Auckland Transport

SPEED LIMIT PEER REVIEW

TRANCHE 2B

5 NOVEMBER 2021

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AT SPEED LIMIT PEER REVIEW
TRANCHE 2B

Auckland Transport

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EXECUTIVE SUMMARY

WSP has been engaged by Auckland Transport (AT) to perform an independent peer review of the proposed Safe Speeds Programme for Tranche 2B. The purpose of this review is to evaluate the alignment and consistency of the programme to industry speed management strategies and guidelines. This report contains the observations and the recommendations following from that review.

The review of Tranche 2B Safe Speeds Programme has been conducted as a desktop study undertaken in the following parts:

Strategic Alignment (Section 2)	Review of the AT Safe Speed Programme to evaluate the programme's alignment with nominated reference documents.
Methodology (Section 3)	Review of AT's process and methodology used to determine and select roads for lower speed limits for compliance with relevant speed management documents and guides.
Application (Section 4 and Appendix A)	Review of the application and implementation of AT's Tranche 2B Safe Speeds Programme methodology on different roads and environments.

This peer review found that Auckland Transports speed limit programme (tranche 2b) is either strongly or reasonably well aligned with national and local strategic documents. This alignment means that the tranche 2b speed limit programme is well placed to contribute to achieving the goals in these key safety strategy documents.

Where the speed limit programme only reasonably meets these documents is where Auckland Transport has taken a wider, complementary approach. However, it is our expert opinion that this approach, while not necessarily targeting the highest DSI benefit sites, performs an important function in achieving the overall aims of the programme.

When reviewing the application of the methodology, several items were identified. These have been outlined in Section 4 and Appendix A. For example, when reviewing the Infrastructure Risk Rating and crash numbers for cul de sacs, there is a mixed approach to including the intersection with the main road. In some cases the intersection with the main road is assessed as part of the cul de sac and in some cases it is not. WSP recommend that the main road intersection should not form part of the cul de sac assessment. But should be part of the main road assessment.

The review also identified potential improvements which may be adopted over and above those required by current traffic control rules and guidelines. These include:

- Using the One Network Framework (or Roads and Streets Framework in the interim if available) to identify urban network risk. This would replace One Network Road Classification.
- The use of minimum default speeds such that outside of school zone analysis, default recommended starting speed for rural roads would be 40 km/h and for urban roads 10 km/h then justify an increased speed limit through assessment of risk and infrastructure.

Overall, we found the Tranche 2B speed limit process to be a reasonable method for achieving the strategies of Auckland Transport and the government.

1 BACKGROUND

1.1 AUCKLAND'S CURRENT ROAD SAFETY PERFORMANCE

The deaths and serious injuries (DSI) across Auckland roads have increased significantly since 2014, with Auckland experiencing crash rates which are increasing faster than growth rates. As large population increases are expected, pressure for the transport network infrastructure and road safety have become major concerns.

Over the past three years, Auckland has seen a small reduction in the DSI's. However, it is important to note that this reduction may have been influenced by external factors such as COVID-19. Although New Zealand's road safety performance has been sub-standard compared to most OECD countries, Auckland has substantially exceeded the national deterioration in performance in percentage terms since 2014.

The DSIs occurring on Auckland roads significantly involve pedestrians, motorcyclists, and cyclists highlighting the vulnerability of these road users. The crashes have also highlighted a clear link between speeds and crash outcomes, with speeds affecting both crash likelihood and severity.

To provide Aucklanders with a safe transport network and reduce the DSI's, Auckland Transport have adopted DSI reduction goals and strategies from the Ministry of Transport Road to Zero Strategy and Vision Zero Strategy.

1.2 TRANSPORT VISIONS

1.2.1 ROAD TO ZERO

In late 2019, the Ministry of Transport released the 'Road to Zero' transport strategy to prioritise safety on New Zealand Roads. The Strategy is a guide to create improvements in road safety in New Zealand over the next 10 years (January 2020 to 31 December 2029) to reduce deaths and serious injuries. Objectives of the strategy include achieving a 40% reduction of DSIs over the next ten years.

The strategy prioritises road user safety and aims to achieve the DSI reduction by targeting roads, streets, footpaths, cycleways, bus lanes and state highways. Road to Zero is guided by the Safe Systems approach aiming to create a road system that is safe and forgiving.

The guiding principles of the Safe System approach include:

- Promoting good choices but accounting for mistakes
- Designing systems for human vulnerability
- Strengthening all parts of the system
- Holding a shared responsibility for road safety

The foundation of the approach is built on the Safe System pillars:

- Safe Road Use
- Safe Vehicles
- Safe Road and Roadsides
- Safe Speeds

1.2.2 TĀMAKI MAKAURAU ROAD SAFETY VISION

Auckland Transport has adopted the Vision Zero strategy where no road users must sacrifice their lives or be seriously injured for the sake of mobility. The goal of the strategy is to eliminate deaths and serious injuries on Auckland's Transport network by 2050. An interim goal of the strategy is to achieve a 56% reduction in death and serious injuries by 2027 (Revised June 2021). Achieving the vision requires a collaborative approach with Tāmaki Makaurau Road Safety Partners.

A core part of successfully delivering this strategy is to achieve safe and appropriate speeds across Auckland's Road network. Setting safe and appropriate speed limits is a cost-effective method to accelerate reductions in deaths and serious injuries. AT has developed the Safe Speeds Programme to achieve Auckland's transport vision whilst providing environmental benefits and improved access and experiences for road users.

1.3 SAFE SPEEDS PROGRAMME

AT has made substantial efforts to decrease the likelihood and severity of crashes through the development of Safe Speeds Programme. The Programme was divided into Tranche 1 and Tranche 2, with Tranche 2 separated into two components: Tranche 2A and Tranche 2B.

Tranche 1 of the Safe Speeds Programme focused on mandating speed limit changes for 10% of Auckland's road network. Tranche 1 concentrated on a mixture of high-risk roads which were already operating at speeds lower than the existing speed limits. The speed management targeted 828 km of rural roads, city centres, town centres, residential areas and urban roads. AT completed Tranche 1 speed management works in late 2020.

The Tranche 2 programme investigates the speed management of a further 1,022 km of Auckland's Road network across two stages. Tranche 2A investigated high risk rural roads, town centres, residential areas, schools, together with complementary and requested roads.

The second stage, Tranche 2B, of the programme investigates high risk rural roads, town centres, residential areas, schools, complementary roads, requested roads and rural Marae.

2 STRATEGIC ALIGNMENT

2.1 KEY DOCUMENTS

The strategic alignment for Tranche 2B Safe Speeds Programme was reviewed against AT selected reference documents to check the strategic alignment. The following documents were nominated as reference documents:

- Government Policy Statement on Lane Transport 2021, (GPS)
- Auckland Plan 2050
- Auckland Regional Land Transport Plan
- Vision Zero for Tāmaki Makaurau
- Auckland Transport Road Safety Programme Business Case
- Single Stage Business Case for the Safe Speed Programme

2.2 SUMMARY

A high-level approach was taken to review how Tranche 2B aligns with the reference documents. Table 1 provides an overview of the contents of each document and discusses the extent to which Tranche 2B aligns with the documents.

Table 1: Alignment of Tranche 2B with key documents

Document	Detail	Discussion	Alignment
Government Policy Statement on Lane Transport 2021	The Government Policy Statement on land transport (GPS) sets out how money from the National Land Transport Fund is allocated towards achieving the Government's transport priorities. 2021/22–2030/31 Safety is a strategic priority focused on developing a transport system where no one is killed or seriously injured by implementing Road to Zero to achieve the target of a 40% reduction in deaths and serious injuries by 2030. Key indicators for the achievement of vision zero are: • % of state highway and local roads modified to align with safe and appropriate speeds • % of urban network with a speed limit of 40 km/h or below • Mode share for how children travel to and from school	The speed management proposed under Tranche 2B will contribute directly to the safety priority indicators on speed limits and the modification of speed limits. The inclusion of Schools Kura and Marae will contribute to the GPS	Strong
Auckland Plan 2050	Direction 3 focuses on maximising safety and environmental protection, while Focus Area 6 signals a move to a safe transport network free from death and serious injury. • These goals will be supported by initiatives which will make necessary regulatory changes to promote safety, such as targeted speed limit reductions • introduce appropriate speed limits in high-risk locations, particularly residential streets, rural roads and areas with high numbers of pedestrians and cyclists.	The speed management proposed under tranche 2B contributes directly toward these initiatives. However, it should be noted that while the Auckland Plan talks about high-risk locations, a reasonable proportion of the programmes involves complementary roads – those where a speed limit change is necessary to ensure consistency with other speed changes leading to a more area-based approach	Reasonable
Auckland Regional Land Transport Plan	The RLTP recognises that the transport system has become increasingly harmful and does not support better health outcomes and that speed has a major role to play in that harm highlighting the importance of	Tranche 2B represents part of that on-going review of safe an appropriate speed.	Reasonable

Document	Detail	Discussion	Alignment
	ensuring speed limits on Auckland's Roads are safe and appropriate. The policy response will see ongoing implementation of speed limit reviews on high-risk roads to ensure they are safe and appropriate	However, this is as noted elsewhere not just focused on high-risk roads but also many complementary roads in a more consistent area focused strategy. It also includes a focus on schools to meet the GPS mandated target for 40% of school zones by 2030	
Vision Zero for Tāmaki Makaurau	The document sets out the vision for Tamaki -Makaurua -on deaths or serious injuries by 2050 and identified speed management is central to achieving Vision Zero. This means infrastructure and speed limits need to reflect the true risk of the road. The document recognises that: • in rural areas too many people are seriously, or fatality injured in road crashes • there are more deaths and serious injuries on urban arterials than any other type of road As a consequence, one of the key safety performance indicators is the proportion of road network where speed limits are adjusted to align with the Safe and Appropriate Speeds	Tranche 2B is focused on increasing the proportion of the road network with safe and appropriate speeds and has specifically identified rural roads and urban arterials.	Strong
Auckland Transport Road Safety Programme Business Case	The Auckland Transport Road Safety Programme Business Case (PBC) develops a 10-year Road Safety Programme for Auckland Transport's road network considering the wider Auckland context. The document identifies a large increase in the number of DSIs since 2014 and highlights the course of action to improve Auckland's Road Safety approach. The desired benefits of the PBC include adequate speed management to address safety and operational deficiencies by reducing the speed limits where appropriate or improving and upgrading the roads where vehicles travel at speeds unsuited to the conditions or speeds higher than the appropriate safe speeds. The PBC outlines the programme objectives to sustain a reduction in DSI crashes, create safe streets, roadside environments, and road user behaviours by adjusting the speed limits to align with safe and appropriate speeds.	The Auckland Transport Road Safety Programme Business Case is the principal document addressing Auckland's Road Safety Strategy. Tranche 2B has a focus on creating safe roads and roadside environments by implementing safe and appropriate speeds across the Auckland Transport Network	Strong

Document	Detail	Discussion	Alignment
Single Stage Business Case for the Safe Speed Programme	The Safe Speeds Single Stage Business Case (SSSSBC) identifies that there are a large number of speed limits currently on the Auckland network which do not accurately reflect the road's function, design, safety risk/survivability or current use. This is currently resulting in a large number of fatal and serious crashes every year. The SSSSBC summarises the process undertaken to develop and analyses options to reduce the impact of speed and make networks safer for everyone.	The Safe Speeds Single Stage Business Case (SSSSBC) is the key document underpinning the speed management initiative of which Tranche 2B is a crucial component. It is therefore not surprising that the focus on rural roads arterials and schools supports the SSSSBC, and the extension to Marae will strengthen this.	Strong

3 METHODOLOGY

The speed limit review process as set by the Safe Speeds Programme outlines the general process for prioritising and selecting roads to implement lower speed limits. The programme has an initial focus on 10% of Auckland's network length, and within that, the top 10% of DSI roads in Auckland as identified by NZTAs Mega Maps. Tranche 2B predominantly focuses on the speed limit reviews of town centres, residential areas, schools, rural roads, rural Marae, and complementary roads.

Overall, the top 10% of DSI roads for Tranche 2 were prioritised using an algorithm to identify the roads on the network that would provide the highest reduction in DSI's, providing a high benefit to cost ratio. The flow process of the algorithm identifies the following factors:

- Appropriate speeds based on the One Network Road Classification (ONRC) and land use
- Safe speeds based on road safety metrics, including infrastructure risk ratings (IRR) and crash risk for each road segment
- Current speeds based on the use of speed counters
- Road safety metrics such as crash risk, personal risk, and collective risks.

The algorithm uses these factors to identify and provide a prioritised list of roads based on the locations which have the greatest potential to reduce crash risk. The approach also considers the credibility for speed management where an alignment between the current speed and safe and appropriate speeds is identified.

Engineering judgement is applied to ensure the technical assessment provides network legibility and aligns with AT's road safety strategies.

The algorithm tool and engineering judgement help to classify the appropriate speed management intervention from the following.

- 'Engineering up' to improving the risk rating of roads through infrastructure improvements
- 'Self-explaining' through aligning the posted speed limit with the safe and appropriate speed/operating speeds at which road users are already travelling at.
- 'Speed limit changes' through proposing and implementing reduced posted and operating speeds.

Additional considerations to the form and function of roads and surrounding roads, land use changes, and ability for safety improvement incorporation into other projects are made to determine the list of prioritised roads.

Tranche 2B has a predominant focus on the speed limit reviews of town centres, residential areas, school areas, rural roads, rural Marae, and complementary roads. The methodology for the selection of roads for these workstreams largely follows the general process as outlined above.

3.1 TOWN CENTRES

Tranche 2B prioritises town centres speed limit reviews based on an assessment of the level of pedestrian activity in the town centre and crash rankings based on the proportion of vulnerable road user crashes in the centre.

The process for selecting and prioritising town centres for speed limit reviews include.

- Town centres with high DSI casualties are identified to determine crash rankings.
- The levels of pedestrian activity in these city centres are identified and ranked as high (H), medium (M) or low (L). These rankings are subjective but based on the town centre's history, size, retail activity, pedestrian facilities, proximity to other activities which attract pedestrians, as well as the overall geometry of the roads, and town centre layouts.
- Self-explaining roads for reduced speeds are identified based on a review of Mega Maps data and TomTom travel speeds. The need for traffic calming measures to reduce speeds are also identified.
- The selected town centre locations are further ranked comparatively based on the town centres that would provide the lowest cost and highest DSI savings

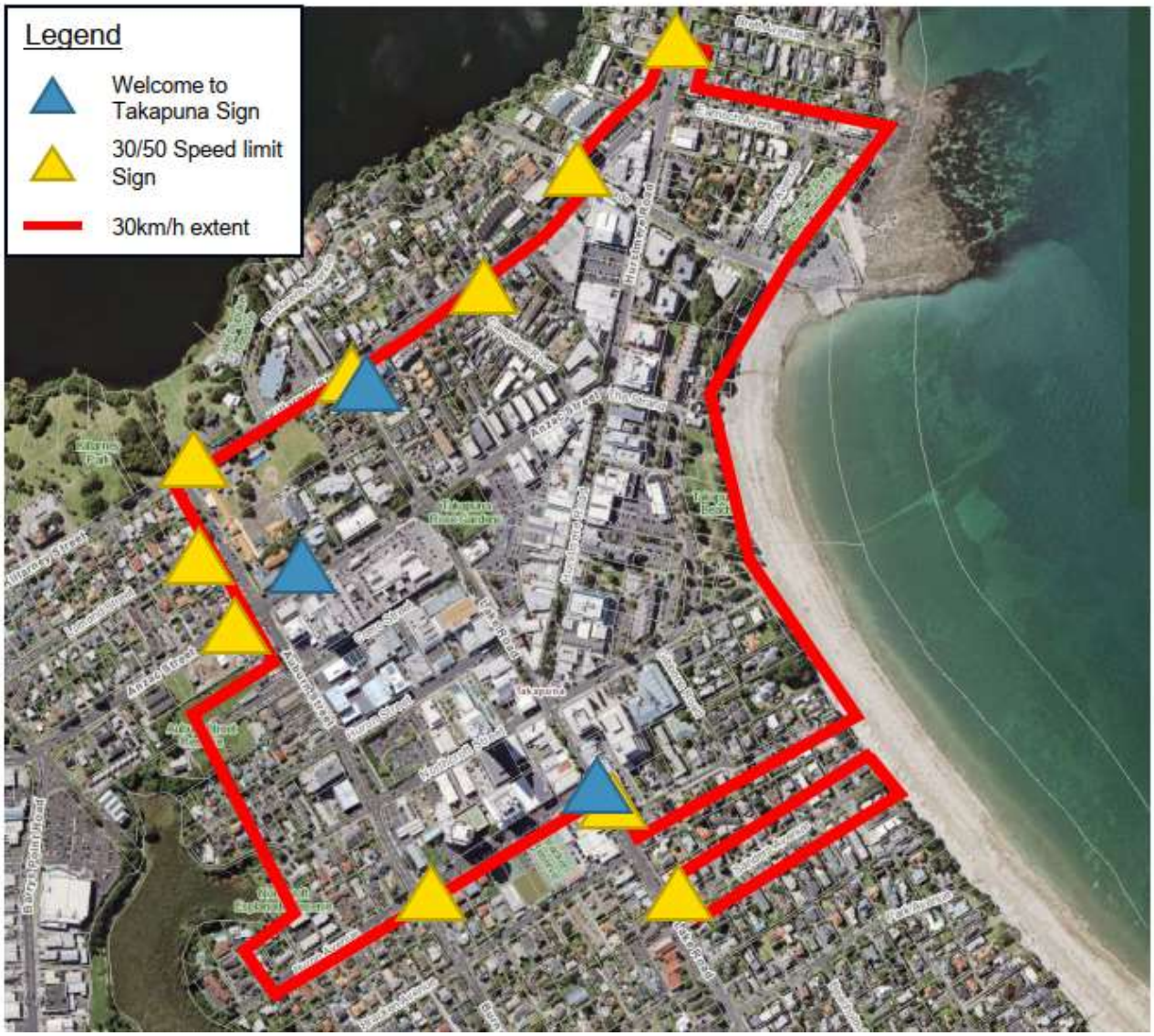

Figure 1 30 km/h Area within Takapuna Town Centre

The Tranche 2A package for the town centre workstream included the Otara town centre. The Tranche 2B package is focused on delivering speed reviews for Devonport, Takapuna, and Glen Innes town centres, with the Glen Innes town centre timed to coordinate with the urban cycling programme.

"The speed limit extent for Takapuna (and Devonport) has been developed via a community working group process, where engineering aspects are considered (crash history, road design,

driver speeds, pedestrian movements) combined with the experience of local businesses, residents and the local board." (Auckland Transport). Following this process, each

3.2 RESIDENTIAL AREAS

The majority of Aucklanders live on urban residential streets, and these communities have highlighted a need to increase the safety of these roads and cycling/walking facilities, particularly for children, the elderly, and other sensitive users. Speeding vehicles in residential areas have been a common concern for Aucklanders, with the public continuously requesting the implementation of speed calming measures. The safe speeds programme aims to address these concerns by applying an area-based approach as opposed to individual street treatments,

Sites for speed treatment in residential areas are selected and prioritised based on:

- Roads with high crash data and risks, particularly involving vulnerable road user risk.
- Roads where motorised traffic currently travels at high speeds.
- Connectivity of roads and locations of community facilities.
- Road geometries and layouts which allow for effective speeds calming measures.
- Public concerns and requests.

The residential area workstream sites are prioritised based on the consideration to local board willingness, the co-design engineering measures to ensure community support and compliance, and where speed limit changes complement engineering measures required.

The Tranche 2A package focused on the speed limit review package for the Manurewa Wordsworth quadrant. The Tranche 2B package is focused on speed limit reviews for the Manurewa Coxhead quadrant.

3.3 SCHOOL AREAS

Tranche 2B considers a specific workstream process for schools in urban and rural settings. School sites are selected based on the existing operating speeds of roads surrounding the schools. These surrounding road catchments aim to capture as many roads as possible with high vulnerable road user demands.

Urban school sites are selected based on sites where the existing operation speeds are already low enough to install a permeant 30 km/h speed limit. Tranche 2B also considers sites where operating speeds can be reduced to near 30km/h by small amounts of engineering or implementing temporary measures.

Rural school sites are selected based on locations where the surrounding road environments have a safe and appropriate speed of 60 km/h or above. For sites comprised of high concentrations of vulnerable road users, a 40km/h variable safe and appropriate speed may be considered instead.

Located in an urban area, Figure 2 shows Mellons Bey Elementary School and the catchment area of roads that would undergo speed limit reductions to 30 km/h.

Figure 2: Vulnerable road user catchment extent for Melons Bay Elementary school.

There is however a concern that once 30 km/h posted speed limits are implemented, compliance to the posted speed limit may not occur on the outer roads of the catchment areas. Road users may fail to see the relationship between the reduced speed limit and school zone for roads at a large radius from the school gate.

3.4 RURAL MARAE

The Safe Speeds Programme project team engaged with Mana Whenua for the proposal to include rural Marae sites in the Tranche 2 programme. Tranche 2A did not have workstream packages planned for Marae sites, and Tranche 2B includes delivery plans for speed limit review packages for rural Marae.

All rural Marae in the Auckland region are located in rural areas with high-speed environments, and therefore all rural Marae sites are prioritised and included in the Tranche 2B package.

Tranche 2A focused on the speed limit review package for Franklin East. Following this, Tranche 2B is focused on the speed limit review package for Waiheke Island and the Waitākere Ranges.

3.5 RURAL ROADS

Currently, most rural roads in Auckland's network have posted speed limits that are not suitable for the existing conditions. These roads typically have difficult road geometries and provide an unforgiving challenge for even the most experienced drivers. The speed review programme focuses on applying safe and appropriate speeds across areas, instead of individual roads, to enhance compliance and consistency.

Rural roads have been selected and prioritised for the speed limit reviews based on:

- Roads with high-risk of deaths or serious injuries occurring, or they are close to high-risk roads
- Unsuitable current posted speed limits with respect to road geometries, layouts and surrounding environments (windy roads, unsealed roads, narrow lanes, narrow shoulder width, inadequate road markings)
- Self-explaining roads where drivers are already travelling at lower speeds than existing

Tranche 2A focused on the speed limit review package for Franklin East. The Tranche 2B package is focused on speed limit reviews for Waiheke Island and the Waitākere Ranges.

3.6 COMPLEMENTARY ROADS

Complementary and community requested roads are roads where a speed reduction would complement the existing road environment, complement other speed changes recommended or where there is strong community demand for speed reduction.

Roads in 'Complementary and community requested' workstream are prioritised for the package based on:

- Roads with high community support.
- Roads where speed reviews and improvements are recommended for safety (fatal crash report recommendations)
- Roads where there are fundamental changes to road use (supporting new land development and infrastructure changes).
- Roads where adjacent roads could become the preferred route for travel, given a speed change on other roads.

The Tranche 2B package complementary and requested roads include urban roads in Ponsonby, higher speed urban roads, and other selected road which meet the criteria summarised above.

3.7 REVIEW FINDINGS

The above methodology for selecting roads was compared to the Waka Kotahi Speed Management Guide. The underlying principles of the Speed Management Guide is for a Road Controlling Authority to identify high priority sites as outlined in Table 2.

Table 2 - Methodology alignment to the Waka Kotahi Speed Management Guide

STEP	WAKA KOTAHI SPEED MANAGEMENT GUIDE	DISCUSSION	ALIGNMENT
Regional Speed Management Map	Using nationally supplied draft speed management map featuring corridor base information, e.g. ONRC, road safety metrics (collective and personal risk), and inferred IRR to identify draft Safe and Appropriate	AT uses MegaMaps data as a starting point as well as DSI figures.	Strong

STEP	WAKA KOTAHI SPEED MANAGEMENT GUIDE	DISCUSSION	ALIGNMENT
	Speeds (SAAS) (in this case MegaMaps data).		
Identify high benefit locations	Infer draft High Benefit sites from SaAS, operating speed and crash history.	High benefit areas identified for each type from data as well as ease of implementation.	Strong
Local Engagement	Overlay local plans and strategic priorities	As noted above, a large complementary portion is also identified to ensure speeds are appropriate across areas and types of treatment rather than targeting routes, e.g. Schools.	Strong
General Application	As above, local policies and knowledge can be used to evaluate speed limits	Currently, Auckland Transport use the One Network Road Classification (ONRC) as dictated in the speed management guide as well as other guidance. Progressing to the One Network Framework as a guide (when available, or Roads and Streets Framework in interim), rather than ONRC, would provide greater alignment with the form and function of the road. Also, more general guidance is recommended for process and typical treatments across Auckland for consistency. For process, while using ONF, the default start point should be 10 km/h in urban and 40km/h in rural areas. To get a higher speed limit, you should prove that higher limit is justified, rather than the current process, where proving that lower speed is justified. For example, when a rural road has enough development to be a rural town, if unsealed, default to maximum 40 km/h. If sealed but enough for one-lane in rural, default to 60km/h max.	Strong

With the above summary review in mind, we have reviewed the methodology for each sub type in Table 3 below.

Table 3 - Methodology Review Findings

SPEED MANAGEMENT AREA	COMMENT
Town Centres	The methodology for determining the extent of town centre speed limits (using community groups, geometrics, crash history, pedestrian movements, and operating speeds) appears thorough. Consideration should be given to complementary roads, e.g. Lomond Street, which is likely to have a 30km/h speed limit reduction for school assessments.
Residential Areas	The methodology to identify residential streets in line with DSi saving and risk, community buy in and infrastructure to support. This is consistent with the principle of the speed management guide.
School Areas	The school area to be assessed is determined by excluding arterials while capturing as much of the active road user catchment for the school. This could default to inconsistent areas associated with school travel and default 30km/h for urban schools being set (in line with Speed limit legislation). It is recommended that AT determines a more rigorous methodology for identifying a school's affected streets for default school speed limits, e.g. alignment to school travel plans, and include other appropriate streets as within 'complementary' to have a full assessment for appropriate speeds This may mean that affected streets require safe infrastructure to cross arterials. There is also an opportunity to simplify the review process for school areas. As the legislation as a default 30 km/h urban and 60km/h rural, a simplified method for assessing if you are confident of the extents, e.g. no need to do IRR and CAS assessment to determine speed limit.
Rural Marae	All Rural Marae were identified through local engagement with Mana Whenua. This aligns with the principles of the speed management guide.
Rural Roads	The prioritisation of these rural areas for speed limit reduction, based on DSI reduction benefit, aligns with the principles of the guide. As noted above, the area approach aligns reasonably well with the

SPEED MANAGEMENT AREA	COMMENT
	guide as, although the guide prioritises routes, it allows for local knowledge and strategic priorities.
Complementary Roads	As above, while complementary roads may not be prioritised based on high benefit alone, they play an important part in ensuring the overall credibility of the speed management programme. Therefore it reasonably aligns with the speed management guide.

4 APPLICATION

The review summary is shown below in Appendix A. In carrying out the review we have included findings in the methodology section as well as below:

- When assessing cul de sacs and other minor roads, clarification is needed on whether the main intersection is included in the assessment. Our assertation is that a change in the speed limit on the cul de sac is affecting the road, rather than the intersection. This intersection assessment would be included in the main road assessment.
- When carrying out assessments, especially complementary sites, the future development (if timing appropriate) should be assessed the future state, e.g. this may impact some rural roads being assessed as urban.
- The Marae CAS assessment, particularly Awhitu Road, does not appear to record casualties correctly. The assessment has miscoded crashes as casualties. Our assessment found remarkably similar crash numbers recorded, but more casualties recorded (as you would expect). The casualty numbers for the consultant matched their crash numbers.
- Throughout the rural sites, there was a general reluctance to assign severe ratings for roadside hazards, even where there are continuous trees, cliffs, or water hazards on both sides of the road.
- Consultants frequently underestimated the access density on rural roads, often by 2-3 categories, changing the assessed IRR in several cases. This could be addressed by including a column for the number of accesses and dividing by corridor length to select a classification.
- MegaMaps Safe and Appropriate Speeds were much more accurate for rural than urban roads. This leads us to infer that MegaMaps is not appropriate for urban use where default proposed speeds from the new One Network Framework would be more appropriate.
- Several single lane rural roads with no markings or EMPs are classified as 80 km/h due to low access and intersection density and relatively low roadside hazards. There does not appear to be an explicit AT policy to set these at 60km/h max, but most consultants are (sensibly) doing this anyway.
- Several single lane urban roads with no markings or EMPS are coming back at 50 km/h due to low access and intersection density and relatively low roadside hazard. There does not appear to be an explicit AT policy to set these at 40km/h max, but most consultants are (sensibly) doing this anyway.
- There does not appear to be an explicit AT policy to set single lane gravel roads at 40km/h, but most consultants are (sensibly) doing this anyway.
- For several roads, it was not clear whether a rural town or rural residential classification is more appropriate. AT does not appear to have an explicit policy in this regard.
- Several roads were classified as challenging conversations, despite MegaMaps speeds being lower than the Safe and Appropriate Speeds. The sample size of speed surveys was not clear and there is some concern that undue weight was placed on them in determining the intervention type.

5 LIMITATIONS

This report ('Report') has been prepared by WSP New Zealand Limited ('WSP') exclusively for Auckland Transport ('Client') in accordance with the Service Order SO 816-22-134-TTG and Offer of Service letter (dated 8/9/2021) ('Agreement').

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6 APPENDIX A

APPLICATION REVIEW

THEME / WORKSTREAM	SUBTHEME	ROAD NAME	ROAD DESCRIPTION	SUBURB	LOCAL BOARD	MCA (ASSESSED)	REVIEW (ASSESSED)	MCA (PROPOSED)	REVIEW (PROPOSED)	PEER REVIEW COMMENTS	AT FEEDBACK
Complementary Speeds	complementary speeds	Cliff Road	between Tamaki Dr and 120m east of Tamaki Dr	St Heliers	Orakei	40	40	30	30	Agree with AT proposal	
Complementary Speeds	complementary speeds	Druces Road	full length	Wiri	Manurewa	50	50	50	50	Agree with AT proposal	
Complementary Speeds	complementary speeds	Favona Road	full length	Favona	Mangere-Otahuhu	50	50	50	50	Agree with AT proposal	
Complementary Speeds	complementary speeds	Haigh Access Road	full length	Redvale	Hibiscus and Bays	<80	<80	60	60	Agree with AT proposal	
Complementary Speeds	complementary speeds	Helianthus Avenue	between 45m south of Ormiston Road and 60m south of Ormiston Road	Ormiston	Howick	50	30	50	30	This complementary section appears to be in school area with higher volume of active users, therefore 30.	No change to AT proposal. The review of this small section of 60 km/h on Helianthus Avenue is to update the existing 40/60 variable speed limit zone which linked to Ormiston Road. Investigation into changing this school zone to 30 km/h variable or permanent is planned after new 2022 legislation comes into effect.
Complementary Speeds	complementary speeds	Ian Mckinnon Drive	full length	Eden Terrace	Waitemata	50	50	50	50	Two parts to road, other MCA and recommendation matched	
Complementary Speeds	complementary speeds	Ihumatao Road	Start to 630m West of Ouarangi	Mangere	Mangere-Otahuhu	<80	<80	60	60	Two parts to road, other MCA and recommendation matched	AT proposal revised. As per below, AT agree to relocate the end of section to 400m west of Orurangi.
Complementary Speeds	complementary speeds	Ihumatao Road	630m West of Oruarangi to end	Mangere	Mangere-Otahuhu	<80	<80	40	40	This was assessed as rural but if complementary because of development (making urban) then assessment would change. Review the location of the speed threshold so where road turns gravel (unless other reason)	AT proposal revised. As per above, AT agree to relocate the start of section to 400m west of Orurangi.

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Complementary Speeds	complementary speeds	McCrae Way	Full length	New Lynn	Whau	10	10	10	10	Agree with AT proposal	
Complementary Speeds	complementary speeds	Park Estate Road	west of motorway	Rosehill	Papakura-Clevedon	40	40	40	40	Assumed to be assessed as urban due to future infrastructure	
Complementary Speeds	complementary speeds	Prices Road	full length	Wiri	otara-papatoetoe	<80	80	60	60	Primary collector means 80 in Table 2.1.	
Complementary Speeds	complementary speeds	Roscommon Road	Full Length	Clendon Park	Manurewa	50	50	60	50	Split into three, majority of proposed is 60 with one 50 section. Our review is to have all has 50.	No change to AT proposal. The proposed 60 km/h and 50 km/h sections has a clear change in the road environment from industrial to residential zone. The industrial section has limited access and less vulnerable user demand. 60 km/h is more aligned with the road environment.
Complementary Speeds	complementary speeds	Selwyn Ave	Between Tamaki Dr and 100m south from Tamaki Dr	Mission Bay	Orakei	40	40	30	30	Agree with AT proposal	
Residential	Manurewa Coxshead Quadrant	Beaumonts Way	Full length	Manurewa	Manurewa	40	40	30	30	Split into two to review which was correct. Assumed as noted, engineer down measures planned to reduce operating speed.	
Residential	Manurewa Coxshead Quadrant	Christmas Road	Full length	Manurewa	Manurewa	40	40	30	30	High free-flow speed. New speed limit is very dependent on engineer down as mentioned.	
Residential	Manurewa Coxshead Quadrant	Buller Crescent	Full length	Manurewa	Manurewa	40	40	30	30	Agree with AT proposal	
Rural	Waitakere	Aio Wira Road	Full length	Waitakere	Waitakere	60	60	40	40	Agree with AT, proposed speed limit of 40 km/h due to it being a single lane unsealed road	

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Rural	Waitakere	Anzac Valley Road	between 20m south of Bethells Road and south end of Anzac Valley Road	Waitakere	Waitakere	60	60	50	50	Agree with AT - it makes sense to extend the adjoining 50 km/h limit to include the school pick up and drop off area. Note that there may be benefit to a permanent or variable 40km/h school speed limit here	No change to AT proposal. Existing 40 km/h variable school zone will be reviewed once legislation changes. Extent of the variable zone will be reviewed in conjunction with consideration of a change to variable 30 km/h.
Rural	Waiheke	AWAAWAROA ROAD	Between Orapiu Road and the southern end of Awaawaroa Road	Awaawaroa	Waiheke	60	60	40	40	Agree with AT that 40 km/h is appropriate for a single lane gravel road. If the road has been sealed, then this may not be viable.	
Rural	Waiheke	BEACH PARADE	Full length	Oneroa	Waiheke	40	40	30	30	Agree with 30 km/h to align with Waiheke Speed Philosophy	
Rural	Waiheke	BELLA VISTA ROAD	Full length	Rocky Bay	Waiheke	40	40	30	30	Agree with 30 km/h to align with Waiheke Speed Philosophy	
Rural	Franklin West	BIG BAY ROAD	between 550m east of MacKinnon Road and western end of Big Bay Road	Manukau Heads	Franklin	50	40	50	40	Disagree with AT - MegaMaps, and assessed SaAS are 40 km/h due to residential neighbourhood land use, proposed speed should be 40 km/h. Adjoining roads in network also seem appropriate for 40, however, AT may wish to review these as well.	No change to AT proposal. Valid point that the residential area could be considered for a lower limit however note that scope of reviews didn't include areas that were already 50 km/h. Changing this section of Big Bay Road in isolation from the wider network would result in inconsistencies in the local area. The wider network will be considered in a future phase of the programme.
Rural	Franklin West	BROOK ROAD	between Walters Road and 190m west of Featon Avenue	Awhitu	Franklin	80	60	80	60	Disagree with AT - MegaMaps, and assessed SaAS are 60 km/h due to medium high IRR, proposed speed should be 60 km/h. Adjoining roads in network also seem appropriate for 60, however, AT may wish to review these as well.	AT proposal revised. Agree with recommendation for a lower speed limit. AT proposed speed limit is 40km/h for this section. Section between Āwhitu Road and Walters Road revised to 60 km/h.

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wasRural	Franklin West	BROOK ROAD		Awhitu	Franklin	80	80	60	60	Agree with AT, Brook Road has a proposed speed limit of 60 km/h due to it being a single lane rural road	
Rural	Waiheke	BROWN ROAD	Full length	Onetangi	Waiheke	40	40	40	40	Agree with 40 km/h to align with Waiheke Speed Philosophy	
Rural	Waiheke	CAUSEWAY ROAD	Full length	Surfdale	Waiheke	50	50	50	50	Agree with AT, ONRC supports 50 km/h	
Rural	Rodney	Coster Road	0	Muriwai Beach	Rodney	60	60	40	40	Agree with AT, Coster Road has a proposed speed limit of 40 km/h due to it being a single lane unsealed road	
Rural	Franklin West	CRAIG ROAD	between Awhitu Road and Keogh Road	Pollok	Franklin	60	60	60	60	Agree with AT	
Rural	Waiheke	CRESCENT ROAD EAST EXT	Full length	Ostend	Waiheke	40	40	30	30	Agree with 30 km/h to align with Waiheke Speed Philosophy	
Rural	Waitakere	Crows Road	between 545m southwest of Birdwood Road and Sunnyvale Road	Taupaki	Waitakere	<80	<80	60	60	Agree with AT	
Rural	Franklin West	DODD ROAD	Full Length	Manukau Heads	Franklin	80	80	60	60	Agree with AT - IRR does not accurately reflect the risk on a road with no road markings or EMPS	
Rural	Rodney	Farrand Road	0	Kumeu	Rodney	60	60	60	60	Agree with AT	
Rural	Waiheke	FISHER ROAD	Full length	Onetangi	Waiheke	60	60	40	40	Agree with AT, Fisher Road has a proposed speed limit of 40 km/h due to it being a single lane unsealed road	

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Rural	Waitakere	Forest Hill Road	between 35m south of Holdens Road and West Coast Road	Henderson Valley	Waitakere	60	60	60	60	Agree with AT	
Rural	Waiheke	GORDONS ROAD	Between Carson Road and 2.3km south of Carsons Rd (adjacent to Poukaraka Flats)	Ōmiha	Waiheke	60	60	50	50	Agree with 50 km/h to align with Waiheke Speed Philosophy	
Rural	Waiheke	GORDONS ROAD	Between Carson Road and 2.3km south of Carsons Rd (adjacent to Poukaraka Flats)	Ōmiha	Waiheke	Route is a duplication of the route above					Duplication removed.
Rural	Waitakere	Gum Road	between Henderson Valley Road and 40m south of Henderson Valley Road	Henderson Valley	Waitakere	60	60	60	60	Agree with AT	
Rural	Franklin West	HARVEY ROAD	Full Length	Waiuku	Franklin	60	60	60	60	Agree with AT	
Rural	Waitakere	Haszard Road	Full length	Waitakere	Waitakere	60	60	60	60	Agree with AT	
Rural	Waiheke	HILL ROAD	Between Cory Road and Te Toki Road	Palm Beach	Waiheke	40	40	40	40	Agree with AT	
Rural	Rodney	Hinau Road	0	Muriwai Valley	Rodney	60	60	60	60	Agree with AT	
Rural	Franklin West	HUDSON ROAD	between Big Bay Road and 150m west of Seaview Terrace	Manukau Heads	Franklin	80	80	60	60	Agree with AT - IRR does not accurately reflect the risk on a road with no road marking	

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Rural	Waitakere	Huia Road	between 70m south of Huia Dam Road and Whatipu Road	Huia	Waitakere	50	60	50	60	Disagree with AT - AT assessed this as rural town, but we believe that the density of homes is too low for road users to understand this. If this is a rural residential, the SaAS should be 50 km/h	AT proposal revised. Agree with recommendation that 50km/h is primarily an urban speed limit therefore not preferred for rural roads. Proposal to amended: – 60 km/h on Huia Road between 70m south of Huia Dam Road and 1,260m south of Huia Dam Road – 40 km/h on Huia Road between 1,260m south of Huia Dam Road and Whatipu Road
Rural	Franklin West	J HULL ROAD	Full Length	Manukau Heads	Franklin	60	60	40	40	Agree with AT, J Hull Road has a proposed speed limit of 40 km/h due to it being a single lane unsealed road	
Rural	Rodney	Kaipara Flats Road	0	Kaipara Flats	Rodney	Assessment could not be found					Road removed from Tranche. Assessment not required.
Rural	Waitakere	Kauri Loop Road	Full length	Oratia	Waitakere	60	60	60	60	Agree with AT	
Rural	Waiheke	KIWI STREET	Full length	Oneroa	Waiheke	40	40	30	30	Agree with 30 km/h to align with Waiheke Speed Philosophy	
Rural	Waitakere	Laingholm Drive	between Huia Road and 35m north of Deirdre Place	Laingholm	Waitakere	50	50	60	50	Disagree with AT - MegaMapas and assessed SaAS are both 50 km/h, proposed speed should be 50 km/h	No change to AT proposal. Disagree with 50 km/h proposal as this road is still characterised as rural with minimal development.
Rural	Waiheke	MANUKA ROAD	Full length	Oneroa	Waiheke	40	40	30	30	Agree with 30 km/h to align with Waiheke Speed Philosophy	
Rural	Franklin West	MISA ROAD	Between Towers Road and Waiuku-Otaua Road	Waiuku	Franklin	80	60	80	60	Disagree with AT - MegaMaps, and assessed SaAS are 60 km/h due to medium-high IRR, proposed speed should be 60 km/h. Adjoining roads in network also seem appropriate for 60, however, AT may wish to review these as well.	No change to AT proposal. Majority of this road lies within the Waikato District Council jurisdiction. The proposed 80 km/h will provide consistency along the entire length of the road.

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Rural	Waitakere	Mount Donald McLean Road	Full length	Huia	Waitakere	60	60	40	40	Agree with AT, Mount Donald McLean Road has a proposed speed limit of 40 km/h due to it being a single lane unsealed road	
Rural	Waiheke	NEIL AVENUE	Full length	Cowes Bay	Waiheke	40	40	40	40	Agree with AT	
Rural	Waiheke	NEIL AVENUE	Full length	Cowes Bay	Waiheke	Route is a duplication of the route above					Duplication removed.
Rural	Waiheke	ONETANGI ROAD	Between Waiata Road and O'Brien Road	Onetangi	Waiheke	50	60	60	60	Agree with AT - Road function as rural residential and should be assessed as such.	
Rural	Waiheke	PARK POINT DRIVE	Full length	Park Point	Waiheke	<80	80	40	40	Agree with AT - Road function as residential neighbourhood and should be assessed as such.	
Rural	Rodney	Pomona Road	0	Kumeu	Rodney	60	60	60	60	Agree with AT	
Rural	Waiheke	POTO ROAD	Full length	Ostend	Waiheke	40	40	30	30	Agree with 30 km/h to align with Waiheke Speed Philosophy	
Rural	Rodney	Redvale Rise	0	Redvale	Rodney	60	60	60	60	Agree with AT	
Rural	Waiheke	SEA VIEW ROAD	Between Ostend Road and Erua Road	Ostend	Waiheke	40	40	40	40	Agree with AT	
Rural	Waiheke	SEA VIEW ROAD	Between Ostend Road and Erua Road	Ostend	Waiheke	40	40	40	40	Agree with AT	
Rural	Waiheke	SECOND AVENUE	Full length	Onetangi	Waiheke	40	40	30	30	Agree with AT, but should only be assessed as package with adjoining streets	
Rural	Waitakere	Sunnyvale Road	Full length	Waitakere	Waitakere	60	60	60	60	Agree with AT - Sunnyvale Road was subdivided into two sections for assessment	
Rural	Waiheke	SURFDALE ROAD	Between Tetley Road and Moana Avenue	Surfdale	Waiheke	50	50	50	50	Agree with AT	

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Rural	Franklin West	TAHUNA PA ROAD	Full Length	Kariotahi	Franklin	80	80	60	60	Agree with AT - IRR does not accurately reflect the risk on a single lane rural road with no road marking or EMPS	
Rural	Franklin West	TAHURANGATIRA ROAD	Full Length	Kariotahi	Franklin	80	80	60	60	Agree with AT - IRR does not accurately reflect the risk on a single lane rural road with no road marking or EMPS	
Rural	Waiheke	TARAIRE STREET	Full length	Ostend	Waiheke	40	40	30	30	Agree with 30 km/h to align with Waiheke Speed Philosophy	
Rural	Waiheke	TIRI ROAD	Between Tiri Road and Tiri Road (i.e. the loop road section from RP 0.09 to 0.82)	Oneroa	Waiheke	40	40	30	30	Agree with 30 km/h to align with Waiheke Speed Philosophy	
Rural	Rodney	Trigg Road	0	Huapai	Rodney	60	60	60	60	Agree with AT	
Rural	Rodney	Trotting Course Drive	0	Kumeu	Rodney	60	60	40	40	Agree with AT, proposed speed limit of 40 km/h due to it being a single lane unsealed road	
Rural	Waiheke	TUI STREET	Between Mako Street and The Esplanade	Blackpool	Waiheke	40	40	30	30	Agree with 30 km/h to align with Waiheke Speed Philosophy	
Rural	Waitakere	Turanga Road	Full length	Henderson Valley	Waitakere	60	60	60	60	Agree with AT	
Rural	Franklin West	TURNER PLACE (WATTLE BAY)	Full Length	Manukau Heads	Franklin	60	60	40	40	Agree with AT, proposed speed limit of 40 km/h due to it being a single lane unsealed road	
Rural	Waiheke	WAIHEKE ROAD	Between Onetangi Road and Garratt Road	Onetangi	Waiheke	50	40	40	40	Agree with AT, but assessed SaAS should be 40 km/h due to residential neighbourhood land use	
Rural	Waitakere	Wendy Road	Full length	Waitakere	Waitakere	80	60	60	60	Agree with AT - IRR does not accurately reflect the risk on a single lane rural road with no road marking or EMPS	

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Rural	Franklin West	WEST COAST ROAD	between Awhitu Road and 2390m west of Awhitu Road	Awhitu	Franklin	60	60	60	60	Agree with AT, but assessed SaAS should be 60 km/h due to medium-high IRR	
Rural	Waiheke	WHARF ROAD	Between Causeway Road and Muritai Road	Ostend	Waiheke	This section was combined with the section below, agree with AT decision					Noted.
Rural	Waiheke	WHARF ROAD	Between Muritai Road and Homai Street	Surfdale	Waiheke	50	50	50	50	Agree with AT, but AT may need to reassess ONRC here to verify whether this is an arterial route north of Belgium Street.	
Rural	Waitakere	Whatipu Road	between Huia Road and 950m west of Huia Road	Huia	Waitakere	40	40	40	40	Agree with AT	
Rural	Waiheke	WILMA ROAD	Full length	Surfdale	Waiheke	40	40	30	30	Agree with 30 km/h to align with Waiheke Speed Philosophy	
Rural Marae	Reretewhioi/Tahuna Pa Marae	Awhitu Rd	Between 225 m west of Taurangaruru Road to Boundary Road.	Franklin	Franklin	<80	<80	80	80	Look at Variable speed limit or active warning during Marae times, e.g. 60km/h. The team that did this seems to have misunderstood Casualties. Our crash numbers nearly exactly matched theirs as expected but Casualties were vastly different. On rechecking, they have same number of casualties as crashes which is unexpected.	

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Rural Marae	Reretewhioi/Tahuna Pa Marae	Marae O Rehia Rd	Full Length	Franklin	Franklin	<80	80	60	60	The main difference in scoring was interestion risk. We make the assertation that, for minor cul de sacs, the major intersection shouldn't be included as it isn't affected by speed limit change. Assessed IRR is Medium so 80 km/h Assessed SAAS	
Rural Marae	Reretewhioi/Tahuna Pa Marae	Tahurangatira Rd	Full Length	Franklin	Franklin	<80	80	60	60	Main difference in scoring was intersection risk. We make the assertation that, for minor cul de sacs, the major intersection shouldn't be included as it isn't affected by speed limit change. Assessed IRR is Medium so 80 km/h Assessed SAAS	
Rural Marae	Reretewhioi/Tahuna Pa Marae	Tahuna Pa Rd	Full Length	Franklin	Franklin	<80	80	60	60	Main difference in scoring was interestion risk. We make the assertation that, for minor cul de sacs, the major intersection shouldn't be included as it isn't affected by speed limit change. Assessed IRR is Medium so 80 km/h Assessed SAAS	
School	Mellons Bay School	Mellons Bay Road	Full Length	Mellons Bay	Howick	30	30	30	30	Mellons Bay Road is Primary collector with higher mean operating speed (MegaMaps). The speed limit change is 1km away from school gate. It may be hard to argue full length should default to 30 km/h under school speed limit legislation without full assessment of speed tube data and some infrastructure changes.	No change to AT proposal. Agree with comments, however while Mellons Bay Road is classified as a primary collector, it primarily connects to some local road cul-de-sacs and it does not function as a primary collector. We are investigating potential infrastructure upgrades along Mellons Bay Road. However, at this stage, while the operating speeds are higher (36km/h), we would expect that signage changes in this instance may bring the operating speeds within 10% of the proposed speed limit. We will be looking to monitor the impact of the speed limit change first before considering additional engineering measures.

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School	Mellons Bay School	Seymour Road	Full Length	Mellons Bay	Howick	30	30	30	30	Agree with AT proposal	
School	Mellons Bay School	Pleasant Place	Full Length	Mellons Bay	Howick	30	30	30	30	Agree with AT proposal	
School	Mellons Bay School	Oceania Place	Full Length	Mellons Bay	Howick	30	30	30	30	Agree with AT proposal	
School	Mellons Bay School	Paisley Street	Full Length	Mellons Bay	Howick	30	30	30	30	Agree with AT proposal	
School	Mellons Bay School	McMillan Place	Full Length	Mellons Bay	Howick	30	30	30	30	Agree with AT proposal	
School	Mellons Bay School	Cheriton Road	Full Length	Mellons Bay	Howick	30	30	30	30	Agree with AT proposal	
School	Mellons Bay School	Castleton Drive	Full Length	Mellons Bay	Howick	30	30	30	30	Agree with AT proposal	
School	Mellons Bay School	Towbridge Place	Full Length	Mellons Bay	Howick	30	30	30	30	Agree with AT proposal	
School	Mellons Bay School	Montressor Place	Full Length	Mellons Bay	Howick	30	30	30	30	Agree with AT proposal	
School	Mellons Bay School	Chilton Place	Full Length	Mellons Bay	Howick	30	30	30	30	Agree with AT proposal	
Complementary Speeds	complementary speeds	Simpson Road	between 90m south of Tasman Avenue and Candia Road	Henderson Valley	Henderson-Massey	<80	<80	60	60	Agree with AT proposal	
Complementary Speeds	complementary speeds	Small Road	full length	Silverdale	Hibiscus and Bays	50	50	50	40/50	Two sections, look at 40 km to 358m west of Spine due to high numbers of people crossing road and parking to use bus depot. Rest 50.	AT proposal revised. Agree with the review. To align with other high pedestrian demand areas, the proposed speed for this section of Small Road amended to 30 km/h.
Complementary Speeds	x	Tamaki Dr	between 60m west of The Parade and 15m east of The Parade	St Heliers	Orakei	30	30	30	30	Agree with AT proposal	

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Residential	Manurewa Coxshead Quadrant	Ashmere Lane	Full length	Manurewa	Manurewa	40	40	30	30	Agree with AT proposal	
Residential	Manurewa Coxshead Quadrant	Solo Place	Full length	Manurewa	Manurewa	40	40	30	30	Agree with AT proposal	
Town Centre	Takapuna	Burns Avenue	Between Northcroft Street and Byron Avenue	Takapuna	Devonport Takapuna	40	40	30	30	Subsequently received full map for town centre. The proposed is in line with overall town centre area. Infrastructure changes needed for higher operating speeds. This site showed differences in MegaMap data, e.g. SAAS.	
Town Centre	Takapuna	Club Lane	Full length	Takapuna	Devonport Takapuna	40	40	30	30	Lower to 30km/h in line with town centre overall zone	
Town Centre	Takapuna	Collins Street	Full length	Takapuna	Devonport Takapuna	40	30	30	30	It is a lower classification and walking route for school should indicate 30km/h for assessed	
Town Centre	Takapuna	Killarney Street	Between Hurstmere Road and 110m southwest of The Promenade	Takapuna	Devonport Takapuna	40	40	30	30	Lower to 30km/h in line with town centre overall zone	
Town Centre	Takapuna	Lomond Street	Between Auburn Street and 30m southwest of Auburn St	Takapuna	Devonport Takapuna	40	30	30	30	Review whether to extend to start of road. It is a lower classification than neighbouring roads and walking route for school should indicate 30km/h full length at same time.	
Town Centre	Takapuna	The Terrace	Full length	Takapuna	Devonport Takapuna	40	30	30	30	It is a lower classification and walking route for school should indicate 30km/h for assessed	
School	Mayfield School	Angus Street	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Antrim Crescent	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	

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School	Mayfield School	Berrett Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Blampied Road	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Bolton Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Carey Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Clarkson Crescent	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Cosmo Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Dairy Road	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Doughty Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Eileen Lane	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Grant Avenue	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Grundy Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Gubb Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Hamill Road	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Hills Road	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Like Mellons Bay, this is a primary collector with relatively high operating speed (MegaMaps). Review actual speed counts and infrastructure that could reduce speeds.	No change to AT proposal. Agree with comments, however while Hills Road is classified as a primary collector, this is likely due to it being used as a rat-running route to avoid congestion on Springs Road and East Tamaki Road. It intended function is not as a primary collector. Due to the

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											relatively high operating speeds we are investigating infrastructure upgrades. However, at this stage, while the operating speeds are higher (36.5km/h), we would expect that signage changes in this instance may bring the operating speeds within 10% of the proposed speed limit. We will be looking to monitor the impact of the speed limit change first before considering additional engineering measures.
School	Mayfield School	Johnstones Road	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Largo Lane	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Lawrence Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Leonards Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Lester Lane	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Matamata Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Nairn Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Oroua Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Pearl Baker Drive	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Perth Street	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Stainton Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Tate Place	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	

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School	Mayfield School	Tyrone Street	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Valder Avenue	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Velvet Crescent	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Mayfield School	Williams Crescent	Otara-Papatoetoe	Otara	Full Length	30	30	30	30	Agree with AT proposal	
School	Panama Road School	Bernard Street	Maungakiekie-Tamaki	Mt Wellington	Full Length	30	30	30	30	Agree with AT proposal	
School	Panama Road School	Jolson Road	Maungakiekie-Tamaki	Mt Wellington	Full Length	30	30	30	30	This Secondary collector has relatively high operating speed. Review infrastructure and actual speed tube counts.	Noted
School	Panama Road School	Kealy Road	Maungakiekie-Tamaki	Mt Wellington	Full Length	30	30	30	30	Agree with AT proposal	
School	Panama Road School	Mataroa Road	Maungakiekie-Tamaki	Mt Wellington	Full Length	30	30	30	30	Agree with AT proposal	
School	Panama Road School	Mclennan Road	Maungakiekie-Tamaki	Mt Wellington	Full Length	30	30	30	30	Agree with AT proposal	
School	Panama Road School	Panama Road	Maungakiekie-Tamaki	Mt Wellington	between 65 metres west of the southern end of Mclennan Road and 40 metres west of the northern end of McLennan Road	30	30	30	30	Primary collector with high speed. However, this road has signalised crossing points and raised zebra with kea incorporated. Review whether variable speed limit is more appropriate.	No change to AT proposal.

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											The MegaMaps operating speeds for this section of Panama Road are likely inflated due to the road segment being grouped with the western end of Panama Road. The intended function of this section of Panama Road is not as a Primary Collector. We would expect that signage changes alone are sufficient for a permanent speed limit reduction on this section of Panama Road. We will be looking to monitor the impact of the speed limit change first before considering whether additional engineering measures are necessary. Depending on consultation feedback we may also consider whether a variable speed limit is more appropriate for this road.
School	Panama Road School	Peace Avenue	Maungakiekie-Tamaki	Mt Wellington	Full Length	30	30	30	30	Agree with AT proposal	
School	Panama Road School	Runa Place	Maungakiekie-Tamaki	Mt Wellington	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Ambury Road	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Review operating speed counts from tubes / after counts to determine if infrastructure needed to further reduce.	Noted
School	Waterlea Public	Anarahi Place	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Andes Avenue	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Ashcroft Avenue	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Banbury Place	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	

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School	Waterlea Public	Boyd Avenue	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Review operating speed counts from tubes / after counts to determine if infrastructure needed to further reduce.	Noted
School	Waterlea Public	Chipping Dale	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Claresholm Place	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Dalry Place	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Feltwell Place	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	House Avenue	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Kiwi Esplanade	Mangere-Otahuhu	Mangere Bridge	between Boyd Avenue and the western end of Kiwi Esplanade	30	30	30	30	Review operating speed counts from tubes / after counts to determine if infrastructure needed to further reduce.	Noted
School	Waterlea Public	Kowhai Avenue	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Lindis Place	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Muir Avenue	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Review operating speed counts from tubes / after counts to determine if infrastructure needed to further reduce.	Noted
School	Waterlea Public	Nadine Place	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Seaforth Avenue	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Sealand Place	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	

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School	Waterlea Public	Sullivan Avenue	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Titoki Avenue	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Warden Place	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Review operating speed counts from tubes / after counts to determine if infrastructure needed to further reduce.	Noted
School	Waterlea Public	Waterlea Avenue	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Watervista Place	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Witla Court	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	
School	Waterlea Public	Yorkton Rise	Mangere-Otahuhu	Mangere Bridge	Full Length	30	30	30	30	Agree with AT proposal	