be achievable.
- External access to the site is only available via SH23. This assessment has concluded that the most suitable place for the access is where the speed limit on SH23 is 80km/h. This will result in a non-compliance in terms of separation between the intersection and an existing vehicle crossing however it is not possible for an access to the site to be provided that is fully compliant with the standards of the Proposed District Plan.
- It is possible for future roading connections to be established to the site. These will improve the resilience of the road network rather than being necessary to address any congestion effects.

10.1.3 Regardless of future density, the following rules are recommended to accompany the proposed rezoning to control the access to the site and protect the arterial function of SH23:

- A right bay should be provided on SH23 to facilitate vehicles turning right into the site. This should be designed by a suitably qualified professional.
- The vegetation within the SH23 road reserve to the west of the access is trimmed back or removed in order to provide at least 282m of visibility to the west.
- No vehicle crossings to individual lots should be provided directly to SH23.
- Footpath linkage to the village should be provided at the time that the access road is constructed

10.1.4 With these above rules in place, it is concluded that the transportation effects of the proposed rezoning will be less than minor for either around 50 dwellings under a Country Living Zone, 82 dwellings in an un-serviced Village Zone or up to 200 dwellings in a fully serviced Village Zone.

CKL

Appendix A - Waka Kotahi NZTA Consultation

26 November 2020

Judith Makinson
CKL
Email: Judith.makinson@ckl.co.nz

Dear Judith,

Diamond Creek Farm Limited – Proposed Plan Change– Part 1 DP 23893

Thank you for submitting your client's proposal to Waka Kotahi NZ Transport Agency (Waka Kotahi) for comment. As you will appreciate, millions of dollars are invested in the transport network each year and Waka Kotahi has an interest in ensuring this investment is not compromised, including by ensuring land use and subdivision do not impact on the safety and efficiency of the transport network.

Waka Kotahi understand that your client seeks to undertake a plan change to the Waikato District Plan for the site located at Part 1 DP 23893, State Highway 23, Te Uku. The plan change will rezone the site from Rural Zone to Village Zone and allow for approximately 160–200 residential lots along with reserves, internal roads, walkways/cycleways and other supporting infrastructure.

The site is expected to generate approximately 280 vehicle movements within the peak hour and potentially over 2000 vehicle movements per day. A new intersection at State Highway 23 will be established which will provide access to the site.

There will be a grade-separated location for pedestrians and cyclists to cross State Highway 23 to the east. There is also the potential for formal bus stops to be added either within a subdivision in the Village Zone or along State Highway 23. It is understood that the inclusion of bus stops within the site or along State Highway 23 is subject to further consultation with Waka Kotahi and Waikato Regional Council.

Based on the information provided, Waka Kotahi requires the conditions outlined below to be met so as to avoid and/or mitigate adverse effects on the state highway network. Subject to these conditions being met, Waka Kotahi is **not opposed** in principle to your client's proposal mentioned above and demonstrated below in Appendix One.

Conditions

1. The State Highway 23 intersection shall be designed in accordance with the Austroads Guide to Road Design and Waka Kotahi Manual of Traffic Signs and Markings (MOTSAM). The design shall include a right turn bay to facilitate vehicles turning right into the site. Preliminary designs undertaken by a suitably qualified person must be submitted to Waka Kotahi for approval prior to construction.

2. A streetlight shall be provided at the State Highway 23 intersection in accordance with Waka Kotahi Specification and Guidelines for Road Lighting Design.
3. A safety audit on the intersection shall be undertaken at the detail design and post constructions stages in accordance with Waka Kotahi Road Safety Audit Procedures for Projects.
4. The vegetation located within the road reserve west of the proposed intersection shall be removed to ensure that a minimum sight distance of 282m is met.
5. There shall be no direct access onto State Highway 23 from individual lots.
6. A footpath linkage to the Te Uku Village shall be provided at the same time the access road is constructed.
7. The existing State Highway 23 underpass will need to be designed and safety audited to ensure that it is suitable for pedestrian and cyclist use. The ownership and responsibility for the long-term maintenance is to be agreed and vested with Council. The design will need to consider, as a minimum:
 - a) Lighting
 - b) Crime prevention
 - c) Stream Water Levels (Flood Risk)
 - d) Handrails
 - e) Structural impact on the existing state highway bridge.

