

April 19, 2023

Auckland Council
Attn. Mr David Wren
(by email)

Dear David

Re: Proposed Warkworth South Plan Change – Response to CI 23 Request

This is the response to the Auckland Council request for information on the Proposed Warkworth South Plan Change.

Attached to this letter is the tabulated response to the full set of questions. In addition, please find attached the following reports which are to replace the corresponding documentation submitted previously to Council (except the Bioreserches January 2021 Report):

- 1 The updated Plan Change document.
- 2 The updated Plan Change Report.
- 3 The updated Appendix 5 – Infrastructure Report.
- 4 The updated Appendix 13 – Draft Stormwater Management Plan.
- 5 The updated Appendix 15 – Stormwater Modelling Report.
- 6 The Bioreserches January 2021 Report (which is referred to in one of the responses).

In addition, the revised cross-section for the Wider Western Link Road is attached and replaces the earlier version referred to in various reports. The key change is that the cross-section for that part of the Wider Western Link Road which adjoins Morrison Heritage Orchard now no longer includes the riparian margin (which will remain outside the road reserve). This reflects the preference of Auckland Transport.

The Appendix 2 – Urban Design Report is currently being updated and this should be supplied to you within the next week. In the interim we consider that the information providing in this letter can be distributed to the other Council staff involved.

As you are aware from our previous correspondence, the Supporting Growth Alliance has provided to some landowners plans showing the draft proposed designations for the Wider Western Link Road. The Supporting Growth Alliance has advised us that we cannot provide these plans to Auckland Council and Auckland Council has to request them from Supporting Growth. We understand that Auckland Council will now do that.

Both Auckland Transport and the Supporting Growth Alliance have requested the Proposed Plan Change documentation submitted to Council. We will be providing them a link to this information shortly for their information.

A new title for Lot 1 DP 578389 (1768 State Highway One) and Lot 1 DP 568727 (1738 State Highway One) have been issued and these are attached.

If you wish to discuss any of the responses then please let us know and we can arrange a meeting.

As the next step is notification of the proposed plan change, could you please send us as soon as practical the draft notification notice for our review.

Sincerely,

David Hay

David Hay
Planning Consultant

Ph: 09 425-9844

Mobile: 027 425-0234

Copy to: KA – Waimanawa Limited Partnership, Attn. Mr Phill Nicholson (by email)
Stepping Towards Far Limited, Attn. Mr Victor Hao (by email)
Tattico, Attn. Mr John Duthie (by email)

Attachments: Response Table
The updated Plan Change document
The updated Plan Change Report
The updated Appendix 5 – Infrastructure Report
The updated Appendix 13 – Draft Stormwater Management Plan
The updated Appendix 15 – Stormwater Modelling Report
The Bioresearches January 2021 Report
WWLR Cross-Section
Records of Title for Lot 1 Deposited Plan 578389 and Lot 1 DP 568727

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Question No.	Question	Response by	Response
	Planning AEE/S32 Analysis		
	<u>Precinct Provisions</u>		
1.1	Please align the zones shown on the zone map (Map 1) with the zones provided elsewhere in the text. I note that the text does not include the Single House Zone, whereas the map does.	DH/JD	The terminology used in the PC has now been standardised so it refers to Residential – Low Density Residential.
1.2	Please notate on the Plan Change document which rules and standards are Qualifying Matters.	DH/JD	This notation has been included to the extent understood by the applicant as the current Council format practice for showing qualifying matters.
1.3	I consider that greater clarity is required in the provisions relating to the Morrison Orchard Precinct. This is particularly in respect of whether the rules allow one of the listed activities (i.e. Market) or many. While some effort has been made to clarify this I think that room for various interpretations remains.	SH/DH/JD	<p>The submitted version of the Plan Change did not include all the proposed changes to the Morrison Heritage Orchard precinct to address the earlier questions raised by Council. The required changes have now been incorporated into the Plan Change.</p> <p>It is now clear that the activity table providing for each of the specified activities as permitted activities, subject to each meeting the applicable standards.</p> <p>When read in conjunction with the standards, the different activities and associated buildings and outdoor commercial areas are limited either in number or area or both.</p>
1.4	On Table lxxx.4.6 Business – Local Centre (A5) provides for the development of a public transport interchange. Should this also allow for the use of that facility?	DH/JD	The requested change has been made to the Plan Change.
1.5	Please explain whether it is proposed to stage the development. If so please explain those stages and whether it is desirable to include such staging within the plan provisions	DH/JD	No staging is proposed in the Plan Change.
1.6	Please show the RUB boundary on the zone map (i.e. Map 1)	DH/JD	The RUB boundary is now shown on Map 1.

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	<u>S32 Report</u>		
1.7	While Qualifying Matters in reference to the application of the MDRS are referred to the s32 Report – it would helpful if these could be discussed in a dedicated section within the report. An assessment under s77J or 77L should be provided for each qualifying matter.	DH/JD	This evaluation has been completed and is included in pages 50-53 of the Planning Report.
1.8	Pages 20 and 21 include a discussion of the FULSS. Please explain whether going ahead with the development allowed in this plan change will have any impacts on other areas in Warkworth where development is likely.	DH/JD	The Planning Report has been updated on pages 20 and 21 to address this point.
1.9	On page 24 the s32 report discusses the south facing links to the new Ara Tuhono-Puhoi to Warkworth Motorway. The structure plan clearly shows that a potential link to these ramps should be provided within the plan change area. Please provide a further explanation of why this is not provided for with the proposed plan change.	DH/JD	Supporting Growth has confirmed that the south-facing ramps, if constructed, will be located on the land to the west of the Mahurangi River (ie not within the Plan Change area). The proposed WWLR is shown in the Plan Change to connect into the area which Supporting Growth has identified will be subject to a notice of requirement to designate to provide for the future WWLR over the watercourse and to the west of the plan change area.
1.10	Please update the reference on page 30 to a town centre to a local centre.	DH/JD	This correction has been made in the Planning Report (page 31).
1.11	Please provide a more fuller explanation of the area of Low Density Residential Zone that extends beyond the RUB and whether the Plan Change remains consistent with the RPS.	DH/JD	The following wording has been added on page 59 of the Planning Report: <ul style="list-style-type: none"> • Within the area outside the RUB, an estimated one additional residential lot will be created, although a small number of lots are likely to saddle the RUB. Taking account of the topography of the area, existing property boundaries and the presence of the Avice Miller Reserve, it is considered that the proposed extension of the urban extent over this RUB in this location will not impact on the integrity of the RUB and the proposed re-zoned of this area remains consistent with the RPS.
1.12	There appear to be very few north-south connections between the Plan Change area	DH/JD	Owing to the topography of this area there is very limited opportunities for further north-south connections.

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	and areas to the north. Please provide a greater explanation why this is the case.		
1.13	Please provide comment on whether retaining the Morrison Heritage Orchard as self-servicing is sustainable in terms of the potential wide range of uses allowable on the land.	SH	On-site treatment and disposal would be assessed at building consent and or resource consent stage. In the event that on-site servicing is no longer feasible in the future then connections could be made to the wastewater and potable water networks which would installed in the general vicinity for the Waimanawa Precinct.
1.14	Please explain why the heading – purpose of the Act is located on page 40 when this refers to the NPS:UD.	DH/JD	This heading has been deleted in the Planning Report.
1.15	In respect of the Objective 6 of the NPS:UD there is a discussion concerning the timing of development. Please provide greater clarification as to how proceeding with this plan change now is strategic given there is land to the north that is yet to be zoned for urban development.	Reset	<p>The proposal is well located within an area that has been identified as an important node for future urban growth in Warkworth by the Warkworth Structure Plan 2019.</p> <p>The northernmost part of the site does connect directly with the urban subdivisions and developments along Mason Heights, making a seamless extension to the current urban area.</p> <p>Following the planning of the Warkworth Structure Plan, the proposal provides a wide range of residential activities around a new local centre, and supports a self-sustaining community with walkable access to daily needs. The new local centre will provide convenience retail and services for the future Warkworth South community which will help reduce private vehicle trips to the Warkworth Town Centre.</p> <p>The proposed residential zones have been configured around the local centre and the transport hub with a network of convenient walking and cycling routes generously provided throughout the development.</p> <p>In addition, the proposed transport hub is located immediately adjacent to the local centre. The proposed transport hub will enable public transport routes from</p>

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		DH/JD	<p>Warkworth South to the Warkworth Town Centre, the surrounding settlements and Auckland.</p> <p>Walking and cycling routes will also be provided alongside the existing SH1 which directly connects to Warkworth Town Centre.</p> <p>The following additional wording has been included on Page 46 of the Planning Report:</p> <p>“Given the necessity to provide this key infrastructure (ie the water reservoir and wastewater pump stations) along with the local centre and the public transportation hub all within Waimanawa, it is both appropriate and necessary for this area to be re-zoned first and to allow for that development to proceed before the land to the immediate north is re-zoned and developed. “</p>
1.16	Please explain more fully how the proposed plan change will support reductions in greenhouse gases given its separation from the existing urban area of Warkworth.	Reset	<p>The proposal is well located within an area that has been identified as an important node for future urban growth in Warkworth by the Warkworth Structure Plan 2019.</p> <p>The northernmost part of the site does connect directly with the urban subdivisions and developments along Mason Heights, making a seamless extension to the current urban area.</p> <p>Following the planning of the Warkworth Structure Plan, the proposal provides a wide range of residential activities around a new local centre, and supports a self-sustaining community with walkable access to daily needs. The new local centre will provide convenience retail and services for the future Warkworth South community which will help reduce private vehicle trips to the Warkworth Town Centre.</p> <p>The proposed residential zones have been configured around the local centre and the transport hub with a network of convenient walking and cycling routes generously provided throughout the development.</p>

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		DH/JD	<p>In addition, the proposed transport hub is located immediately adjacent to the local centre. The proposed transport hub will enable public transport routes from Warkworth South to the Warkworth Town Centre, the surrounding settlements and Auckland.</p> <p>Walking and cycling routes will also be provided alongside the existing SH1 which directly connects to Warkworth Town Centre.</p> <p>It is considered that the proposal will positively contribute to the reduction of greenhouse gases with the provision of a series of walkable neighbourhoods with safe and accessible routes to the planned local centre and transport hub.</p> <p>The following wording has been added into the Planning Report (page 103):</p> <p>“In terms of s7(i) (climate change), this proposal proceeds from the premises that it is a good planning outcome to develop a local centre with its associated transportation hub, cycleways and walkways and develop the community around that centre. Any local centre relies on a walkable catchment. This Plan Change more quickly delivers this walkable catchment which will then allow for the development of the local centre and transportation hub. This means that for residents they good get access to standard local retail services and potential alternative transport connections.</p> <p>The contrary view is that Warkworth is expanded from the centre out. The difficulty with this approach is that key infrastructure such as the water reservoir and the wastewater pumping stations and assets such as the local centre would be constructed well after urbanisation of the northern Warkworth South area has commenced.</p> <p>This latter approach brings the risk of under development of the three-water services and places a focus on vehicular transport modes as the services of the local centre and transport hub would not be available.</p>
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			It is considered that in this circumstance, developing Waimanawa first and then enabling Warkworth to grow from the McKinney Road plan change area south to join Waimanawa is the appropriate planning strategy. This delivers better infrastructure, retail servicing and transportation infrastructure outcomes.”
1.17	Given the Precinct provisions which modify the MDRS standards in different way please provide greater clarity around how it is considered that the plan change is fully consistent with the RMA Amendment Act.	DH/JD	With the changes made to the Plan Change provisions and the explanations providing in the Planning Report, it is considered that the Plan Change is fully consistent with the RMA Amendment Act. If Council forms the opinion that any of the proposed rules are not consistent with the RMA Amendment Act then it would be appreciated if Council could identify these so further consideration to the appropriateness of them can be given.
1.18	The notification assessment on page 157 seems at odds with the proposed rule in the Waimanama Precinct. Please clarify.	DH/JD	The assessment on Page 163 of the Planning Report has been updated and is now consistent with Proposed Plan Change 78.

