

18 February 2022

Natasha Rivai  
Planning Manager – Auckland  
The Property Group  
PO Box 104, Shortland Street,  
Auckland 1140

Dear Natasha

**Private plan change application change at 41 – 43 Brigham Creek Road, Whenuapai – further information request (without prejudice)**

Auckland Council has now completed an initial review of the application and its documentation with the assistance of its various experts and requests the following further information pursuant to clause 23 of the First Schedule to the Resource Management Act 1991 (RMA). The request has been put together as a compilation of parts, including attaching the requests as received from experts, and therefore some specific requests may appear to be repeated. The information requested is indicated at the numbered points below and is needed for all the reasons set out in clause 23.

The following further information is needed in order to have a clearer understanding under section 23(1)(a) – (d) of the RMA.

Planning - S32 Analysis

1. Section 22 of the Resource Management Act 1991 (the RMA) states:

*(1) A request made under clause 21 shall be made to the appropriate local authority in writing and shall explain the purpose of, and reasons for, the proposed plan or change to a policy statement or plan and contain an evaluation report prepared in accordance with section 32 for the proposed plan or change. [Emphasis added]*

**Information request:** Can you please include a section in the Plan Change Request that explains the purpose of, and the reasons for the plan change.

2. Section 32(6) of the RMA sets out the meaning of 'objective', 'proposal' and 'provisions. It is useful to outline what this means regarding the Plan Change Request. As currently drafted, the Plan Change Request does not state the purpose of the change or what the objective is of the Plan Change Request. The current request compares the current AUP objectives to meeting the current AUP objectives, and states that this meets the purpose of the RMA.

This is incorrect, and a purpose or a plan change objective is needed as per the S32(6). The justification using provisions is needed to meet the objective of the plan change.

**Information request:** Can you please provide an analysis against S32(6) of the RMA. I am happy to provide examples of where this has been completed in operative plan change requests. If you do not wish to provide this analysis, please explain why.

3. The Plan Change Request provides an analysis of the operative AUP (OP) provisions against the purpose of the RMA. The AUP (OP) currently meets the purpose of the RMA, as it has been through a statutory process that confirmed that. Therefore this assessment is unnecessary.

**Information request:** Please correct this assessment, if not, why not?

4. Section 3 of Appendix 3 of the Plan Change Request is the options analysis against the Objectives. Sub-sections '3.2 Evaluation of Objectives' and '3.3 Objectives Conclusions' from my understanding are the evaluation against s32(1)(a) of the RMA. It is useful to include headings throughout the evaluation to clearly identify which assessment meets which part(s) of s32 of the RMA.

**Information request:** Can you please clearly identify in text, or in sub-headings to set out which parts of s32 of the RMA are being met.

5. Section 4 of Appendix 3, 'Assessment of options – zoning' suggests that the choice of Mixed Housing Urban is the preferred option. Other sections of the evaluation report it is stated that SMAF-1 will be applied to the site.

**Information request:** please adjust your options analysis to include all provisions that are being introduced onto the site.

6. In Section 4 of Appendix 3, it is considered that the current AUP provisions are sufficient, and a new precinct is not required. Appendix 12 contains the engagement material supplied. In summary, Appendix 12 outlines the concerns of:
  - a. Infrastructure delivery
  - b. Reverse sensitivity effects on the NZDF Whenuapai Airbase.

**Information request:** Taking into account the concerns above regarding infrastructure and reverse sensitivity, did you consider including specific controls to manage these effects? If not why not?

**Information request:** it is noted that nearby out of sequence plan changes are proposing staging controls or triggers to release land at the appropriate time, can you please clarify why this site does not require these controls. If not, why not?

7. Under Option 3 of Section 4 of Appendix 3 you have quoted an interim decision from the IHP.

**Information request:** can you please appropriately reference this document to assist the reader.

8. Section 5.2 of Appendix 3 states the following:

*"Section 32(2) of the RMA requires that councils assess the efficiency and effectiveness of the policies and methods as the most appropriate way to achieve the objectives of the zone..." [emphasis added]."*

This is considered incorrect and not consistent with s32 of the RMA. Section 32 evaluation report is a requirement of cl22 of Schedule 1 of the RMA, which is prepared by the

requestor (the Applicant). It is the evaluation report that makes the assessment. Further, S32(2) relates to the assessment under s32(1)(b)(ii) of which relates to “...the provisions in achieving the objectives”. Objectives the meaning under S32(6).

**Information request:** Can you please correct this, if not, why not?

9. Under Section 5.2 of Appendix 3 of the Plan Change Request, I can only see a reference to an assessment of S32(2)(a). It is not clear if subsections 32(2)(a)(i), (a)(ii), (b) and (c) have been assessed. All sections of S32 of the RMA are required by cl22 of Schedule 1 of the RMA.

**Information request:** Can you please direct me to these assessments or complete these assessments.

10. Appendix 3 of the Plan Change Request does not contain an assessment of s32(3), s32(4) and s32(4A). All sections of S32 of the RMA are required by cl22 of Schedule 1 of the RMA.

**Information request:** Can you please complete the assessment of all section of s32 of the RMA as required by cl22 of Schedule 1 of the RMA.

11. It is considered that Cl34 of Schedule 12 of the RMA applies to this Plan Change request. