520 Great South Road Cl 23 Summary

Contents

Note: No further information has been requested by:

- Sarah Lindsay, Auckland Design Office

#	Category of information	Specific Request	Reasons for request	Applicant response	AC comments	Status	Applicant response
Planning, statutory and general matters – Sanjay Bangs, Plans & Places							
P1	Section 32 assessment	Please expand on the section 32 analysis contained in Section 9.0 of the Section 32 Assessment to outline the costs and benefits of the identified options at a finer grain level.	The section 32 analysis provided does not contain a sufficient depth of information to understand why the proposed rezoning is the most appropriate option. As per section 32(1)(c) RMA, such an assessment should contain a level of detail that corresponds to the scale and significance of effects anticipated. Section 32(2) requires an assessment of the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions. Further explanation is required to understand the benefits and costs of each option in relation to the anticipated effects of the rezoning, particularly in relation to transport, stormwater/flooding and urban design.	Refer to additional section 32 analysis within Section 9.0 of the Section 32 Assessment Report.	Information accepted.	**Request satisfied.**	**N/A.**
P2	Consultation	Please expand on the consultation undertaken with iwi groups outlined in	Further clarification is required to understand the nature of the consultation undertaken, in terms of	Refer to Section 6.3 of the Section 32 Assessment Report.	Information accepted.	**Request satisfied.**	**N/A.**

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		Section 6.3 of the Section 32 Assessment report, including the timeframes, scope of engagement and documents provided to iwi groups (including all iwi groups with an interest in the land).	timeframes, scope and documents supplied to mana whenua in Section 6.3 of the Section 32 Assessment report. This should include all iwi groups with a potential interest in the land, as outlined the Auckland Council's mana whenua contacts facility: https://www.aucklandcouncil.govt.nz/building-and-consents/understanding-building-consents-process/prepare-application/prepare-resource-consent-application/Pages/find-hapu-iwi-contacts-for-your-area.aspx				
P3	Urban design	Please comment on the quality of access from the site to convenience retail, commercial services and community facilities.	The Section 32 Assessment and Urban Design Assessment do not comment on the proximity/access from the site to daily convenience retail, commercial services and community access, and the resultant effect on travel patterns and amenity for future residents. Comment is sought on access from the site to these amenities, both in the short term and once the surrounding Drury-Opaheke Structure Plan area has been urbanised and built-out.	The closest shop to the Plan Change area is located on 530 Great South Road approximately 150m to the south of the Plan Change area. This shop sells fruit and vegetables. From the Plan Change area it is 1.5km to the Drury village. There are continuous footpaths on the western side of Great South Road that extend between the Plan Change area and Drury Village. The topography is relatively flat so therefore it is a gentle and manageable walk. The Drury Village has all the required day to day needs There is a foodmarket, butcher, bakery, hairdresser, beauty salon, real estate agent, petrol station and car workshop to name a few of the businesses located at Drury Village. Papakura is located 3km north of the Plan Change area. Whilst Papakura is located further away there are footpaths that extend between the Plan Change area and the Centre and the topography is relatively flat. Papakura is a larger centre with a wide range of retail, commercial, civic and other amenities. Both centres can also be accessed via established public transport. The primary mode of public transport serving the site is the 376 bus route with two sets of bus	Information accepted.	**Request satisfied.**	**N/A.**

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				stops located within 400m on Great South Road. The 376 is a local service that runs between Drury and Papakura running at half hourly frequencies at peak times, down to hourly outside of the peaks. The Drury Central Train Station is due to be complete in 2024 and it is anticipated that bus services along Great South Road will increase to become a Frequent Transport Network. This is indicated in the Supporting Growth Alliance's preferred network for the South: https://www.supportinggrowth.govt.nz/assets/2019-Launch-Website/c1c1831b2e/Indicative-Network-2019-Maps-South.pdf. To support this, as part of their resource consent application, the Plan Change Applicant is proposing a 5m setback from Great South Road to enable any necessary future road widening. Discussions with Auckland Transport on this matter are on-going as part of the resource consent process			
P4	Future Urban Land Supply Strategy (**FULSS**)	Please expand on the assessment of the PPC against the FULSS in Section 6.2.2 of the Section 32 Assessment report to consider the matters set out in Appendix 1 and 2 of the FULSS,	Appendix 1 of the FULSS outlines the high level reasoning underpinning the staging and sequencing set out in the FULSS. Appendix 2 identifies the specific considerations for each geographic location within Future Urban areas. Further assessment against these specific considerations is sought to better understand how the PPC aligns with the FULSS and the Auckland Plan 2050.	Refer to Appendix 10 to the Section 32 Assessment Report.	Explanation appreciated	**Request satisfied.**	**N/A.**
P5	Please expand on the RPS Assessment provided as Appendix 4 to the request to clarify how	Further clarification is sought in relation to the following RPS provisions: • B2.2.2(5) and B2.4.2(2) which seeks to enable residential intensification close to centres, public	Please expand on the RPS Assessment provided as Appendix 4 to the request to clarify how the PPC is consistent with the identified RPS matters.	Refer to Appendix 4 of the Section 32 Assessment Report.	Information accepted.	**Request satisfied.**	**N/A.**

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	the PPC is consistent with the identified RPS matters.	transport, social facilities and employment opportunities; • B2.3.2 in relation to achieving the built form outcomes sought, particularly whether any precinct provisions are required to achieve these outcomes (also expressed in B2.4.2(8) relating to whether place-based planning tools are appropriate); • B7.3 in terms of whether a Stormwater Management Area – Flow Control is necessary to achieve hydrological mitigations outlined in the Stormwater Assessment (**refer to Item HW4**).					
Traffic matters – Mat Collins, Flow Transport Specialists Ltd							
T1	Access visibility	Please provide further information on measures that could be put in place to address restricted visibility. The assessment should also address the additional volume of traffic likely to use the new road as an alternative.	The Transport Assessment (**TA**) states that visibility from Gatland Road/Great South Road intersection towards the south is restricted but concludes that increased use of this intersection will have minimal effect on the safety. An increase in traffic movements through this intersection will increase the likelihood of a crash occurring and, with a speed limit of 70 km/hr on Great South Road, the consequences of any crash are likely to be serious. Measures to eliminate the visibility shortfall, such as speed treatments, removal of sightline obstructions such as vegetation which sits within the road reserve should be considered.	I agree the recommended measures, namely reduced speed limits and removal of vegetation to improve sight lines can address safety at the intersection. However, I considered that the removal of the vegetation will be enough to address given the likely flows added to the intersection will be minor. Both these measures are outside of the control of the applicant and are the responsibility of the road controlling authority, Auckland Transport. We understand the applicant is happy to work with Auckland Transport on the removal of the vegetation. Furthermore, I understand that Auckland Transport is reducing the current speed limit from	We accept the applicant's response and acknowledge that Auckland Transport approval for vegetation removal would be required. We suggest that a consent notice is placed on 21 Gatland Road and 520 Great South Road that prohibits vehicle access from the site to Gatland Road until adequate safe sight distances are achieved at the Great South	Consent notice (or similar mechanism) recommended.	The visibility issues at the Gatland Road/Great South Road intersection currently exist and can be remediated through undertaking tree trimming along Great South Road. Trimming trees to maintain vehicle sightlines is the responsibility of Auckland Transport as the road controlling authority and ultimately falls outside of the plan change or resource consent process. Regardless the applicant is working on resolving this issue with Auckland Transport through the resource consent process. Consequently we do not agree that another legal mechanism to address this issue is required.

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				70km/h to 50km/h which will take effect in June 2020. With regards to an assessment of additional traffic using the new road, we understand Council's Traffic Engineer is referring to the new road through 520 Great South Road that will connect with Great South Road. If connected through to Gatland Road, there is the potential of traffic generated from other land use on Gatland Road to use the new road. Traffic modelling results provided in our traffic assessment show that there is spare capacity within intersection once the plan change area is fully developed. All movements at the intersection are operating at a Level of Service (LOS) "A" except for the right turn movement from the new road during the AM and PM periods which is operating at a LOS C. Any additional vehicle movements using the intersection and not relating to 520 Great South Road are only expected to do so if their destination or origin is towards the south. Otherwise using Gatland Road, would continue to be the preferred route. This will add turning movements for the left turn from and the right turn into the new road. The modelling indicates that both these movements would operate well under capacity and additional movements would not have an adverse effect on the intersection performance.	Road/Gatland Road intersection.		
T2	Pedestrian network	Please confirm how pedestrian connectivity between the existing network and the development site will be provided.	Drury School is located approximately 1km south of the subject site (about a 13-minute walk) and is considered a reasonable walking distance. The Drury School website also indicates that the Site is within their walking school bus route. Both Rosehill College and Rosehill Intermediate are located to the	We anticipate that any future development of the plan change area will include new roads with a pedestrian network that will connect to Great South Road and a new footpath along Great South Road for the extent of the site frontage will be provided. This is proposed as part of a resource consent application that is now lodged	We accept that the footpath connections are proposed as part of the resource consent application. We suggest that a consent notice is placed on 520 and 522 Great South Road that a	Consent notice (or similar mechanism) recommended	A pedestrian network that will connect to Great South Road is proposed as part of the concurrent resource consent application which is currently being processed by the Council. If this consent isn't progressed, any future subdivision consent will need to show consistency with Policy E38.2(10) which requires subdivision to provide a street and block network which support a connected neighbourhood and pedestrian safety. As a

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			north of the site, on the opposite side of Great South Road. Further, there are existing bus stops on either side of Great South Road. Pedestrian demand can be expected to be generated, however the PPC does not confirm how this will be provided for. Can commentary please be provided on the existing pedestrian network, including any improvements considered necessary to ensure safe connections exist for those generated by the PPC.	with Council for the development of 520 Great South Road. Any footpath connection to the south can be provided on the east side of Great South Road where a footpath exists 80 metres south of site. Pedestrians are currently using the unsealed shoulder along this side of the road and as development occurs a more formal footpath can be provided. A footpath connection to the north is available on the west side of Great South Road and we anticipate a pedestrian crossing facility being established immediately north of the new intersection with Great South Road as the site is developed, and this is proposed in the resource consent application for 520 Great South Road. This will also provide a connection to the bus stops either side of Great South Road.	pedestrian connection to the existing footpath on Great South Road is to be provided before any subdivision or development.		result we are of the view that the need to provide pedestrian connections through to Great South Road is sufficiently covered by the E38 provisions and the lodged subdivision consent application. Therefore we do not agree that another legal mechanism is required to ensure that this connection is put in pace.
T3	Great South Road improvements	Please confirm the how mitigation measures for Great South Road will be delivered – relating to both Great South Road/Gatland Road sightline improvements and the new intersection.	Section 8.3 of the Section 32 report states that "*TPC also assume that widening of Great South Road outside of the Plan Change area will occur to provide for a dedicated right turn pocket into the Plan Change area. The detailed design and location of this would be determined through a future resource consent process under E27 Transport. We note that this approach for assessment was accepted by Council and Auckland Transport as part of Plan Change 8 to the AUP (Kings College).*" The mitigation measures suggested by the applicant seem acceptable, however it is unclear how the delivery of the measures are secured through a future resource consent(s). It could be that once zoned, access relies on Gatland Road only, and the new access is not delivered. Council could then be faced with a situation where individual	An application is about to be lodged for the development of 520 Great South Road that is consistent with the proposed private plan change. A new intersection with Great South Road, a right turn pocket and a pedestrian crossing facility are proposed. An indicative layout of these features is included in Figure 1 below. Final details of the design will need to be addressed with Auckland Transport however this should provide enough confidence that these mitigations can be accommodated and are proposed as part of development on the site. With regards to the Great South Road / Gatland Road intersection. The mitigation measures have been discussed in response to T1.	Noted, refer to our response to Comment 1 and 2.	Consent notice (or similar mechanism) recommended	As previously highlighted a new intersection with Great South Road, a right turn pocket and a pedestrian crossing facility are proposed as part of the current resource consent application which is currently being processed by the Council. If this consent isn't progressed, any future subdivision consent will need to consider the effects from any significant increase in traffic volumes on the existing road network (E38.12.2(7)(g)). Furthermore, as noted above Great South Road is an arterial road and under E27.41(A6) restricted discretionary consent is required to construct a new vehicle crossing. One of the matters for discretion is the effect on the traffic network E27.8.2(10)(a). Therefore we are of the view that the need to design appropriate vehicle access to the site is sufficiently covered by the E27/E38 provisions and the lodged subdivision consent application, and we do not agree that another legal mechanism is required to ensure that this connection is put in pace.

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T4	Great South Road improvements	Please confirm if the proposed road widening on Great South Road, including compliant berm formation, can be accommodated within the current road boundary and what setbacks are proposed to accommodate the required infrastructure, noting that the road reserve width adjacent to the site narrows relative to the upstream and downstream width.	consents are sought, each of which are considered permitted, that cumulatively trigger the need for mitigation identified within the TA but cannot be required under the Auckland-wide rules of the AUP (i.e. if E27.6.1. Trip Generation is not triggered). This is particularly relevant for those measures that are not immediately adjacent to the property boundary. The delivery of the mitigation anticipated in the ITA, particularly that not adjacent to the development needs to be secured through a sound framework which ensures a safe and efficient outcome for all users, Auckland Transport and Auckland Council. At this time, a risk exists in relation to the best outcome when considering the effects of the PPC and how identified effects are mitigated.	Although not clear in Figure 1. It is anticipated that a portion of the existing private land will be required to accommodate the road widening, right turn pocket and a suitable berm width. The final details of the road widening will be subject to discussions with Auckland Transport at the time of subdivision of 520 Great South Road and the new vested roads within the PPC area. As part of the resource consent application for 520 Great South Road, a 5.0 metre setback is proposed. Figure 1 also illustrates a setback of 5.0 metres from the existing road boundary to accommodate any future widening of Great South Road. This is consistent with boundary setbacks immediately north of the site.	*We note that the resource consent application includes widening.* *We suggest that a consent notice is placed on 520 and 522 Great South Road that a right-turn bay (and associated road widening) is to be provided before any subdivision or development.*	Consent notice (or similar mechanism) recommended	As previously the widening of Great South Road is being discussed as part of the current resource consent application which is currently being processed by the Council. If this consent isn't progressed, any future subdivision consent will need to consider the effects from any significant increase in traffic volumes on the existing road network (E38.12.2(7)(g)). Furthermore Great South Road is an arterial road and under E27.41(A6) restricted discretionary consent is required where there is a change of activity or intensification of existing activity on site. One of the matters for discretion is effect on the traffic network. Therefore we are of the view that the need to consider building setbacks to enable future widening of Great South Road is sufficiently covered by the E27/E38 provisions and the lodged subdivision consent application, and we do not agree that another legal mechanism is required to ensure that this connection is put in pace.
T5	Traffic generation	Please clarify the distribution of the predicted traffic volumes at both Gatland Road and the new road intersections.	Section 3.3 in the TA states that *"The new flows have been distributed at the intersections in the same proportions as the existing turning movements recorded at the Great South Road/Gatland Road intersection."* However, different turning volumes are calculated in some of the scenarios. For example, Figure 9 in the TA assumes a 50/50 in/out split at the new road during the midday period, but the same proportion split has not been applied at Gatland Road intersection. Although they could be minor differences, clarification of the assumed split from the applicant is requested.	I have reviewed traffic flow diagrams provided in Section 3.3 of the report and can confirm there are some splits of turning movements at the new intersection that are not proportionate to those measured at the Gatland Road intersection. These occur in the midday and the PM periods only and relate to turning movements into the new road. If they were corrected, it would result in the right turning movements into the new road reducing and the left turn movements increasing. The changes in flows would be 5 vph and 10 vph, respectively. This change in flows is unlikely to have any material effect on the traffic modelling results and in fact will show a slightly better performance than reported.	Noted, we agree that the differences will have minor effects on the conclusions.	**Request satisfied.**	**N/A.**

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T6	Future Road Connection	Please comment on how the PPC aligns with AUP objectives for urban growth and urban subdivision in relation to the future extension of the public road network to the FUZ land to the south.	In order to ensure connectivity between potential future urban areas, the transport network within the PPC should allow for future extension. Connectivity of the transport network reduces the reliance on private vehicle transport, increases accessibility, permeability and increases resilience. Connectivity is supported by the following AUP policies and objectives • Policy B2.3.2(1) • Policy B3.3.2(2) • Policy E38.3(10) • Objective B3.3.1.(1)	As per T3 above, this is best illustrated by providing the information in the proposed subdivision application for 520 Great South Road. The proposed road layout includes a new road that will extend towards the south and connect with the paper road along the southern boundary of the PPC area. This connection will provide the ability for future extensions into the FUZ land to the south.	We're satisfied that the resource consent application includes a road connection to the FUZ land to the south.	**Request satisfied.**	**N/A.**
Development engineering matters – Arun Niravath, Regulatory Engineering South							
Advice notes (non-Clause 23)							
DE1	Wastewater capacity	Veolia Water have been consulted; Veolia Water have advised below- *"At present, there is insufficient capacity to service the proposed development. Upgrades to the downstream gravity wastewater network as well as pump station and storage will be required. Water network upgrades may also be required*." As cited above, there is not enough capacity in the wastewater network to service the proposed area and there may be some upgrades required in the water supply reticulation. At the future subdivision or land use stage, in consultation with Veolia Water, necessary network upgrades shall be carried out to the infrastructure network.		Maven Engineering Consultants are providing engineering advice as part of the resource consent application currently being prepared to redevelop the site. Maven advise that a pump station can be provided on-site that would not pump during peak times either from the current existing catchment or from the proposed development. This on-site solution will take pressure off the existing downstream pump stations during peak times. This solution is currently being discussed with Veolia.	Information accepted.	**Accepted.**	**N/A.**
Stormwater and flooding matters – Danny Curtis, Healthy Waters							
HW1	Stormwater Management Plan (SMP)	Pleas provide a Stormwater Management Plan to support the plan change. <u>Note:</u> It is recommended that a meeting between the applicant and Healthy	The plan change land is in the Future Urban zone and seeks to apply live zonings. An assessment of effects and proposed mitigations should be included in a SMP as part of the AEE and Section 32 Assessment to demonstrate how the Regional Policy	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**

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		Waters be arranged to discuss the requirements of the SMP.	Statement and regional plan provisions in Chapter E1 will be met, in particular policies E.1.3(3), E1.3(8) and E1.3(10). The SMP should: • address the Drury-Opaheke SMP and also discuss downstream effects; and • assessment why the proposed stormwater treatment and flood mitigation is the Best Practicable Option.				
HW2	Network Discharge Consent (NDC)	Please confirm whether it is intended that the plan change come under the Council's Global NDC for stormwater discharges.	It is unclear from the plan change documents whether it is intended for the stormwater discharges from the site to come under the Council's global NDC. This should be clearly identified in the SMP. The Stormwater Assessment supplied does not constitute a SMP in accordance with the Council's NDC. A clear statement on the methods that are intended to be used to meet Schedule 4 NDC performance requirements is needed in the SMP and these should be tied to the proposed land use. It is recommended that a meeting between the applicant and Healthy Waters be arranged to discuss what is required to come under the NDC.	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**
HW3	Precinct	Please explain why precinct provisions have not been proposed to achieve the outcomes of the proposed stormwater management approach.	Section 8 of the stormwater assessment identifies options, including use of inert building materials, green outfalls, and quality treatment of all roads. These are not currently requirements of the AUP and therefore would may not be implemented without precinct provisions.	Section 8 of the stormwater assessment identifies options, including use of inert building materials, green outfalls, and quality treatment of all roads. These are not currently requirements of the AUP and therefore would may not be implemented without precinct provisions. Further discussions regarding appropriate precinct provisions will be required once an SMP is provided.	No information has been provided demonstrating suitable precinct provisions that would implement the stormwater management approach recommended by the SMP. Nor does there appear to by any explanation provided as to why they are not required.	Please clarify how the SMP will be addressed by the proposed AUP(OP), and whether precinct	The Plan Change proposes to utilise the underlying Auckland-wide provisions to manage stormwater. In particular to prove compliance with E8 & E9 resource consent applications must show how the adopted SMP requirements are met to confirm that stormwater discharge is "authorised" under the Network Discharge Consent (NDC). The SMP that has been prepared to support the Plan Change is intended to be adopted under the Council's Network Discharge

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			Further discussions regarding appropriate precinct provisions will be required once an SMP is provided.		Healthy Waters appreciates that subdivision consents are lodged with the Council for the majority of this plan change area (although not all), but appropriate matters of discretion under the AUP are necessary to enable suitable conditions to be imposed. Healthy Waters seeks the opportunity to discuss appropriate precinct provisions to ensure that potential adverse effects on stream health are adequately mitigated.	provisions are required. We are happy to meet to discuss this further.	Consent as part of the concurrent resource consent application. Duplicating provisions within the precinct can cause interpretation issues later down the track when technical documents such as the SMP are updated. This can result in applicants being put through a consent due to noncompliance with precinct provisions even though they are consistent with an SMP adopted under the NDC.
HW4	SMAF Control	Please confirm whether SMAF Control is to apply to the site..	The stormwater assessment appears to require hydrological mitigation but it is unclear whether the plan change proposes to apply the SMAF Control to the site. Further assessment of the erosion risks should be undertaken to understand whether the SMAF Control will adequately mitigate potential effects. Additional mitigation may be required. The SMP should identify whether this is the best practicable option. Advice note (non-Clause 23): If hydrological mitigation is proposed then it is recommended that the SMAF Control be applied to the land through this PPC.	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**
HW5	Stormwater Modelling	Please provide further information is on the modelling to be included within the SMP including: • more description on the modelling	Modelling information is required to understand the effects of the plan change in terms of increased stormwater runoff, peak flows and also effects on the flood plain both upstream and downstream.	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**

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		undertaken to support the development, in particular where there are discrepancies between the Council model and the TP108 graphical assessment. • demonstrate that the Council Rapid Model is suitable for undertaking the assessment of impacts from a specific site. • confirmation that T+T have not amended the HW model as part of this work. • provide clarification of the MPD imperviousness used for the rural areas. • clarify why the model	It appears that the HW model has been used to assess flows within the watercourse through 520 Great South Road and TP108 graphical has been used to assess the local discharge from 520 Great South Road. However, there does not appear to be any commentary around how the development would impact the catchment flows. Even if this is negligible then this should still be worked through. Section 5.2 states that '*…rural areas increases by 20% compared to the ED scenario*…' Is this correct, or has the rural imperviousness increased to 20%? This clarification is required to confirm the model that is being used and the accuracy of flow volumes assumed through the site.				
HW6	New asset ownership	Please provide discussion on the future ownership of the proposed stormwater devices.	It is unclear whether the proposed stormwater management approach will result public assets to be vested in Healthy Waters, or whether they would remain private assets The vesting of stormwater devices in Healthy Waters has implications for the design of these assets and future maintenance costs for Council.	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**
HW7	Proposed stormwater management	Please clarify the proposed stormwater management principles that have been adopted, and explain what	It is unclear what the actual principles for this development are. Greater discussion needs to be provided in relation to what could be considered	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**

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		stormwater management is considered to be the Best Practicable Option.	and why the proposed stormwater management is considered to be the Best Practicable Option. Swales are mentioned as being possible (Section 8.1 and 8.2); however, it is then proposed to convey runoff in a new pipe network (Section 8.3).				
HW8	SMP	Please provide a location plan of the plan change area to demonstrate how it fits in with the local Slippery Creek catchment.	Section 2.1 of the Stormwater Assessment discusses the catchment. However, it does not consider the site location in the context of the wider catchment. The site is located upstream of a very large floodplain associated with flows from the urban Papakura catchment. It is important to understand the effects of the plan change on the wider catchment.	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**
HW9	SMP	Please address the impact of the embankment approximately 60m upstream of the south eastern property boundary.	It is unclear from Section 2.4 of the Stormwater Assessment what the impact of the identified embankment would have on the environment. Does it create ponding water above the embankment, or does it impact the floodplain? This issue needs to be identified in order to determine the extent of effects and potential mitigation required.	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**
HW10	SMP	Please include further discussion about the receiving environment identified as a Significant Ecological Area (SEA) and implications to stormwater management because it is identified as a SEA.	Section 2.5 of the Stormwater Assessment discusses the receiving environment but does not identify the importance of it as a Significant Ecological Area. This is a relevant consideration in terms of effects on the environment and in determining the Best Practicable Option for stormwater management, particularly quality.	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**

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HW11	SMP	Please clarify the extent of impervious coverage anticipated by the plan change.	Section 3 of the Stormwater Assessment identifies that the impervious coverage will increase, with greater runoff volumes and higher flows. However, the document is confusing with regard to what area it actually covers. This needs to be clarified.		Information accepted.	**Request satisfied.**	**N/A.**
HW12	SMP	Clarify that Table 5.2 identifies 100 year ARI peak flow levels rather than flood levels.	Table 5.2 indicates flood levels but they are not necessarily flood levels. This appears to be an error.	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**
HW13	SMP	Confirm whether the 24hour rainfall depth was used for the TP108 graphical assessment.	Section 6.2.1 discusses the assumption for runoff. Although HW assumes that the 24hr rainfall depths was used this is not explicitly identified in the document.	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**
HW14	Flooding	Clarify how it is proposed to manage discharges from each sub-catchment when flows will be passed forward into a floodplain.	Discharges to the south currently enter a floodplain area across 530 GSR. Will unattenuated flows increase the extent, depth or frequency of this flooding? Will it be affected by the Slippery Creek Catchment. Further information is required to determine the proposal not to require attenuation is the Best Practicable Option.	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**
HW15	Flooding	Confirm how Subcatchment B will work in relation to passing forward flows. This would need to rely on overland flow paths because there no pipe network	Section 6.1.3 discusses the proposal to pass forward flows without attenuation. Depending on what development area you consider, No. 522 GSR could be significantly affected with flows passed to the property every time there is rainfall. Insufficient information is provided to understand the downstream effects of passing flows forward without attenuation.	As per Appendix 1 of SMP provided,	Information accepted.	**Request satisfied.**	**N/A.**
Geotechnical matters – Shane Lander, Lander Geotechnical Consultants Ltd							

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G1	Land modifications	Please assess the geotechnical constraints that may arise within the watercourse in the eastern corner of the site, and provide recommendations on further site investigations required.	Historic aerial photos infer fills or land modifications may have occurred within the watercourse in the eastern corner of the site. It is recommended that ENGEO re-affirm their interpretation of land modifications on the site. Depending on the outcome, please clarify (in terms of Section 6.3.4) that if filling is likely to be present in the watercourse, whether there are any perceived geotechnical constraints or concerns. If there are concerns, ENGEO should also make recommendations on what (if any) site investigations will be required to address this (for example, during a Resource Consent phase).	The Plan Change is seeking to rezone the site to 'Mixed Housing Urban'. Future development will be assessed through the resource consent process. However, we understand that housing lots are proposed within the low lying portion of the site adjacent to the northern boundary (outside of the stream alignment). The Maven Consultants earthworks plan set provided to us – reference 135014 dated 06/03/2020 indicates that fills of up to 3.5 m in height are proposed within the lots adjacent to the watercourse. The retaining wall proposed along the northern extent of the lots in the area adjacent to the watercourse will need to be designed by a chartered professional engineer and this wall design should include consideration of the global stability of the wall. Given the extent of the development proposed, it is expected that further geotechnical investigation and laboratory soils testing will be required along the alignment of the retaining wall and within this fill area. This work is required to determine the nature (strength and composition), of the underlying soils and to determine their susceptibility to settlement under the fill loads proposed. As a result of this further investigation, it may be that settlement monitoring will be required for these fills. This will be addressed as part of the Resource Consent process. Monitoring is used to determine when the underlying soils have consolidated to an acceptable degree - such that any remaining settlement does pose a risk of unacceptable total or differential settlement to future dwellings. The nature and location of detailed geotechnical site investigations required will be determined through the resource	It is understood that details relating to proposed earthworks and future development of the land have occurred recently and a resource consent application is lodged with Council and currently in progress. We have not sighted the "Maven Consultants" earthworks plan cited in the ENGEO response to illustrate things, however, the constraints ENGEO consider necessary to address in this area as part of the (current) resource consent process relate to global stability and fill induced consolidation settlement of lots adjacent to the watercourse, and to future retaining wall designs where applicable. They have suggested future investigations would comprise further boreholes and CPT testing. We concur with their identification of perceived geotechnical risks here and that the geotechnical scope of work for Resource Consent should be aimed to address these.	**Request satisfied.**	**N/A.**

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				consent process. This is likely to include further boreholes within the north-eastern portion of the site and CPT investigations across the site.			
G2	Watercourse	Please provide comment on perceived geotechnical constraints if the low lying watercourse area was to be filled, and clarify what further site investigations will likely be required to assess these (for example, during a Resource Consent phase). This should also consider the point raised in G1 above	No investigations have been undertaken in the invert of the low-lying shallow watercourse feature (as per Section 5.1 of the ENGEO report). As stated in Section 3 of the ENGEO report, it is "…proposed to ease the steeper contours and fill the lower lying areas…". Further clarification is sought on the perceived geotechnical constraints in this area and further site investigations required at the resource consents stage.	The Maven Consultants plan set provided shows that the watercourse along the northern boundary is to be left in place and that development will be limited to a zone set back from the stream as shown on the earthworks plan set. Filling is limited to outside of the watercourse area as shown on the plans and will be retained by a specifically designed retaining wall. Likely investigations and design considerations for this proposal will be considered through the Resource Consent process and are outlined in our response to query G1.	G2 Response Review: As for G1, we have not sighted the "Maven Consultants" earthworks plan cited to illustrate the ENGEO response. However, it is understood that the water course itself will remain in place, leaving the issues described in ENGEO's response for G1 to be addressed during the Resource Consent process. We concur with this.	**Request satisfied.**	**N/A.**
G3	21 Gatland Road	Please clarify the nature of future site investigations for 21 Gatland Road.	Number 21 Gatland Road is included in the plan change submission, but this block of land has not been investigated as part of the ENGEO geotechnical report, however future investigations are recommended here.	We have just recently (following submission of our report), been provided with a previously completed geotechnical investigation report for the property at 21 Gatland Road. This report was completed by Riley Consultants Limited in December 2018 (reference 180432-B), in support of a previous application for Resource Consent for that site. As such, we consider that the investigation records and conclusions of that report are relevant to this plan change application and that no further geotechnical investigation works are required within the site at 21 Gatland Road to support this plan change application. Further investigations regarding deep soil conditions may be required for resource consent, though the Maven Consultants plan set provided does not include the 21 Gatland Road site, so this will need to be	It appears there is an existing investigation covering the area encompassed by 21 Gatland Road, which has come to light since plan change report was prepared. ENGEO consider the investigations records and conclusions of that report are relevant to the plan change application.. We have not sighted the "Riley Consultants Limited" report cited to substantiate the ENGEO response on this matter, and do not know what these conclusions are or what investigations were undertaken.	**Request not yet satisfied.**	Please find report completed by Riley Consultants attached.

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				determined once development plans are available for this area.	**It is recommended ENGEO provide this report, or elaborate on the data and conclusions therein, as supporting information to inform the Plan Change, thereby confirming their (ENGEO's) response here before it can be closed out.**		
G4	Seismicity	Please provide comment on likely seismic site class and also the proximity of the site to any active faults.	The liquefaction potential reported in Section6.5 of the ENGEO report is low based on the regional setting and hand auger borehole findings. In addition, NZS1170.5 seismic site class and seismicity have not been commented on in the ENGEO report. Further comment is sought on likely seismic site class (e.g. based on their regional knowledge) and also the proximity of the site to any active faults. Also, please clarify whether more detailed liquefaction analyses of a deeper soil profile will be a necessary requirement for further assessment (e.g. during a Resource Consent stage).	ENGEO proposes to address this query within a 'Supplementary GIR' for the overall site including 21 Gatland Road. Seismic site class determination and location of the nearest fault(s) will be addressed as part of the Resource Consent process.	ENGEO propose to undertake the necessary work to address these matters as part of a supplementary study for the purposes of a Resource Consent process. We understand from Section 1 of the ENGEO response letter that a Resource Consent application has already been lodged with Council, but we are unsure whether ENGEO's proposed investigations to support the resource consent have accompanied this application. ***The proximity to active faults has not been responded to for the Plan Change, and it is recommended this assessment is made to inform the Plan Change as it should simply involve a desktop review of the GNS active faults database. Regarding the matters***	**Requests not yet satisfied – please provide analysis of proximity to active faults.**	Please refer to the attached email from Engeo. The GNS New Zealand Active Fault Database indicates that there are no known active faults on site. The nearest active fault is the Wairoa North Fault located approximately 13.2 km west of the site. The Wairoa North Fault dips west and is a normal (extensional) type fault. Nearby inactive faults include the Glenbrooke and the Waiau Faults, located within 1 km of the site.
G5	Liquefaction	Please clarify whether more detailed liquefaction analyses of a deeper soil profile will be a necessary requirement for further assessment (e.g. during a Resource Consent stage).		Yes, a detailed liquefaction study that considers the deeper soil profile will be required. ENGEO proposes to address this query within a Supplementary GIR, to be undertaken as part of the Resource Consenting process.			

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					of seismic site class and liquefaction potential, we concur with ENGEO's response and it is recommended that Council ensure this is adequately addressed in the Resource Consent geotechnical reporting.		