Healthy Waters			
2.1	Healthy Waters have reviewed the Stormwater Management Plan (SMP) submitted as part of the Warkworth South PPC in relation to stormwater effects against the plan change requirements and in relation to the Auckland Council Healthy Waters’ Regionwide Network Discharge Consent (NDC). The Plan Change proponent has indicated that it wishes its stormwater discharges to be covered by the NDC and		No response required.

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	intends to vest stormwater assets with Auckland Council. The table below outlines the further information requested by Healthy Waters pursuant to Clause 23 of the First Schedule to the RMA.		
	<u>Water Quality</u>		
2.2	<p>Sections 7.2.1 and 7.2.3, and Table 7 in the SMP listed out many options for stormwater treatment but no preferred option is confirmed. Please confirm the preferred treatment option and/or device for the different areas and activities. Please also provide an assessment on how the preferred treatment options will achieve the required performance criteria (e.g. all impervious areas need to be treated to meet GD01 requirements).</p> <p>This information is required to enable a full assessment of water quality effects and to meet the requirements of the NDC authorisation process.</p>	Maven	<p>The section 7.2.1, 7.2.3 and Table 7 have been updated in the revised SMP rev C to show wetland as a preferred option for water quality treatment. An alternative option is also listed to provide a water quality treatment solution where the wetland option is not viable.</p> <p>An assessment of the effectiveness of the preferred treatment option to meet the performance criteria is deemed not necessary at this Plan Change stage as all listed water quality treatment devices listed in the SMP will be designed in accordance with GD01. GD01 has provided a detail assessment of each devices performance criteria for the target contaminant. See table below:</p>

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			Quantity control					Quality control										
			1% AEP	Detention of 50% and 10% AEP	90 th & 95 th percentile detention	Groundwater recharge	Retention	Sediment	Gross pollutants	Heavy metals	Oils and grease	Nutrients	Organics	Hydrocarbons	Indicator bacteria	Temperature		
																	Key	
			● Effective	○ Partially effective	- Not effective													
			Pervious pavement - unlined	-	-	●	○	●	●	.b	.b	.b	.b	.b	.b	.b	.b	.b
			Pervious pavement - lined	-	-	●	-	-	●	.b	.b	.b	.b	.b	.b	.b	.b	.b
			Living roof	-	-	● ^a	-	●	○	NA	○	NA	○	○	NA	○	●	
			Rainwater tank (no reuse)	-	○	●	-	-	●	NA	○	NA	○	○	NA	○	○	
			Rainwater tank (with reuse)	-	○	●	-	●	●	NA	○	NA	○	○	NA	○	○	
			Infiltration device	-	○	● ^a	●	●	-	-	-	-	-	-	-	-	-	●
			Swale (lined)	-	-	-	-	-	●	○	○	○	○	○	○	○	○	●
			Bioretention swale (unlined)	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●
			Rain garden	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●
			Stormwater tree pit ^c	-	-	○	○	●	●	●	●	●	●	●	●	●	●	●
			Planter box	-	-	○	○	●	●	●	●	●	●	●	●	●	●	●
			Constructed wetland	- ^d	●	●	-	○	●	●	●	●	●	●	●	○	○	
			Wet pond	●	●	●	-	-	●	●	○	○	○	○	○	○	-	
			Dry pond (detention basin)	●	●	●	-	-	-	-	-	-	-	-	-	-	-	●
2.3	Please provide an assessment of and justification why the proposed treatment methods for high contaminant generating car parks, public local road and high use road as stated in Table 7 of the SMP are considered the Best Practicable Options (BPO). It should be noted that some of the proposed treatment methods do not comply with the requirements in Chapter E9 of the AUP (OP) Or the NDC's requirements.	Maven	The NDC and Chapter E9 only refer to water quality treatment as per GD01. We have not proposed any deviation devices outside the scope of GD01. All devices suggested in the SMP fall within the best practice scope.															

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2.4	Please provide information on how stormwater runoff from any communal waste storage areas in apartments and multi-unit developments is proposed to be managed and treated.	Maven DH/JD	The SMP has been updated to provide the adequate treatment provision for this area. This is a detailed design matter addressed through future resource consent applications rather than through the Plan Change.
2.5	Please provide an assessment of how the proposed SMP addresses stormwater quality in accordance with the policies under Section E1.3 of the AUP. This information is required to enable a full assessment of stormwater runoff effects and to meet the requirements of the NDC authorisation process.	DH/JD	The implementation over time of the stormwater management train will ensure that an adequate level of stormwater treatment is achieved prior to discharges to watercourses. As specific development is progressed, the relevant resource consent applications will need to identify that stormwater treatment is being provided in terms of the NDC. At the Plan Change level, specific designs are not provided for stormwater treatment as this is a matter which is addressed at the detailed design stage as subdivision and infrastructure are designed then consented. However, it is considered that there are no obvious reasons why the Policies under E1.3 could not or will not be achieved. In particular an integrated stormwater management approach is proposed and can be implemented over time in this catchment as development progresses. The proposed WW South SMP has adopted the framework from the Tonkin and Taylor’s Structure Plan SMP to ensure that the receiving environment is protected and enhanced as it undergoes change from the current rural environment to an urban form. The stormwater management approach is considered to generally align with the outcomes of the NDC.
	<u>Hydrology</u>		
2.6	Please confirm the purpose of the calculations provided in Table 8 of the SMP. Where a decision has been made for passing flow forward, the increased runoff volume and rate become irrelevant. Additional	Maven	Table 8 removes any information beyond SMAF 1 event. The retention volume will be removed as indicated by the preliminary geotechnical report that there is limited infiltration available on this site. Hence the retention volume will be added on top of the detention volume. Please refer to the updated calculation in the revised SMP attached.

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	<p>assessment is needed to support the decision to pass flows forward.</p> <p>In addition, Healthy Waters notes that the calculations provided are confusing. Retention equals 0.5m³ for every 100sq of impervious area. Detention is approx. 34.5mm of rainfall depth between pre and post imperviousness difference. What is the actual meaning of this detention volume?</p> <p>It should be noted that all impervious area require mitigation as per the SMAF requirements.</p> <p>This information is required to enable a full assessment of stormwater runoff effects and to meet the requirements of the NDC authorisation process.</p>		<p>The supporting information to justify the passing forward arrangement has been provided in the chapter 7.2.5 and the flood modelling report. Please refer to the updated SMP and flood modelling report attached.</p> <p>All impervious area within the SMP area will be required to be mitigated as per NDC.</p>
2.7	<p>Bioretention devices are proposed as the BPO throughout the SMP. However, the Geotechnical assessment has indicated there is limited infiltration in the plan change area. Therefore, please provide a feasibility assessment and justification for this.</p>	Maven	<p>In accordance with GD01, bioretention devices will still be able to achieve the full water quality and hydrological mitigation required in areas where infiltration is limited. The use of bioretention devices in these areas will comply with the requirement of the NDC. No further feasibility assessment is required for the Plan Change.</p>
2.8	<p>Please provide information on the potential size/area of the proposed wetlands and confirm if the proposed wetlands (as indicated in Figure 16 of the SMP) will be located above the 10-year floodplains.</p>	Maven	<p>The indicative wetland location shown in the Figure 16 is only an indicative concept plan. The final location of these wetland will be determined at resource consent stage(s). All wetlands will be placed outside of the flood plain. This information will be provided at resource consent stage(s).</p>
	<p><u>SMAF Implementation</u></p>		

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2.9	Please provide information on how the proposed stormwater management methods outlined in the SMP are intended to be implemented. Please confirm and clarify at what stage of the development the proposed wetland and other public network/devices are intended to be constructed. If staging of development is proposed, please provide information on how the SMP will be implemented corresponding to each stage of development.	Maven	As stated in the SMP, the stormwater management devise will be implemented progressively as the site is development. This information will be provided at resources consent stage.
2.10	Rule A15 is proposed in the Precinct provisions to require subdivision to be consistent with the approved SMP. Please confirm and clarify how the precinct provision intends for any development that occurs before the subdivision stage to provide for the implementation of the proposed SMP. This information is required to enable a full assessment of adverse stormwater effects and to meet the requirements of the NDC authorisation process.	DH/JD	A new A9 has been added in this table in the Plan Change.
	<u>Flood Modelling</u>		
2.11	The naming conventions of the sub-catchment is confusing and unnecessary in the SMP. Healthy Waters considers that it would be better to identify the sub-catchments as Upstream of PCA (Plan Change Area) and Downstream of PCA.	Maven	Flood report amended with suggested naming convention.
2.12	This assessment is lacking an assessment of the capacity of the downstream infrastructure. Constraints such as the	Maven	Flood report had been updated to include assessment. The road level of the Woodcocks Road bridge has been surveyed at 23.75 mRL.

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	<p>Woodcocks Road bridge should be surveyed and assessed.</p>		<p>Existing scenario (with climate change) WSE at Woodcocks bridge have been calculated using to be 22.17 mRL providing 1.58m freeboard to the deck of the bridge.</p> <p>Proposed scenario (with climate change) WSE at the Woodcocks Road bridge have been calculated using to be 22.16 mRL providing 1.59m freeboard to the deck.</p>
<p>2.13</p>	<p>The current assessment has been done for the wider catchment by using HEC-HMS to assess the peak flow for 100yr pre-development, 100yr pre-development with climate change, and 100yr post-development with climate change.</p> <ol style="list-style-type: none"> 1) Please add additional scenarios that include 100yr post development with no climate change. 2) Please include a localised event scenario, which includes an Upstream PCA 2yr event, within the PCA and downstream of the PCA 100yr ARI for before and post development, no climate change. These runs are considered necessary to understand the effects of the development on the existing scenarios. Please also assess the BPO for flood management. 3) Please also check the slope calculations provided. A sport review has been done that found errors in the sub-catchment A, C and E slope calculations. 	<p>Maven</p>	<ol style="list-style-type: none"> 1. Proposed scenario without climate change added to report. 2. Localised event scenario added to report (refer to section 2.5.3) 3 Please refer to appendix D for slope calculations and long-sections for each of the subcatchments which have also been included for reference.

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2.14	In Section 3 of the Flood Modelling Report, please include an assessment of culvert capacity, whether they would be overtopped, and the period and frequency of such events.	Maven	Report updated. Please refer to section 3.9.
2.15	Please double check the boundary condition in Section 3.3 of the Flood Modelling Report. Auckland Council's regionwide model has a gradient of 0.002.	Maven	Boundary condition updated to be 0.002.
2.16	Please include a plan of the route of the HGL in Section 3.6 of the Flood Modelling Report, and explain why this should be shown.	Maven	Plan and explanation added to section 3.6. Plan shows an indication of the flood depths along Mahurangi River for different modelled scenarios.
2.17	Please revise Section 3.7 of the Flood Modelling Report. Peak flow and return period should be discussed respectively. Please clarify whether due to development, the post development flow during a 5% AEP would be equal to 1% AEP pre-development?	Maven	Peak flow from the existing 1% predevelopment (without climate change) is approximately equal to a 5% developed (with climate change).
2.18	Section 3.8 of the Flood Modelling Report – please clarify the rainfall event and AEP that gave a peak level of 21.9mRL. This information is required to enable a full assessment of flood risk and to meet the requirements of the NDC authorisation process.	Maven	Report updated. The peak flood level reference is a development scenario with a 1% AEP Flow.
	<u>SMP Approval</u>		
2.19	Please provide an amended SMP which includes the further information and assessment as requested above.	Maven	An updated draft SMP and Flood Report is attached.
2.20	Feedback on other sections of the SMP:	Maven	The devices listed on Table 7 and 9 are endorsed by GD01 which is appropriate to provide the specific stormwater quality and quantity target set out by the SMP and

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	<p>Section 7.4 – The SMP provides no guidance on devices to manage stormwater or provides information that the devices presented in Tables 7 and 9 could work. As such, there is no relevant information to support the statements made on asset ownership.</p> <p>Section 7.6 – There is no guidance provided in the SMP on how any of the stormwater infrastructure could be implemented.</p> <p>Table 10 – The risks identified should be addressed in the SMP. The content of the SMP fails to adequately identify the impacts of development in relation to water quality, SMAF and flooding.</p> <p>Section 9.2 – The recommendation section seems incomplete and does not align with the content of the SMP.</p> <p>The SMP acts in the plan change process as an assessment of stormwater effects and forms part of the NDC authorisation process. An approved SMP is required for the authorisation of stormwater diversion/discharge under the NDC.</p>		<p>NDC. The specific design information and device location is generally provided at resources consent stage when the land development layout has been confirmed.</p> <p>This SMP is a high-level SMP which sets out the stormwater management framework for the plan change area. The final design is subject to future resource consent application(s) and at this stage the detail sought within Sections 7.4 and 7.6 will be expanded on. The statements within Section 7.4 and 7.6 remain correct, and all future SMPs in support of resource consents will abide by this high-level governance.</p> <p>The Table 10 has been updated to including risk with flooding, water quality and SMAF. These risk has been adequately address by the SMP.</p> <p>Section 9.2 has been updated to aligned with the content of the SMP. This SMP only provides a high-level framework for the PCA. Detail SMPs will be developed at resources consent stage to authorise the stormwater discharge & diversion under the NDC.</p>
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Landscape			
3.1	Part A – Amendment to the maps within the Requested Plan Change document outlines the proposed zones, this includes THAB, Low Density, MHU, Large Lot, Local Centre, Open Space Conservation and Rural Mixed Rural and the standards and activity tables and labels an	DH/JD	This is the same as question as 1.1 All references to Residential - Single House have been changed to Residential – Low Density Residential.

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	<p>area Single House (eastern escarpment) and the response to Council’s Soft Lodgement comments also notes that the eastern escarpment is zoned single house zone, but the precinct does not provide activity tables/standards titled single house.</p> <p>Please confirm the proposed zoning name/title for the eastern escarpment area and update the map and/or key to correctly label the area where required.</p> <p><i>If the low-density zone proposed is ‘Single House’ consistent labelling or titles for plan zones, tables, standards etc should be provided rather than switching between single house and low-density zone.</i></p>		
3.2	<p>The proposed plan change identifies two special height limit areas (within the Landscape Protection Area Eastern Escarpment); those being a special height area of 5m/single storey building area, and special height area 9m building area. However, these controls are only identified on the key of the ‘Waimanawa Precinct Plan 1 Spatial Provisions plan’. These are in addition to the height control for the ‘landscape protection area controls (Eastern Escarpment)’ of 8m.</p> <p>The applicant is asked to consider how the controls could be better included and made clearer within the body of the precinct as they are not mentioned within the precinct</p>	DH/JD	Special height limit rules have been included in the Plan Change to reflect the maps.

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	standards/controls and may be missed where only noted on the one plan.		
3.3	Noting the sensitive landscape values within the eastern escarpment; its elevation, located adjacent to/on the boundary of an ONL, and the existing vegetation recommended for retention as noted within the Arboricultural report; it is recommended that the proposed external finishes control included within the 'landscape protection area control (northern escarpment)' be included within the 'landscape protection area controls (eastern escarpment)'.	DH/JD	This change has been made to the Plan Change.
3.4	<p>The 'Waimanawa Precinct Plan 2 Environment plan', outlines areas of existing covenanted bush and areas of riparian planting and bush to be retained. Generally, this appears to capture the majority of vegetation noted as mandatory protection within the Arboricultural report. However, some trees or groups of trees do not appear to be included (e.g., Tree 50 and Group 214 within Waimanawa Hills).</p> <p>Please describe how the recommendations outlined within the Arboricultural report; such as the protection of mandatory trees, has been adopted (and or where this has not been possible) into the proposed plan change and Precinct Plan 2 – Environment.</p>	DH/JD	The Plan Change is proceeding on the basis of the protection of the trees shown on Precinct Plan 2.
3.5	The objectives of the 'Morrison's Heritage Orchard Precinct' include maintaining a rural heritage character and appearance of the Morrison Heritage Orchard and providing for	SH	There is no maximum impervious area specified in the AUPOP for the Rural – Mixed Rural zone.

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	<p>the continued rural use/activities on site. However, a number of other activities; such as camping grounds, markets, garden centre, restaurant, visitor accommodation, residential sites; are permitted within Area A & B; which will also have to accommodate the rural use.</p> <p>Please demonstrate how the standards around the additional activities that are permitted on site will be able to retain a rural character (e.g., consideration of a maximum impervious/building coverage, retention/protection of open space or trees within this Precinct).</p>		<p>The front yard along SH1 is 20m, with other yards being 12m. It is also noted that this would apply to any future arterial road, including the proposed WWLR along the south-western boundary.</p> <p>An option to address this is to reduce the permitted activity GFA for buildings to 250m², with buildings larger than that being restricted discretionary activities. In this way, larger buildings would be subject to the matters of discretion and assessment criteria in Rule H 19.12.1 and H 19.12.2 Rural zones.</p> <p>The relevant standards for building areas suggest a maximum GFA for all likely buildings of around 5000 m². Assuming areas A and B total 15 ha approximately, this is only 3.3% site coverage.</p> <p>So with a maximum GFR overall within areas A and be of around 5% at most, and combined with the option of a restricted discretionary activity status for any single building over 250 m², the overall rural open space landscape should be easily attainable and protected. In addition, the boundary setbacks will also provide for a low density and rural amenity compared to, for example, residential development with front yards of 3m were the land to be zoned for, and developed as, standard mixed housing suburban or higher-density</p>
3.6	<p>The proposed precinct plan outlines that the underlying overlays, zone and Auckland-wide provisions apply to the 'Morrison Heritage Orchard Precinct'; it is taken that this includes aspects such as setbacks from streams as required within the Rural Zone and protection of watercourses under the Auckland-wide chapter objectives.</p>	SH	<p>Yes. AUPOP objectives and policies apply, as do NPS/NES Freshwater. It is also noted that the standard riparian yard for permanent and intermittent streams applying in rural zones is 20 m (refer table H19.10.3.1).</p>
3.7	<p>However, noting the number of potential activities that could occur within the site, it is unclear how the protection of the landscape features such as the streams on site are equally expressed within the 'Morrison</p>	SH	<p>Yes. AUPOP objectives and policies apply, as does the NPS/NES Freshwater. Refer to the comment above regarding the 20m riparian setback.</p>

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	Heritage Orchard Precinct' as the streams on site are equally expressed within the 'Morrison Heritage Orchard Precinct' as being an important feature for protection and enhancement in balance with the proposed additional activities being provided for. <i>(Retention of streams is outlined in the 'Waimanawa Precinct' objectives and plans but not for the Orchard).</i>		
3.8	Please demonstrate how the proposed standards/controls appropriately balance between retention of watercourses (an Auckland-wide objective) and the potential scale of permitted activities and uses now provided for within the 'Morrison Heritage Orchard Precinct'.	SH	Yes. AUPOP objectives and policies apply, as does the NPS/NES Freshwater.
3.9	(a) The LVA notes that the paddock within the Orchard will be retained as open/rural (with planting along the road) as viewed from Twin Coast Discovery Highway/SH1. However, the Morrison Heritage Orchard Precinct outlines the ability within Section A & B of the site for camping, visitor accommodation units, restaurant facility and subdivision.	SH	The relevant standards for building areas suggest a maximum GFA for all likely buildings of around 5000 m ² . Assuming areas A and B total 15 ha approximately, this is only 3.3% site coverage. So with a maximum GFR overall within areas A and be of around 5% at most, and combined with the option of a restricted discretionary activity status for any single building over 250 m ² , the overall rural open space landscape should be easily attainable and protected. In addition, the boundary setbacks will also provide for a low density and rural amenity compared to, for example, residential development with front yards of 3m were the land to be zoned for, and developed as, standard mixed housing suburban or higher-density residential development.
	(b) Similarly in managing the effects as seen from intermediate views of the wider Waimanawa urban development, the LVA relies on the Morrisons Orchard vegetation being retained within the orchard to provide a	Reset	A shelter belt will continue to be required along the southern boundary of the Morrisons Orchard although the current shelter belt may be replaced over time owing to the age of the trees. As its name indicates the shelter belt provides needed shelter from the wind from the south and westerly directions. The shelter

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	<p>buffer of screening. However no Arboricultural report or precinct plan identifies trees/vegetation which are to be retained within the orchard precinct and the underlying zone would not automatically protect vegetation on site.</p> <p>Therefore, the retention of the open rural character to the road may not be retained along the road.</p>		<p>belt also provides screening to visually separate the orchard from the proposed development.</p>
	<p>(c) The response to Council Soft Lodgement Comments notes that the Rules about development in Morrisons Heritage Orchard have been strengthened to help achieve these outcomes. However there does not appear to be any significant changes to objectives, policies or standard wording.</p> <p>Therefore, please clearly identify how the objectives/policies/standards have been strengthened to specifically achieve the outcomes mentioned within the LVA.</p>	SH/DH/JD	<p>Policy 2 for the Precinct has been modified slightly. As outlined earlier, the standards have been modified to provide greater clarity.</p>
3.10	<p>(a) The proposed zoning for the Morrison Heritage Orchard area is Rural – Mixed Rural zone as identified on Map 1 – Zoning. However, Area C of the ‘Morrison Heritage Orchard Precinct’ outlines provisions for subdivision as a Large-Lot Residential Activity (XXX.6.11 Subdivision (3)).</p> <p>Please explain how the correlating zoning (Rural – Mixed Rural) and Large Lot Subdivision rules would work – e.g., do the underlying</p>	SH	<p>Activity Area C on the Precinct Plan is now proposed to have the underlying zoning of Residential – Large Lot.</p>

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	zone (rural) standards such as height and no impervious area apply, or do the Large Lot objectives, policies, and zone standards apply.		
	<p>(b) Please update Map 1 – Zoning where required.</p> <p><i>It is recommended that the Large Lot zone be applied to Area C on the planning maps, this zone also manages building height (slightly more restrictive than rural zone) but still aims for an open landscape character similar to that of the proposed precinct and rural zone. Large Lot zone could also be better respond to the physical landscape traits of this part of the site (ridgeline).</i></p>	SH	Yes this is agreed to.
3.11	The applicant is asked to clarify the area left out on the ‘Morrison Orchard Precinct Plan (2)’ which his left white; as this is not outlined as a different area within the ‘Morrison Orchard Precinct Plan (2)’. <i>Area highlighted in yellow below.</i>	SH/DH/JD	There is no Morrison Orchard Precinct Plan 2 in the Plan Change.
3.12	<p>(a) The author of the LVA in their conclusions relies on the ongoing management of the landscape to ensure that the landscape values will be maintained to a high quality and the overall impact of the zoning/future development will be appropriate.</p> <p><i>“When considered collectively, it is concluded that even though the Private Plan Change will create a high level of change the Site can accommodate the proposed masterplans without significantly diminishing the landscape</i></p>	Reset	It is a standard expectation for high quality subdivisions that a comprehensive maintenance and management programme will be established to help maintain a high-quality visual landscape outcome. The conclusion in the LVA doesn’t wholly rely on a maintenance and management plan for positive landscape values for public parks, open space, etc. Landscape management and maintenance is likely to be part of the development contracts, development design guidelines and/or resource consent conditions.

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	<p><i>values. The character of the landscape will be affected by the proposed development, but it is anticipated that future development within Warkworth South will reduce the overall impact of the scale of the proposal. With a comprehensive maintenance and management programme the landscape will be maintained to a high quality.” (Summary of Effects, paragraph 11.9)</i></p> <p>While the Plan Change Precinct Plan 4 identifies indicative areas of open space and reserves, the precinct does not provide specifics for future development landscape treatment (e.g., planting within public roads, pocket parks) or the ongoing management of these spaces to ensure the above landscape outcomes concluded within the LVA.</p> <p>Therefore, the applicant is asked to consider how the outcomes conclude within the LVA can be achieved through the plan change.</p> <p><i>In this instance could a landscape plan and landscape management & maintenance plan be required as part of future development to ensure appropriate open space, enhancement planting (such as that mentioned within the Arboricultural report), amenity planting and ongoing maintenance of public and private spaces is achieved.</i></p>		
3.13	Comment from Landscape Specialist – I hold concerns that the reduction in riparian/reserve	Reset	In respect to the section of stream that runs along the southern boundary of Morrison Orchard, a minimum 4m wide riparian planting will be provided with

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<p>planting and/or setback to 4m and 10m in some places will directly impact the ability for walkways/cycleways along these spaces to be provided for in the future. I note the Proposed Greenways – Walking and Cycling Infrastructure section of the plan change requires minimum 2m width paths, but if Council does not want to or is unable to accept vesting then there is no requirement for the infrastructure to be put in. In my view, the initial narrowing of the stream’s reserves could impact on paths being able to put in or being of an amenity level and quality that council would accept for vesting. Provision of walkways is positive and will create greater connectivity throughout the precinct and wider amenities and sites; therefore, further consideration should be given to narrowing the riparian setback. I do understand however that the applicant has been in conversation with Council Parks and Facilities in regards to the provision and location of public parks, and that this is to be an ongoing process with Council to determine where vested parks etc will be located. However reduced vegetation along riparian edges is generally not considered a positive landscape outcome.</p>		<p>the footpath/cycleway located outside the riparian strip. Since Morrison Orchard sits immediately north of this section of the stream and interfaces the site with a densely planted shelter belt, the existing visual and physical connections through to the Morrison Orchard are limited and will remain to protect its rural character.</p> <p>The proposed riparian strip helps enhance the stream corridor and will provide effective buffer planting without creating further separation between the two precincts.</p> <p>In terms of the walkways/cycleways that could be possibly provided within the riparian strip, these are mostly provided along the 20m riparian strip except a section that is along Stream 1 and adjacent to the proposed collector road. The provision of riparian planting together with recreational walking/cycling paths along the stream corridors will help enhance the ecological values and offers additional transport and recreational opportunities throughout the development.</p> <p>In respect to the walkway/cycleway that could be located within the 10m riparian setback, it provides an additional off-road recreational route between the proposed local centre/transport hub and Valerie Close. This also aligns with the indicative greenway routes that are proposed in the Warkworth Structure Plan.</p>
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Transport			
<u>Future Traffic Flows</u>			
4.1	Please undertake an assessment for 2046 to demonstrate that the proposed Sh1/WWLR	TPC	As stated in Section 3.3 of the ITA report, the SGA have undertaken assessment of the road network required to accommodate the traffic generated by the full

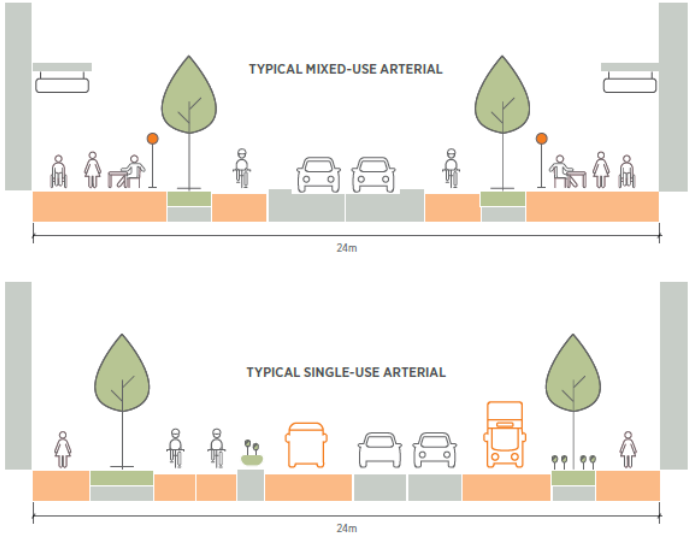
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	<p>intersection operates satisfactorily in 2046, or whether upgrades to the intersection may be required. If upgrades are required, the precinct should ensure that those upgrades are no precluded.</p> <p>The ITA focuses on the short to medium term effects of the plan change. No assessment of the long term effects within the full build out of the plan change in considered in 2046, other than reliance on the previous work undertaken in the Warkworth Structure Plan (WSP).</p> <p>The assessment in the WSP was a high level assessment and there is now more detailed information available with regards to the development and the roading network for Warkworth South; for instance, the Wider Western Link Road now connects to SH1 as a cross-roads with a collector road to the east of SH1. Previously, this road was a T intersection.</p> <p>The assessment should ensure that the proposed intersection with SH1 which provides the main access to the plan change area would continue to operate satisfactorily in 2046 or identify whether an upgrade (or additional land) would be required.</p>		<p>development of Warkworth in 2046, and this work has not been repeated in the ITA report.</p> <p>SGA have verbally advised the applicant that a single lane roundabout would accommodate WWLR/SH1 traffic following the full development of FUZ land and a completed arterial road network. As shown below, SGA have recently shared their idea for a layout of the Western Link Road/SH1 intersection proposal to support their upcoming Notice of Requirement and which shows a single lane roundabout.</p> 
	<p><u>Future Public Transport Accessibility</u></p>		
<p>4.2</p>	<p>Please provide details as to how the precinct provisions ensure that interim bus stops are provided prior to the construction the public transport interchange.</p>	<p>DH/JD</p>	<p>The implementation of interim bus stops on roads is a permitted activity under Rule E26.2.3.2 (as a road network activity) and specific provisions therefore do not need to be included in the precinct rules to provide for such bus stops.</p>

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	<p>The ITA states that bus stops will be provided to service the existing route 995 to provide public transport for the plan change area. Whilst the exact location may be a matter of detail, the precinct provisions do not require the provision of bus stops prior to the construction of the public transport interchange. As the timing of the interchange is not currently known, it is important that facilities for public transport users are provided in the interim period. The precinct should ensure these facilities are provided.</p>		<p>The provision of bus stops on the road network is the responsibility of Auckland Transport.</p>
	<p><u>Future Pedestrian and cyclist Accessibility</u></p>		
4.3	<p>(a) Please review the extent of the pedestrian/cycle path on the eastern side of SH1 so that it connects to an existing facility.</p>	TPC	<p>The proposed precinct provisions rightly only take responsibility for providing pedestrian and cycle connections to the existing urban area of Warkworth. It is the responsibility of NZTA/AT/Council to provide adequate walking and cycling infrastructure on SH1 within the existing urban area, which is needed with or without the proposed plan change. There is a mixture of shoulder markings and footpaths provided between McKinney Road and Woodcocks Road that are existing available for active modes as well as the requirement for PC72 to provide a footpath north of McKinney Road.</p>
	<p>(b) Please review the need for a pedestrian crossing facility in the vicinity of the Morrison Orchard vehicle access across SH1.</p>	TPC	<p>See item 4.7</p>
	<p>(c) The Transportation Infrastructure Table IXX6.15.1 (T3) and (T4) require the construction of a pedestrian/cycle path to connect to McKinney Road and the access to Morrison Orchard respectively. The termination of the facility at McKinney Road would stop short of connecting to an existing footpath cycle facility.</p>	TPC	<p>See response to 4.3(a) above. See item 4.7.</p>

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	<p>The termination of the footpath at Morrison Orchard could lead pedestrians/cyclists having to cross SH1 when wanting to travel to the Warkworth urban area. This poses a safety risk to vulnerable road users.</p>		
	<p><u>Road Hierarchy “Waimanawa Valley” – WWLR Cross-section</u></p>		
<p>4.4</p>	<p>(a) Please provide justification for including the riparian margin within the road reserve width and for the provision of the cycle facilities only on the northern side as a two-way cycle lane.</p>	<p>DH/JD</p>	<p>The updated WWLR cross-section does not now include the riparian strip.</p>
	<p>(b) Please explain how the road could be upgraded by Auckland Transport to an arterial through this section, including the provision of a one-way cycle lane on the south side of the road.</p>	<p>TPC</p>	<p>Please note that the proposed cross sections of the WWLR as shown in Figures 19 and 20 of the ITA report are intended to be of arterial road standard. They are very similar to the arterial road cross-sections shown on page 27 of the AT “Urban Street and Road Design Guide” as below:</p> 

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			<p>The AT design guide cross sections, and those proposed for the WWLR, provide off-road cycle paths, which is a safer option than on-road cycle lanes.</p> <p>The updated Plan Change includes a table of road widths and requirements and reflect this.</p>
	<p>(c) Figure 19 of the ITA shows a cross-section for the WWLR alongside the Morrison Orchard with a two-way cycle way only on the northern side of the road. This would force cyclists to cross the WWLR and would inconvenience cyclists travelling between the western and eastern sides of SH1, and compromise access to the Local Centre. Cycle facilities should be provided on both sides of the WWLR for its entire length.</p> <p>The figure also shows that the riparian planting is within the road reserve width (24m). The available width without the riparian planting (19.4m) would not enable Auckland Transport to upgrade this section of the WWLR to arterial standard with one-way cycle ways on each side.</p>	TPC	<p>Having a two-way cycle path on one side only of an arterial road corresponds to the cross-section for a typical single use arterial road shown on page 27 of the AT “Urban Street and Road Design Guide”. As explained on page 29 of the ITA report: “An advantage of having the cycle path on the northern side of the road is that cyclists will not need to cross any intersections or vehicle crossings. (The Matakana Link Road is a local example of an arterial road with a cycle path on one side of the road only.) Cyclists travelling from the western section of the Wider Western Link Road to the Morrison Orchard section would need to cross the link road where the cycle lane on the southern side of the road terminates. A high-standard cycle crossing facility would need to be provided at this point.</p>
	<u>Wider Western Link Road Alignment</u>		
4.5	<p>Please provide details of what assessment has been undertaken that demonstrates that the WWLR is appropriately located to allow it to be extended west of the plan change area in both the horizontal and vertical alignments.</p> <p>The WWLR will be required to be extended to the west when this land is rezoned and</p>	DH/JD	<p>The Supporting Growth Alliance (“SG”) (for Auckland Transport/Auckland Council/NZTA) has now distributed the plans showing the areas they intend to designate at the WWLR/SH1 and the western side of WW South.</p> <p>In terms of the western side of the WW South Plan Change area, the proposed WWLR alignment in the Plan Change aligns with the SG proposed designation area for the crossing of the watercourse.</p>

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	<p>developed and/or the WWLR is constructed to connect to Woodcocks Road or the motorway interchange. It is therefore important that the alignment of the WWLR is provided for in an appropriate location to allow for it to be extended in terms of both horizontal and vertical geometry.</p>	<p>Maven</p>	<p>In terms of the WWLR/SH1 designation position, the proposed area to be designated needs to be expanded to the north to appropriately provided for the proposed WWLR/SH1 intersection and discussions are being had with SG in respect to that.</p> <p>SG has confirmed that the indicative alignment of the WWLR within the Plan Change area which they have shown is indicative only and will be determined through the Plan Change process based on the alignment which has been included in the Plan Change.</p> <p>The WWLR alignment has been located based on the factors listed below:</p> <ul style="list-style-type: none"> • Centrally located within the FUZ area which provided a good service to surrounding land • The proposed WWLR vertical alignment is generally flat with minimal requirement for batter • WWLR will need to be extended west via a bridge crossing Mahungari River. Given the topographical on site this bridge can be formed with minimal work needed for the abutment. • The intersection of WWLR with State Highway 1 (SH1) is located in a straight section of SH1 which has a better outcome in terms of traffic safety. • This intersection location also provides a safe access to the Waimanawa Hills area. • The WWLR is located next to the local center and large recreation park which generate high volume of traffic. This also promote the use of public transport and cycling which is provided as part of arterial facility.
	<p><u>Road Hierarchy “Waimanawa Hills”</u></p>		
<p>4.6</p>	<p>(a) Please provide details of how cyclists using the collector road (Road 1) in Waimanawa Hills will be catered for east of Road 6 where traffic volumes are still likely to be high as vehicles access the wider Waimanawa Hills area.</p>	<p>TPC</p>	<p>See (b) below.</p>

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	(b) The proposal is for the collector road to be constructed along the western end of Road 1 before turning north along Road 6. Further consideration is required as to how the hierarchy of roads within this area provides for cycling and the movement of traffic through the “Hills” area. For instance, the continuation of separated cycle facilities along Road 1 would likely be desirable as traffic volumes would still be elevated as this road provides the main access to the southern parts of the development.	TPC	The extent of the Collector Roads within the “Hills” is consistent with the Warkworth Structure Plan. Traffic volumes to the east of the proposed collector roads are not anticipated to be greater than 3,000 vpd and therefore it is unlikely that separated facilities would be required beyond the collector road. The applicant does not consider that special provision is therefore required within the precincts and the design of cycle facilities, if any, can be dealt with a resource consent time.
	<u>Cycling and Walking</u>		
4.7	(a) Please detail how appropriate pedestrian and cycle crossing facilities across SH1 to meet likely demands for crossing this road will be provided in locations where the plan change is likely to result in desire lines across SH1. Advice Note: Consideration should be given to facilities in the vicinity of the pedestrian/cycle connection from the eastern area to SH1 south of the WWRL and at in the vicinity of the Morrison Orchard access (refer to item 3).	TPC	With the proposed rear-loading of development along SH1, the potential locations where pedestrian demand to cross SH1 might be expected are at the new WWLR intersection (which will have pedestrian crossing facilities), the vicinity of Valerie Close and the pedestrian-cycle connection from the eastern area to SH1 south of the WWLR (see next item). At the time of any upgrade to the Valerie Close intersection, pedestrian facilities will be considered and we do not believe any additional provisions are required within the precinct. Any pedestrian desire line between the “Hills” and the Morrison Orchard access will be via the WWLR intersection and a footpath along the Orchard frontage. No additional facilities are anticipated north of this intersection.
	(b) A pedestrian and cycle access indicated on the western boundary of the Waimanawa Hills area (circled in red in the image below) connects to SH1 and the proposed pedestrian and cycle paths. The location is located south of the SH1/WWLR intersection. This connection could create pedestrian demands across SH1 for residents to walk or cycle to the	TPC	See response to item 4.7(a) above. The appropriate time to address these detailed design matters is at the resource consent stage if the Valerie Close intersection is upgraded.

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	<p>southern areas of the Waimanawa Valley part of the precinct.</p> <p>Pedestrians are unlikely to deviate to cross the road at the proposed WWLR/SH1 intersection due to the distance between these two locations, and therefore this could result in safety risks for pedestrians and cyclists.</p> <p>ITA Section 7.1 states that <i>“regular and safe crossing opportunities on the arterial roads where pedestrian desire lines are evident”</i> will be provided. Desire lines such as that described above would not be currently evident as there is no development or pedestrian facilities along SH1, however, the provision of the connection to SH1 for pedestrians/cyclists, which is considered appropriate, is likely to be a location where crossing demand would exist.</p>		
	<p><u>Traffic Generation of Proposed Warkworth South Plan Change Area</u></p>		
<p>4.8</p>	<p>(a) Please confirm that the SGA has accepted the trip rate used in the ITA for the single house and THAB zones.</p> <p>If these rates have not been accepted, please review the trip rates used in light of the accessibility to public transport and connections to wider facilities by active modes and update the assessment of the SH1/WWLR intersection accordingly.</p>	<p>TPC</p>	<p>We confirm that, as stated in the ITA, the use of the trip rates used in the previous ITA reports for approved plan changes/subdivisions in Warkworth has been agreed with the SGA.</p>

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	ITA Section 6.3 presents forecast flows and trip rates in Table 4. The ITA states that the use of the trip rates used in the previous ITA reports for approved plan changes/subdivisions has been agreed with the SGA.		
	(b) However, the rates for single house zones shown in Table 3 had a rate of 0.85 trips per household, but a rate of 0.65 trips per household has been used.	TPC	That is an error. A rate of 0.85 trips per household should have been applied to the 41 dwellings of this category. Increasing the trip rate from 0.65 to 0.85 increases the peak hour trip generation by 8 vehicles per hour, a difference of 0.6% to the total predicted trip generation of the PPC area. Thus, the effect of this error is insignificant.
	(c) There were no trip rates for THAB zones in the other plan changes. The ITA assumes a trip rate of 0.5 for THAB, and it is therefore not clear if this has been accepted by SGA. Given the poor connectivity to public transport and connections for walking and cycling and the short to medium term (as noted in the ITA), this trip rate is considered low. A rate in the order of 0.65 trips/household is considered more appropriate. Higher trip rates will affect the assessment of the operation of the SH1/WWLR intersection	TPC	We do not agree that THAB households would have the same vehicle trip generation as single house sites. THAB households generally have fewer vehicles per household and less parking available than single house sites, and thus have lower trip rates. The 0.5 rate used is consistent with the rates of 0.4-0.65/dwelling for medium density residential flat buildings suggested in the RTA Guide to Traffic Generating Developments. The trip rate of 0.5 used for THAB households has been accepted by the SGA
	<u>Motor Vehicle Trips at the Morrisons Orchard Access on SH1</u>		
4.9	Please provide an assessment of the suitability for a simple site access (as proposed) for the Morrison Orchard taking into consideration the volume of traffic turning into and out of the access and volume of traffic on SH1. The assessment should consider the provision of a channelised right turn or improvements to the	TPC	As SH1 is an arterial road, a Vehicle Access Restriction applies under Standard E27.6.4.1 of the AUP, and any new activity or change of type of activity at the Morrison Orchard site would need to be assessed against the criteria specified in E27.8.2(11) of the AUP, including the effects of the location and design of the access on the safe and efficient operation of the adjacent transport network having regard to visibility and safe sight distances, existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring, proximity to and operation of intersections, existing pedestrian

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	<p>access as illustrated in the Waka Kotahi Planning Policy Manual.</p> <p>With the forecast turning movements and the volume of traffic on SH1, a channelised right turn or right turn bay may be required, or at least improvements to the access in accordance with the Planning Policy Manual SP/M/001 Appendix 5B – Accessway standards and guidelines. A new access onto the State Highway would need to be assessed against this document and would require approval from Waka Kotahi.</p>		<p>numbers, and estimated future pedestrian numbers having regard to the level of development provided for in this Plan.</p> <p>Thus, the appropriate design of the access to the Morrison Orchard site will be determined to Council’s satisfaction when any new land use or change of land use is proposed at the site. Should any extra land be required for the access, this can be provided by the property owner if required as a condition of resource consent.</p> <p>In terms of the proposed Morrison Orchard precinct provisions, standard XXX.6(2) only allows for activities generating up to 100 vehicles per hour in any hour. The estimated turning volumes arising from this level of activity in the AM and PM peak hour are shown in Figure 32 of the ITA report. An evaluation of these peak hour turning volumes against the auxiliary lane warrants on page 53 of Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossing Management (2020) indicates that only a basic left turn (BAL) treatment is warranted to accommodate left turning traffic, while a full right turn bay (CHR) is warranted to accommodate right turning traffic. As the proposed SH1 cross section shown in Figure 18 of the ITA report indicates a central median island width of 2 metres, a reduction of the berm width or local widening would be required in the vicinity of the Morrison Orchard access to accommodate a right turn bay.</p>
	<p><u>Morrison Heritage Orchard traffic generation standard IXXX6.1(2)</u></p>		
<p>4.10</p>	<p>Please provide an explanation as to why the trip generation limit in Standard IXXX6.1(2) for the Morrison Orchard only applies to certain activities in Table IXXX.X.1 and not all activities.</p> <p>If the standard does not apply to the other activities in the Activity Table, please provide an assessment of the operation of the site access to demonstrate that this will operate satisfactorily without an upgrade.</p>	<p>DH/JD</p>	<p>The Plan Change has been updated so that the trip generation limited in Standard Ixxx6.1(2) applies to all activities.</p>

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	<p>Morrison Orchard Precinct Standard IXXX6.1(2) General Access and Traffic Generation Standard proposes to limit the total number of vehicle movements to 100 veh/hour from the Morrison Orchard for activities A4 to A10 (excluding A7) listed in Table IXXX.X.1 for the Morrison Orchard. The trip limit is considered appropriate, however, it is not clear why the limit only applies to certain activities. If the limit is proposed to address an effect of development exceeding 100 vehicles per hour, then this should apply to all activities as the safety of the access will not be better just because the trips are generated by one of the activities not referenced in the standard.</p>		
	<p><u>Activity Tables, including Activity Table IXXX4.4, 4.5 and 4.6</u></p>		
4.11	<p>Please provide justification as to why non-compliance with IXXX6.15 Transport Infrastructure is Discretionary and not Non-Complying.</p> <p>Please review the consistency of how the non-compliance with Standards IXXX6.7, IXXX6.8 and XXXX6.15 in the Activity Tables has been applied, including consideration of these being applied to Table IXXX4. for all zones.</p> <p>The activity tables for the various zones list activities that do not comply with Standard IXXX6.7 Limited Access Restrictions and Pedestrian Connections, and IXXX6.8 Wider</p>	DH/JD	<p>It is not agreed that the activity status needs to be non-complying. It is possible that AT may change over time the road design requirements from those currently proposed. The discretionary activity status is therefore more appropriate and provides the opportunity for Council to assess the effects arising and taking into account any changes in the road design requirements by AT at that time.</p>

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	Western Link Road as Non Complying (NC), and those that do not comply with IXXX6.15 Transport Infrastructure as Discretionary (D). The inclusion of these varies across the zones in which they have been applied. It is not clear why non-compliance with all these standards does not apply to all zones. Furthermore, it is not clear why non-compliance with the IXXX6.15 is not non-complying.		
	<u>Standard IXXX6.7 – Limited Access Restrictions and Pedestrian Connections</u>		
4.12	Please explain why the access restrictions for roads with separated cycle facilities only apply to S1 and the WWLR and not all road with separated cycle facilities (such as the collector roads).	TPC	Recent practice with plan changes has sought not to prohibit vehicle access on Collector Roads, but there is an expressed desire to limit access. This recognises that it is not always practical or possible to provide rear lane access on both sides of a Collector Road. This is also recognised in AUP standards where limits are provided on a number of design features such as the number of crossings provided on a frontage, vehicle access width, separations, and level of use where reversing vehicles may be required. We consider that there is sufficient provision within the AUP to address any safety concerns for cycle paths on collector roads.
	Standard IXXX6.7(2) refers to the SH1, WWLR and Green Road. However, there are other roads which have separated cycle facilities. These roads should also have restricted access to provide for the safety of cyclists. Note that the Precinct Plans refer to Green Road as Green Avenue.	DH/JD	The terminology in the PC has been corrected so it refers to Green Avenue.
	<u>Standard IXXX6.8(1)(c) – Western Link Road</u>		
4.13	Please explain how the precinct allows for or protects the Wider Western Link Road for upgrading to arterial road standard.	DH/JD	The width of road being provided for allows for it to be converted to an arterial road standard in the future. This upgrading is likely to be a permitted activity and falls within the ambit of E26. Specific rules in the Plan Change are therefore not required.

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	The precinct provisions do not allow for the future upgrading of the WWLR to arterial standard. Previous versions of the precinct provisions (IXXX6.8(1)(c)) included such a provision but this has been deleted.		
	<u>Transportation Infrastructure Requirements Table IXXX6.15.1(T1)</u>		
4.14	<p>Please review the detail of the trigger for IXXX6.15.1(T1) to ensure that the effect of <u>any</u> development using Valerie Close is appropriately addressed as is recommended in ITA Section 2.2.2.</p> <p>The Transportation Infrastructure Table IXXX6.15.1(T1) requires that an assessment of the Valerie Close intersection should be undertaken in the event of development fronting onto or having access to a Valerie Close. The ITA states in Section 2.2.2 that <u>any</u> additional traffic would require Valerie Close intersection to be upgraded. The standard therefore only requires an assessment to be undertaken not an upgrade itself, therefore the effect of the development on the safe operation of the intersection may not be addressed.</p>	DH/JD	No change to the Plan Change wording is required and the required assessment will determine if the upgrading is required at that point.
	<u>Transportation Infrastructure Requirements Table IXXX6.15.1(T9)</u>		
4.15	Please detail how IXXX6.15.1(T9) would trigger upgrades to Mason Heights if development is accessed via a new road connection or an extension to Mason Heights rather than just	DH/JD	<p>The Plan Change wording has been changed to:</p> <p>Any subdivision or development with frontage to that section of Mason Heights or in the event that Mason Heights is extended or a new road is connected to it within the Waimanawa Precinct.</p>

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	<p>fronting onto Mason Heights as is currently stated in the table.</p> <p>The Transportation Infrastructure Table IXXX6.15.1(T9) relates to the upgrade of Mason Heights where development or subdivision has frontage on to Mason Heights. If Mason Heights is extended or a road connection is provided onto Mason Heights, then technically the threshold would not be met and no upgrade would be required. This would mean that residents would not be provided with appropriate pedestrian connections to the wider network.</p>		
	<p><u>Standard IXXX6.15 – Transport Infrastructure</u></p>		
<p>4.16</p>	<p>Please provide an explanation why the triggers for Table IXXX6.15.1 Transport Infrastructure Requirements (T2) and (T5) relate to the 20 residential lots and only relate to subdivision.</p> <p>The triggers included Table IXXX6.15.1 Transport Infrastructure Requirements (T2) to (T5) are for 20 residential lots. There is no justification provided for the use of 20 residential lots rather than for the first dwelling or not. Furthermore the trigger only refers to the “first subdivision”. If a development for a retirement village or similar were to occur, this may not require subdivision and thus not trigger the requirement for the upgrade. The standard should refer to the first subdivision or development creatin more than 1 residential lot.</p>	<p>DH/JD/TPC</p>	<p>(T2) and (T5) have been updated so that any subdivision within the Business – Local Centre Zone or for a retirement village triggers the upgrades.</p> <p>In terms of the 20 residential lot trigger, this has been included as it reflects that there are a number of small lots not under the control of the applicants within the Plan Change area. This would allow very limited subdivision of these lots without them triggering the upgrading requirement if for any reason those landowners decided to progress the subdivision of their lots for residential purposes prior to the applicants progressing their subdivision.</p>

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	<u>Standard IXXX6.15 – Transport Infrastructure</u>		
4.17	<p>To assess the adequacy of roading elements and functions, please include the Road Standards and Function Table in the precinct provisions. Reference should be made to the table in IXXX6.15 Transportation Infrastructure to require infrastructure to be provided in accordance with the table.</p> <p>The ITA recommends that a Road Standards and Function Table be included in the precinct provisions. The table would set out the function of each road and the key design elements of the road including number of lanes, pedestrian and cycle requirements, whether the road is to accommodate buses, the overall corridor width etc. This would provide clear guidance to developers and planners. However, the Precinct Provisions do not include the table. The table is referenced in IXXX8.2(1)(c)(vii) for the Assessment Criteria for Restricted Discretionary activities in relation to subdivision.</p>	DH/JD	This requested table has been included in the Plan Change.
	<u>General comment from Traffic Engineer</u>		
	<u>XX.3(16) Policies</u>		
4.18	<p>Please amend policy 16 to read:</p> <p><i>“Avoid direct vehicle access from individual sites on to the Wider Western Link Road, and State Highway One, and collector roads with separated cycle paths, while allowing direct pedestrian and cycle access.”</i></p>	DH/JD	A new Policy 19 has been added to address collector roads.

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	<p>To provide safe cycling facilities and to provide priority for cycling, vehicle access should be avoided on roads with separated cycle facilities, including SH1, WWLR and the collector roads within the precinct. Policy 16 only refers to SH1 and the WWLR, but it should also refer to the collector roads.</p>		
	<p><u>Standard IXXX6.7 – Limited Access Restrictions and Pedestrian Connections</u></p>		
4.19	<p>Please amend IXXX6.7(3) to refer to Precinct Plan 3 rather than Precinct Plan 1.</p> <p>Standard IXXX6.7(3) refers to Precinct Plan 1 with regards to pedestrian connections. It is assumed that this should refer to Precinct Plan 3.</p>	DH/JD	This correction has been made.
	<p><u>IXXX9.1 Special Information Requirements – Transport and Safety</u></p>		
4.20	<p>Please review IXXX9.1 Special Information Requirements – Transport and Safety and include the purpose of the assessment in the special information requirement.</p> <p>IXXX9.1 Special Information Requirements do not provide sufficient guidance to developers as to the purpose of the transport assessment or safety audit. The purpose of the requirement should be clearly identified in the purpose of the requirements.</p>	DH/JD	No changes are proposed.

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Urban Design			
Pedestrian Connectivity			
5.1	<p>The precinct description asserts ‘that range of lot sizes for different typologies focused on open spaces and responding to the topography ... will result in a walkable community with a high amenity urban area’. However, ‘community’ is driven by wider associations and affiliations relating to the wider Warkworth Area. Walkability is about enabling easy, safe and convenient pedestrian connections for all ages, genders and use during evening hours.</p> <p>Objective 2 in a broad sense reflects this wider need of community and pedestrian amenity, but that part of the objective “integrated walking and cycling connections internally and to the wider Warkworth urban area” and Policy 13 requires subdivision ... to provide walking and cycling networks within the precinct while provided connections to the wider transportation network. My experience to date is if any pedestrian link is provided, however circuitous, with limited overlook and lighting and/or connections to the wider area through limited high-end connectors or arterials is considered as integrated.</p> <p>Please consider how the policy and other provisions of the precinct can address and make clear the needs for the development of street-based structure for the easy, safe, and</p>	DH/JD	No changes are proposed.

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	convenient pedestrian connections for all ages, genders and appropriate for use during evening hours to the wider or adjoining neighbourhood areas of Warkworth. Please demonstrate the dependence of open space pedestrian routes connecting northwards having limited length (i.e., less than 30m) and what provisions would support appropriate overlook.		
	<u>Cul-de-sac road grids</u>		
5.2	<p>The creation of groups of connected street grides as indicated by the Master Plan work, accessed by a single-entry road create cul-de-sac neighbourhoods, with edges defined by streams and open spaces. The effect, even when stream side pedestrian paths and crossings are provided, is to drive inconvenient, and long pedestrian access between closer residential sites that act as a barrier to pedestrian activity and promotes more vehicle use.</p> <p>The applicant is asked to consider what provisions are necessary to avoid the impacts these small neighbourhood pods of connects streets that are poorly connected other similar pods and how these provisions to that outcome is better balanced against open space and topographical constraints.</p>	DH/JD	No changes are proposed, and it is considered that adequate pedestrian and cycle access can be provided onto SH1.
	<u>Northern Esplanade Reserves</u>		
5.3	The provision of a continuous esplanade incorporating the recreational 'green route' with either further open space landscaped	DH/JD	No changes are proposed.

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	<p>protection or rear of properties that back onto these esplanade reserves undermines connections to the north which would be considered easy, safe, and convenient pedestrian connections for all ages, genders usable during evening hours. While changes to fencing have been made, all these properties can develop a landscape response which can screen and undermine the intentions behind the fencing provisions. The use of road frontage against the esplanade, open them to better overlook and positions roads closer to enable shorted pedestrian links across the stream.</p> <p>Please identify how objectives, policies and assessment criteria for subdivision would strengthen the ability for easy, safe, and convenient pedestrian connections for all ages, genders usable during evening hours.</p>		<p>In terms of the western edge of the Plan Change area it is considered inappropriate for a road to be formed within the area identified as a bat flight corridor.</p>
	<p><u>Local Centre</u></p>		
<p>5.4</p>	<p>(a) The precinct description identifies that the local centre is ‘designed’ to be a focal point for the community, and the centre is to be both accessible and functional within the notion of high amenity. However, there is a lack of policy or provisions which deal with the co-ordination of activities frontages and backs. Subdivision of the site and selling sites to be developed independently (an approach that is being adopted by developers) will result in case by case consenting and potential</p>	<p>DH/JD</p>	<p>The design of the local centre is a detailed design matter. No changes are proposed.</p>

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	conflicting outcomes based on some of the functional needs of businesses.		
	(b) The master plan depicts reasonable attempt at a new urbanist approach to the town centre, however the extent to which this has been assessed from a retail perspective is lacking in any supporting documents or the urban design report, where that would sit if not separated out. In particularly what the stream which bisects the site and its 10m riparian setback does to the functioning of the centre and its approach to developments fronts and backs.	DH/JD	The design of the local centre is a detailed design matter. No changes are proposed.
	(c) There is need to identify key frontages within the subdivision consenting process, and to describe the frontages performance. This centre could easily be developed on a site-by-site basis, in its own time with its own agenda activity. That raises some conflicts between assembling pedestrian supportive frontages, assembly of activities and the efficiency of a centre's layout. Below are some of the poor examples of development fronting key arterials and corner sites, which indicates how poorly planning is dealing with these locations. While there is a need to provide for a range of business activities, a piecemeal approach is unlikely to result in the envisaged community focal point, a functional shopping environment or an appropriate gateway address for the site.	DH/JD	The design of the local centre is a detailed design matter. No changes are proposed.
	(d) The applicant is asked to provide a retail assessment of the local centre, considering the	DH/JD	The Warkworth Structure Plan identifies the requirement for a local centre in Warkworth South (and close to the proposed location). It is considered that a

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	implications of the stream and riparian protections, costs associated with bridging, and the co-ordination of frontages and backs to achieve a town centre based on urban design principles. The applicant to consider strengthening the subdivision policies and provisions for the local centre to manage and co-ordinated frontage conditions relating to the WWLR, State Highway 1, stream, and riparian, possibly utilising existing AUP-OP provisions such as identify commercial and retail frontages.		retail assessment for a local centre is not required particularly when the requirement for this local centre is already identified in the Structure Plan for the area.
	(e) The applicant consider implications of street on parking provisions in the design of the WWLR to support the early establishment of frontage conditions, and parking considerations when in the long-term the WWLR becomes an arterial route.	TPC	Standard lxxx.6.7(2) requires that “sites that front onto the Wider Western Link Road, Green Avenue and State Highway One must not have direct vehicle access to the road and must be provided with access from a rear driveway, rear lanes (access lots) or side roads at the time of subdivision” so a very stringent frontage control is already proposed. The WWLR cross-sections do not provide on-street parking on the WWLR.

Parks			
<u>Stormwater Ponds</u>			
6.1	<p>The masterplan shows that the indicative open spaces shown in Precinct Plan 4 double as stormwater ponds. This is not supported and does not meet the requirements of the Open Space Provision Policy 2016 for suburb, neighbourhood and pocket parks.</p> <p>Please clarify/confirm the provision of sufficient and appropriate open space and how this coordinates with green infrastructure.</p>	Reset	<p>The proposed open spaces within Warkworth South are provided primarily along the multiple stream corridors. These streams are an integral part of the existing site and will be essentially protected and enhanced by the provision of riparian yards. The approach to integrating the existing site features such as streams, natural landforms and vegetation into the proposed open space network helps create a rich sense of place. The various open spaces proposed along the stream corridors not only provide for a range of recreational activities but also combine stormwater management functions into the area. Integrating green infrastructure with open spaces to create multifunctional open spaces demonstrates good urban design practice and is encouraged by the Auckland Council’s Open Space Provision Policy 2016.</p>

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	<u>Subdivision</u>		
6.2	<p>Ixxx.4 Activity table removes the application of the E38 activity table provisions for vacant site subdivision and replaces them with RD activity class for subdivision in the precinct. An assessment of open space provision is not provided for within the proposed matters of discretion, beyond a narrow consideration of “the extent to which green connections are provided”. This means the normal consideration of open space provision within a subdivision consent application and its adequacy in terms of useable spaces etc. under E38 would be precluded.</p> <p>The Section 32 assessment considers that providing certainty over open space provision is preferred to the uncertainty of a resource consent process. This approach is not supported by Parks Planning as outlined in its pre-lodgement consultation feedback.</p> <p>There is no comment, response or further explanation is the section 32 report regarding Parks Planning’s significant concern over the application of open space zones at the initial plan change stage, rather than post-subdivision.</p> <p>It is how the precinct plan provides suitable mechanisms to ensure the provision of sufficient and suitable open space in future</p>	JD/DH	<p>The original draft Plan Change included zoned areas for formal and informal recreation. During the soft lodgement process, the Council Officer feedback was that the preferred approach for Council was to zone future open space land as residential so that the detailed boundaries could be worked through at the resource consent stage.</p> <p>The applicants do not reconcile from the provision of open space as per the masterplan and this will feature with appropriate boundaries at the time of resource consent applications for staged subdivision.</p> <p>A new policy 20 has been added and a new matter of discretion (Ixxx.8.1(1)(h)) and assessment criteria (Ixxx.8.2(1)(f)) have also been included. These matter of discretion and assessment criteria are consistent with the E38 provisions.</p>

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	subdivision, and how this will be able to be assessed at subdivision consent stage.		
	<u>Numbers, sizes and types of parks</u>		
6.3	<p>Precinct Plan 4 appears to conflate potential areas of future open space zones with open space provision in terms of the numbers, sizes and type of parks to be provided throughout the precinct.</p> <p>Please explain how Precinct Plan 4 provides the necessary guidance for future subdivision and development of the precinct in terms of numbers, sizes and type of parks to be provided, or how else this is specified and assessed in the proposed precinct provisions.</p>	DH/JD	<p>Auckland Council identified through the soft lodgement process that they did not want future open spaces defined at this stage as the exact location, size and function of open spaces will be determined through the future subdivision processes.</p> <p>For this reason, the final Plan Change submitted in January removed open space zonings (except for Open Space - Conservation).</p>
	<u>Esplanade Reserves</u>		
6.4	Should the stated reason for IXXX6.16 refer to only esplanade reserves in the actual wording or should it refer to 'vested publicly accessible open space' to ensure land that may not be vested as esplanade reserve is also considered?	DH/JD	This change has been made in the Plan Change.

Ecology			
7.1	Please confirm the proposed riparian yard widths and whether the proposed widths are shown as a measured whole width (i.e., 20m riparian yard width means 10m each side of the stream bank) or whether the proposed riparian yard widths are (as generally accepted) measured individually from the top of both stream banks (i.e., 20m riparian yard	DH/JD	The riparian widths shown on the plans to date are only indicative as detailed surveys and plans are prepared at the subdivision stage. The width will be from the top of stream banks.

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	<p>is measured as 20m from either side of the top of the streams bank). Please update Precinct Plan 1 as necessary.</p>		
<p>7.2</p>	<p>It is acknowledged that bat surveys have been undertaken on site and that records of bats using the area identified as the “Indicative Bat Flight Corridor” have been shown. However, it is my opinion that these surveys are lacking in sufficient detail or scope for the nature of the proposed application. The Bat surveys are very limited in area and appear to have been placed on the edge/boundaries of the site, outwardly focused. The applicant has not undertaken any formal surveys from within the centre areas of the site including around wetlands, stream and pasture areas within the site that are likely to be used as feeding areas/habitats for bats. The plan change proposes a large area of the site to be Open Space – Sports and Active Recreation (Suburban Park) which is located next to a significant area of stream and wetland. Sports and Active Recreations area are busy locations often associated with large flood lights and spotlights for sports at night. Without formal bat surveys over and around these it is difficult to determine and assess the effects of the proposed location and rezoning of these areas on bats. As such please provide further formal bat surveys over the site including the areas of potential bat habitat.</p>	<p>Bioresearches</p>	<p>The scope of the surveys, provided in the Ecology report, targeted key ecological features- being those that are linear and / or support potential roost habitat, such as:</p> <p>Waimanawa Valley The Mahurangi River (right arm) and associated riparian corridor along the western and northern site boundaries and including key vegetation fragments along the northern extents of the site.</p> <p>Waimanawa Hills Groves and fragments of large totara, puriri (areas 2 & 3, Figure 8 of ecology report) adjacent to the northern edge of Avice Miller Scenic Reserve.</p> <p>These areas are identified as being of important ecological value, including for potential bat use, and are protected under the proposal, including the provision of a dedicated bat corridor at Waimanawa Valley to support identified bat activity.</p> <p>It is acknowledged that further survey spread has potential to provide more insight into bat activity within and around the project areas, such areas within Waimanawa Valley are proposed to be open space under the proposed plan change, (e.g. areas of wetland and watercourse, connected to northern riparian corridor- which was surveyed and reported in the ecology assessment), and would be best suited to open space zoning, rather than the more regular anthropogenic activity (lighting, vehicle traffic noise) associated residential areas.</p> <p>Existing, repeated surveys to date indicate that any such activity beyond the Mahurangi River corridor would be low level (as identified from existing survey information) if at all, and because previous survey effort and bat database records indicate that the source of the identified activity is highly likely to be associated with the large area of forest (indigenous and exotic) to the south-west, which has</p>


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			more recently become bisected from Warkworth by the construction of SH1 (Puhoi to Warkworth) motorway.
7.3	The proposed provisions in the plan do not propose any specific lighting provisions around standards for lighting for areas of identified or potential Bat Habitat. Please provide comment as to why the recommendations of the ecologist have not been adhered to. Notwithstanding the above, it is recommended that further provisions addressing this matter, such as those previously approved under Plan Change 69 – Spedding Road be adopted.	DH/JD	Proposed lighting provisions within the Bat Flight Corridor have now been included in the Plan Change.
7.4	A wetland area (unlabelled) alongside watercourse 15 has been identified as a constructed wetland. Please reevaluate this assessment. Whilst it is agreed there are elements of ground modification, Council has previously concurred this as a restored natural wetland (both prior to, and during review for subdivision consent SUB8007191 [RMA55271]).	Bioresearches	<p>Page 28 of the Baseline Ecology Report discusses the wetland and the reasoning for classifying the wetland as a constructed wetland, including the history of the site as pasture (<i>15 years ago</i>) and construction of a dam across the watercourse to create a pond.</p> <p>The following are snips from the current Google Earth Imagery and 1963. The current wetland is located in the centre of the Google Earth Imagery and absent from the 1963 imagery:</p>

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			 An aerial photograph of a rural landscape. A yellow boundary line is drawn across the image, enclosing a central area. This area includes a small cluster of buildings, possibly a farm or a small village, and a road. The surrounding land is green, with some fields and trees. The boundary line follows the general shape of the central area, including a small triangular section on the right side.
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7.5	<p>Please update precinct plan 2 with all natural wetlands and streams on site irrespective of determined value. Wetlands and streams have been identified within the ecology report that have not been shown on precinct plan 2. Please provide a clear, detailed and labelled precinct plan that includes all natural features. For avoidance of doubt, it is not agreed that pre-determining potential wetland and/or stream reclamations are a matter for the Plan Change; this is contrary to</p>	DH/JD	<p>The Precinct Plan shows retained streams for planning reasons and there is no requirement under Appendix 1 of the AUPOP or the NES for Freshwater to show all watercourses.</p>

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	the Unitary Plan Appendix 1 and/or National Environment Standards for Freshwater.		
7.6	Please accurately identified the area proposed as 'Waimanawa Wetland' reserved on precinct plan 4.	DH/JD	This has not been included. Auckland Council made it clear during the soft lodgement process that future open spaces which may be vested in Council were not to be zoned Open space through the Plan Change process.
7.7	It is not considered that the streams shown as 'artificial watercourse' in Figure 5 of the Baseline Ecology Report prepared by Bioresearches have been incorrectly identified. It is considered that these 'artificial watercourse' meet the definition of a modified stream as a modified element of a natural drainage system as determined under the AUP definition for streams. These streams are located within a natural floodplain that has been altered for farming and horticultural activities. Please provide an updated Figure 5 and a full assessment of these modified streams. All streams should be shown on Precinct Plan 2, should the Plan be used to act as a baseline for future Resource Consent applications.	Bioresearches	<p>The detailed assessment of the watercourses is included in the January 2021 report which is attached. Figure 5 is based on this earlier report where all watercourses and potential watercourses were ground-truthed.</p> <p>It is considered that no updates to Figure 5 are required.</p> <p>Precinct Plan 2 only shows those streams which are to be retained and does not need to show all artificial watercourses or drains.</p>
7.8	No formal Herpetofauna surveys have been undertaken on site. Please undertake formal surveys to identify if there are any areas on site that have high value habitat or value and should undertake habitat restoration and/or protection.	Bioresearches	<p>Formal herpetofauna surveys are not considered necessary in the current instance. We acknowledge that the potential occurrence of indigenous lizards within parts of the site, beyond those we have identified for protection and enhancement, remains possible. However, such areas are localised and fragmented, and are currently maintained as pastures and exotic hedges.</p> <p>Our assessment has identified areas of indigenous vegetation, habitats and linkages on both blocks (Waimanawa Valley and Waimanawa Hills) that are worthy of further protection, enhancement and buffering with respect to their wider ecological representativeness, diversity and context, as well as their potential to support indigenous lizard communities. These locations are mapped</p>

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			<p>in Figures 4 and 8, and additionally include those areas that are afforded riparian yard protection. In the longer term, we anticipate that these identified areas could further provide support for additional enhancement of lizard habitat values as managed under future resource consents.</p>																																																																				
7.9	<p>Table 4 within the ecology report shows NZ treat status for herpetofauna, please update this table to represent regional threat status for the Auckland region instead, as endorsed by the Department of Conservation.</p>	Bio	<p>The ecology report listed all native herpetofauna as “At Risk’. This has not changed. A revised version is produced below, as per Melzer et al. 2022.</p> <p>Table 1. Terrestrial herpetofauna of the Rodney District, corresponding NZ threat status (Hitchmough <i>et al.</i>, 2016; Burns <i>et al.</i>, 2018; Melzer et al. 2022) and occurrence within five kilometres of the site.</p> <table border="1" data-bbox="1115 592 2101 1358"> <thead> <tr> <th></th> <th>Common name</th> <th>Species name</th> <th>NZ threat status</th> <th>Reported within 5 km of the sites</th> <th>Habitat potential within Projects</th> </tr> </thead> <tbody> <tr> <td rowspan="9" style="writing-mode: vertical-rl; transform: rotate(180deg);">Indigenous</td> <td><i>Mokopirirakau granulatus</i></td> <td>Forest gecko</td> <td>At Risk – Declining</td> <td>✓</td> <td>✓</td> </tr> <tr> <td><i>Nautinus elegans</i></td> <td>Elegant gecko</td> <td>At Risk – Declining</td> <td>✓</td> <td>✓</td> </tr> <tr> <td><i>Dactylocnemis pacificus</i></td> <td>Pacific gecko</td> <td>At Risk – Declining</td> <td></td> <td>✓</td> </tr> <tr> <td><i>Woodworthia</i> “Muriwai”</td> <td>Muriwai gecko</td> <td>Threatened- Critical</td> <td></td> <td></td> </tr> <tr> <td><i>Oligosoma ornatum</i></td> <td>Ornate skink</td> <td>At Risk – Declining</td> <td></td> <td>✓</td> </tr> <tr> <td><i>Oligosoma moco</i></td> <td>Moko skink</td> <td>At Risk – Relict</td> <td></td> <td>✓</td> </tr> <tr> <td><i>Oligosoma smithi</i></td> <td>Shore skink</td> <td>At Risk – Naturally Uncommon</td> <td></td> <td></td> </tr> <tr> <td><i>Oligosoma aenuem</i></td> <td>Copper skink</td> <td>At Risk – Declining</td> <td>✓</td> <td>✓</td> </tr> <tr> <td><i>Leiopelma hochstetteri</i></td> <td>Hochstetter’s frog</td> <td>At Risk – Declining</td> <td></td> <td></td> </tr> <tr> <td rowspan="3" style="writing-mode: vertical-rl; transform: rotate(180deg);">Exotic</td> <td><i>Lampropholis delicata</i></td> <td>Plague skink</td> <td>Introduced & Naturalised</td> <td>✓</td> <td>✓</td> </tr> <tr> <td><i>Ranoidea aurea</i></td> <td>Green and golden bell frog</td> <td>Introduced & Naturalised</td> <td></td> <td>✓</td> </tr> <tr> <td><i>Ranoidea raniformis</i></td> <td>Southern bell frog</td> <td>Introduced & Naturalised</td> <td>✓</td> <td>✓</td> </tr> </tbody> </table>		Common name	Species name	NZ threat status	Reported within 5 km of the sites	Habitat potential within Projects	Indigenous	<i>Mokopirirakau granulatus</i>	Forest gecko	At Risk – Declining	✓	✓	<i>Nautinus elegans</i>	Elegant gecko	At Risk – Declining	✓	✓	<i>Dactylocnemis pacificus</i>	Pacific gecko	At Risk – Declining		✓	<i>Woodworthia</i> “Muriwai”	Muriwai gecko	Threatened- Critical			<i>Oligosoma ornatum</i>	Ornate skink	At Risk – Declining		✓	<i>Oligosoma moco</i>	Moko skink	At Risk – Relict		✓	<i>Oligosoma smithi</i>	Shore skink	At Risk – Naturally Uncommon			<i>Oligosoma aenuem</i>	Copper skink	At Risk – Declining	✓	✓	<i>Leiopelma hochstetteri</i>	Hochstetter’s frog	At Risk – Declining			Exotic	<i>Lampropholis delicata</i>	Plague skink	Introduced & Naturalised	✓	✓	<i>Ranoidea aurea</i>	Green and golden bell frog	Introduced & Naturalised		✓	<i>Ranoidea raniformis</i>	Southern bell frog	Introduced & Naturalised	✓	✓
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7.10	<p>Precinct Plan 2 shows proposed areas of bush to be protected by covenant. These areas include the areas of mixed native exotic vegetation and indigenous tree land vegetation identified as areas 2 and 3 on the plan. These areas are connected by proposed covenant bush area identified as a dark green colour on the plan. These large areas proposed to be covenanted fall outside of the provision on chapter E38 of the AUP. No provisions are proposed under the proposed plan change to enhance, restored, and protect these areas. Please provide an assessment/propose provision as to how these areas will be enhanced to achieve the outcomes as identified in the AUP. The applicant may choose to include relevant standards within the Precinct to ensure these outcomes are met.</p>	DH/JD	No changes are proposed.
	<p>Further identified areas of concern that are likely to be raised through the application review process but not included in this s23 assessment.</p>		
7.11	<p>The proposed plan change and provisions frequently references back to 'Precinct Plan 1, 2, 3&4' however it is considered that the provisions should instead reference natural features 'identified on precinct plan or otherwise existing'.</p>	DH/JD	No changes are proposed.

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7.12	The riparian planting provisions under IXXX9.2 of the plan change provisions are inconsistent with what has been approved under other plan changes and those under appendix 16 of the AUP. Including the exclusion of walking tracks from within riparian buffers, especially those that are only 10m wide.	DH/JD	The provisions reflect those used in the Warkworth Clayden Road Precinct.
7.13	The proposed standard under table IXXX.4.1 (A7) allows for public walkway within a riparian yard or esplanade reserve as a permitted activity. It is not considered that this standard is appropriate in such a broad capacity as it fails to take ecological values of specific natural features into account. Furthermore the standard is more permissive than the Unitary Plan and has not been accompanied by appropriate justification or assessment of ecological effects.	DH/JD	The Plan Change has been amended to make this an RD activity.
7.14	<p>A 4m riparian yard is proposed alongside watercourse 5 adjacent to the indicative location of the proposed local centre. It is not considered that this is acceptable in this instance for the following reasons:</p> <ul style="list-style-type: none"> a. A width of 4m lacks the ability to provide adequate riparian yard functions, including terrestrial benefits. b. This area of riparian yard is an important ecological link between and through the site, reducing its width reduces the buffer and connectivity to other areas of terrestrial vegetation, including SEA's. 	<p>Reset</p> <p>Bioresearches</p>	<p>In respect to the section of stream that runs along the southern boundary of Morrison Orchard, a minimum 4m wide riparian planting will be provided with footpath/cycleway located outside the riparian strip. Since Morrison Orchard sits immediately north of this section of the stream and interfaces the site with a densely planted shelter belt, the existing visual and physical connections through to the Morrison Orchard are limited and will remain to protect its rural character. The proposed riparian strip helps enhance the stream corridor and will provide effective buffer planting without creating further separation between the two precincts.</p> <p>(a) Although 10m riparian yards are a general standard for Auckland, the Auckland Council guidance document TP148 allows for narrower riparian yards</p>

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	<p>c. The plan changes provisions propose allowing walkways within riparian reserves as a permitted activity which would further significantly compromise the ecological integrity of this area.</p> <p>d. This watercourse would have originally linked further north with watercourse 13a by dissecting the orchard area to the north, this has been identified within the baseline ecology report. If full riparian yards cannot be achieved along watercourse 5, the applicant may like to consider modifying this stream to be located along its original drainage route therefore allowing for a full riparian yard and ecological corridor, however it is understood that this area is proposed to remain as an orchard and hence this may not be practical, whereas other solutions could be considered.</p>	<p>than the 10m 'general guideline'¹, and narrower yards provided for in rules are common elsewhere (e.g. GWRC). The primary reasoning for the wider yard is edge effects i.e. weed invasion from abutting pasture or vegetation (TP148). At this site, this is not the case as a formed cycleway/ footpath will be immediately adjacent to the yard. Other functions, such as shading, woody inputs, leaf litter will not be compromised by the narrower yard, particularly with the incised banks and tall trees on the opposite bank already providing for these functions.</p> <p>Functions such as filtration will not be compromised because the stormwater will be collected by roadside drains and be treated prior to discharge to the streams.</p> <p>(b) With the proposed 10m riparian yard either side of the other streams on site, connectivity through the site is assured. This straightened and highly modified stream has no direct connectivity upstream (broken by State Highway 1 and then connected to pasture) and downstream it will be provided by the riparian yards of Streams 2 and 12. There is no direct connection to SEAs with the closest SEA the riparian yard of the Mahurangi River, located over 700m to the west (or over 2km if the connection was through the riparian areas) and separated by the proposed development area.</p> <p>(c) With the proposed 10m riparian yard either side of the other streams on site, connectivity through the site is assured. This straightened and highly modified stream has no direct connectivity upstream (broken by State Highway 1 and then connected to pasture) and downstream it will be provided by the riparian yards of Streams 2 and 12. There is no direct connection to SEAs with the closest SEA the riparian yard of the Mahurangi River, located over 700m to the west (or over 2km if the connection was through the riparian areas) and separated by the proposed development area.</p>
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¹ TP 148 p.15, 2.3 Width of sustainable riparian zones, concluding statement: *In light of the above, a 10m minimum buffer width is therefore recommended as a general guideline for the purposes of this Strategy and Guideline, with narrower or wider options being considered appropriate as indicated by site constraints or opportunities.*

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			(d) The original route of the stream was through the adjacent northern property (Orchard). The option of re-establishing the historic flow path was explored in the early design stages, but the landowner has clearly stated that re-routing the stream through his property is not an option.
	The proposed Arterial Road is currently shown on the plans to dissect the covenanted natural wetland; however no assessment of alternatives has been provided to avoid this impact, or remedies to offset being proposed in the ecological report.	DH/JD	The wetland area referred to is not covenanted. The title for this site has been provided to Council. That area impacted by the proposed WWLR is not a natural wetland as outlined above.
7.16	Areas of wetlands and watercourses that have been identified as having low value. Without acknowledging their existence the precinct would seem permissive to their removal, and therefore contrary to National Policy and /or relevant National Environment Standards.	DH/JD	No response required.
7.17	It is considered that the northern areas of the site proposed to be rezoned Open Space – Conservation Zone could be better connected to provide higher ecological connectivity value.	DH/JD	No response required.

Development Engineering			
8.1	Please update the Maven report to refer to the correct opening date of the Puhoi to Warkworth motorway.	DH/JD	The exact date of the opening of the Puhoi to Warkworth Motorway has not been confirmed by NZTA but it is understood it will be around June 2023.
8.2	It is proposed to provide the necessary pipe infrastructure to the various pumpstations (Falls Rd, McKinny Rd) and the documentation refers to pump stations as far as pump station 2. Please check and confirm this is the case and	Maven	The infrastructural report has been updated to reflect the timing of this network to be completed by Watercare.

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	verify along with estimated date for the completion of the Watercare Services limited rising man from Warkworth to Snells Beach, (Lucy Moore Park to Hamilton Road treatment facility). The current projection is 2025 (and we have requested information from WSL on this at the time of writing) the Maven report states 2024.		
8.3	Please confirm that there has been input from WSL on the infrastructure that may be required to implement a water supply for the Plan Change area.	Maven	On-going consultation has been carrying out regularly with Watercare representative regarding which infrastructure required for this Plan change.
8.4	Please provide an update on progress with Chorus and Vector on achieving the necessary power and telecommunication infrastructure to serve the Plan Change area.	Maven	On-going consultation has been carrying out with Chorus and Vector regarding extension of existing network extension to services this plan change.

Key:

DH/JD – David Hay/John Duthie (Planning Consultants for the Applicants)

SH – Shane Hartley (Planning Consultant for Morrison Heritage Orchard)

Reset – Reset Urban Design

Maven – Maven Engineers

TPC - Traffic Planning Consultants.