Advice Notes

1. Vehicles on state highways can produce adverse effects that extend beyond the state highway boundary, such as: noise and vibration, emissions, lighting/glare, and dust. Development that establishes near highways needs to take into account the potential for these to be experienced and should be designed to avoid/mitigate them. In particular, noise sensitive activities such as dwellings can be affected by road-traffic noise and vibration, which can lead to annoyance and sleep disturbance potentially resulting in adverse health effects. Waka Kotahi therefore seek to work with councils and landowners/developers to ensure development near highways is appropriately planned and designed. The publication Guide to the management of effects on noise sensitive land use near to the state highway network contains more information and can be downloaded from Waka Kotahi website. Any future development of the site should consider the potential for effects to be experienced and be designed and built accordingly.
2. Waka Kotahi would like to review and comment on stormwater related matters, including how the overland flow and stream from any development will be altered and the impact it will have on the state highway drainage system. It is understood that a stormwater assessment will be provided to Waka Kotahi for comment at the consent stage for the subdivision.
3. No works shall be undertaken within State Highway 23 without the prior approval of Waka Kotahi pursuant to Section 51 of the Government Roding Powers Act 1989. A *Traffic Management Plan* and *Consent to Work on the Highway* shall be submitted to and approved by Waka Kotahi at least seven working days prior to the commencement of any works on the state highway.

4. Although not part of the rezoning, Waka Kotahi understand that there is a potential for future road connections to the east and west of the site. These future road connections are however dependent on development occurring within the neighbouring sites. If any future road connections are developed, an assessment of the trip generation to the relevant state highway intersections will be required, including any potential impacts as a result of the future road connections.

Please be aware that this response is Waka Kotahi current view of the situation. If your application changes or is put on hold for any length of time, Waka Kotahi may need to consider your application further.

Thank you for undertaking consultation with us. Please feel free to contact me if you have any questions or require further information.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jones' with a stylized flourish above it.

Claudia Jones

Planner

DDI: 07 958 9614

Email: Claudia.jones@nzta.govt.nz

Appendix One: Scheme Plan



Judith Makinson

From: Claudia Jones <Claudia.Jones@nzta.govt.nz>
Sent: Tuesday, 18 August 2020 12:40 PM
To: Judith Makinson
Subject: RE: [#CKL B19110] B19110 Diamond Creek Farm, Te Uku

Hi Judith,

This feedback is now complete.

Kind regards,

Claudia Jones / Planner
Consents & Approvals- Transport Services
DDI 07 958 9614
E claudia.jones@nzta.govt.nz / W nzta.govt.nz

Waka Kotahi NZ Transport Agency

Hamilton Office / Level 1, Deloitte Building 24 Anzac Parade
PO Box 973, Waikato Mail Centre, 3240, New Zealand



From: Judith Makinson <judith.makinson@ckl.co.nz>
Sent: Tuesday, 18 August 2020 12:08 PM
To: Claudia Jones <Claudia.Jones@nzta.govt.nz>
Subject: RE: [#CKL B19110] B19110 Diamond Creek Farm, Te Uku

Thanks Claudia – that's great and very helpful. Are you consulting with anybody else internally or is the feedback now complete?

J

Judith Makinson

Transportation Engineering Manager | Associate

DDI 07 260 0571 | P 07 849 9921 | M 022 685 5496 | judith.makinson@ckl.co.nz | 58 Church Road, PO Box 171, Hamilton, 3240 | www.ckl.co.nz

 **CKL** Planning | Surveying | Engineering | Environmental

From: Claudia Jones [<mailto:Claudia.Jones@nzta.govt.nz>]
Sent: Tuesday, 18 August 2020 10:56 AM
To: Judith Makinson <judith.makinson@ckl.co.nz>
Subject: RE: [#CKL B19110] B19110 Diamond Creek Farm, Te Uku

Hi Judith,

I have received feedback from the Safety Engineer. Comments are as follows:

- 1) Waka Kotahi supports the potential future road links.
- 2) It is requested for the potential future walkway/cycleway access and linkage to Te Uku Village to be constructed prior to the development being completed, and not in the potential future.
- 3) The proposed location of the pedestrian refuge island appears to be within the seal widening for the church accessway, and the sightlines to the east may be obstructed by the vegetation outside the church.
- 4) Waka Kotahi is currently designing a flush median from 240m east of Okete Road to 130m west of Okete Road, which may impact the proposed footpaths in this area. The construction of this project is not currently funded, and the timing cannot be confirmed at this time.
- 5) As previously advised, Waka Kotahi is currently developing a speed management programme, which includes reviewing the current speed limits on State Highway 23. This review may include lowering the speed limits at Te Uku Village and some rural sections of State Highway 23. Consultation on any speed limit changes has been delayed is currently planned to take place in October 2020.
- 6) Waka Kotahi understands the future Farm Shop/Café and Parking is indicative only, and we have not provided comments for this proposal.

In terms of the Village zoning, both Engineers stated that an ITA will need to be provided that assesses the density increase as they do not have an understanding of what the impacts would be for safety and efficiency. However, using the current Austroads guidelines it is likely the right turn bay will still be the warranted treatment.

Let me know if you have any questions in regards to the above.

Kind regards,

Claudia Jones / Planner

Consents & Approvals- Transport Services

DDI 07 958 9614

E claudia.jones@nzta.govt.nz / w nzta.govt.nz

Waka Kotahi NZ Transport Agency

Hamilton Office / Level 1, Deloitte Building 24 Anzac Parade
PO Box 973, Waikato Mail Centre, 3240, New Zealand



From: Judith Makinson <judith.makinson@ckl.co.nz>

Sent: Wednesday, 5 August 2020 3:25 PM

To: Mike Wood <Mike.Wood@nzta.govt.nz>

Cc: Sandy Ke <Sandy.Ke@nzta.govt.nz>; Mark Lilley <Mark.Lilley@nzta.govt.nz>

Subject: [#CKL B19110] B19110 Diamond Creek Farm, Te Uku

Hi Mike

Its been a while since we've been in touch but we have been working away on the potential structure plan for the above rezoning proposal through the Waikato District Plan. As you can see from the attached, we have refine the layout a bit more:

Judith Makinson

From: Mike Wood <Mike.Wood@nzta.govt.nz>
Sent: Monday, 11 November 2019 9:17 AM
To: Judith Makinson
Cc: Sandy Ke; Joan Forret; Pervinder Kaur; Glenn And Abbie; Mark Lilley
Subject: RE: [#CKL B19110] B19110 Diamond Creek Farms, Te Uku

Hi Judith, below are our preliminary comments on the proposal:

1. The NZ Transport Agency prefers to have a single access point from State Highway 23 to the proposed development, within the existing 80km/h speed limit at Te Uku Village.
2. We strongly support an off-line shared footpath/cycleway connecting the proposed development to Te Uku Village. This rural residential development will create a significant community boarding SH23 that isn't currently present. Consideration needs to be made on the liveability and multi-modal modes available for local and wider travels that ensures the safety of users.
3. Consideration needs to be given to factoring in having a paper road connection to the boundary of Lot 2 DP 425998; this is to allow for any future road connection from the proposed development through to Okete Road.
4. The NZ Transport Agency is currently developing a speed management programme, which includes reviewing the current speed limits on State Highway 23. This review may include lowering the speed limits at Te Uku Village and some rural sections of State Highway 23. Consultation on any speed limit changes is currently planned to take place in February 2020.
5. The Transport Agency would like to review the stormwater (e.g. catchment, hydrology etc assessments) and how the overland flow and stream from the development will be altered and what impact it will have on the state highway drainage system.
6. The impacts of road noise/vibration on dwelling occupants need to be factored into the design – generally any dwelling within 100 metres from the edge of the carriageway will require some form of acoustic treatment to address this.

Regards
Mike

From: Judith Makinson <judith.makinson@ccl.co.nz>
Sent: Friday, 8 November 2019 11:06 AM
To: Mike Wood <Mike.Wood@nzta.govt.nz>
Cc: Sandy Ke <Sandy.Ke@nzta.govt.nz>; Joan Forret <Joan.Forret@harkness.co.nz>; Pervinder Kaur <Pervinder.Kaur@harkness.co.nz>; Glenn And Abbie <oldhillroad@xtra.co.nz>
Subject: RE: [#CKL B19110] B19110 Diamond Creek Farms, Te Uku

Thanks Mike – that would be very much appreciated.

J

Judith Makinson

Transportation Engineering Manager

DDI 07 260 0571 | P 07 849 9921 | M 022 685 5496 | judith.makinson@ckl.co.nz | 58 Church Road, PO Box 171, Hamilton, 3240 | www.ckl.co.nz

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From: Mike Wood [<mailto:Mike.Wood@nzta.govt.nz>]

Sent: Friday, 8 November 2019 9:25 AM

To: Judith Makinson <judith.makinson@ckl.co.nz>

Cc: Sandy Ke <Sandy.Ke@nzta.govt.nz>; Joan Forret <Joan.Forret@harkness.co.nz>; Pervinder Kaur <Pervinder.Kaur@harkness.co.nz>; Glenn And Abbie <oldhillroad@xtra.co.nz>

Subject: RE: B19110 Diamond Creek Farms, Te Uku

Thanks Judith. We will aim to get some preliminary comments back by next Wednesday.

Mike

From: Judith Makinson <judith.makinson@ckl.co.nz>

Sent: Thursday, 7 November 2019 5:20 PM

To: Mike Wood <Mike.Wood@nzta.govt.nz>

Cc: Sandy Ke <Sandy.Ke@nzta.govt.nz>; Joan Forret <Joan.Forret@harkness.co.nz>; Pervinder Kaur <Pervinder.Kaur@harkness.co.nz>; Glenn And Abbie <oldhillroad@xtra.co.nz>

Subject: B19110 Diamond Creek Farms, Te Uku

Hi Mike

Firstly, I'd like to thank you and the NZTA team for meeting with us today and for sharing your initial thoughts on the proposed rezoning of land to the north of SH32 at Te Uku to potentially enable 50 – 60 rural residential lots (as well as gully protection lots, native landscaping and tree planting areas). As we outlined today, there is still a long way to go through the whole District Plan process but we are keen to work with NZTA at an early stage so that we can get the best possible understanding of your position and to ideally reach a position of agreement on the suitability of the site to support the existing community of Te Uku and the best means of access.

I thought it might be helpful to summarise the key points from our meeting today and I have also attached an electronic version of CKL's initial transport feasibility review and the potential community walkway/cycleway that Glenn and Abbie are pursuing with Jonathan Kennet in the NZTA National Cycleway team:

- The proposed rezoning is largely supported by the Te Uku community and early consultation with iwi is also looking promising.
- the need to connect with the school and church is key and part of the proposal would be to create a community cycleway/walkyway through the site and across neighbouring land to link with the village. This facility would be continued south of the existing stock underpass to link to follow a stream.
- The site has frontage to SH23 only. There are section of frontage where compliant visibility can be achieved, sections where it cannot and also a section close to the village where vegetation is currently obscuring visibility but this could be resolved. Options for a new intersection have been considered – using the existing farm access to the east end of site, creating a new access at the west end of site and having 2 accesses. Any new intersection is expected to include a right turn lane on SH23 and suitable walking connections will also be needed. This is preferably off road via the community path but could potentially be along SH23 if necessary.

- The preferred at this point is the western access option, as near to the village as possible to support the lower speed limit in that area. Initial NZTA views were broadly positive of this option from a road safety / speed management perspective.
- Existing speed limit s 100km/h for the majority of the site frontage dropping to 80km/h closer to the village. NZTA is in the process of reviewing the speed environment and is hopefully of having a decision on what they would like to take to public consultation by Xmas 2019. Public consultation is targeted for Feb 2020. Current thinking – in no way confirmed – is that a combo of 80/60km/h.
- Other areas for consideration raised by NZTA included landscaping, stormwater and noise.
- The community has previously raised the difficulty in crossing SH23 and it would be great to see a pedestrian refuge to assist access from the school to the community hall.
- The submission on the Waikato District Plan includes requiring a structure plan to be developed for the land in question. NZTA has not submitted on this particular rezoning proposal but would be keen to see a Structure Plan go forward as part of evidence to the hearing schedule late 2020.

I think that is the crux of what we talked about today but it would be great for us going forwards if you could give us some more considered feedback, particularly in relation to the items discussed today and whether there are any other matters of interest to NZTA at this point.

Thanks and regards

J

PS – apologies, I don't have Mark's email address, please can I prevail on your to forward this on?

Thanks

Judith Makinson

Transportation Engineering Manager

DDI 07 260 0571 | P 07 849 9921 | M 022 685 5496 | judith.makinson@ckl.co.nz

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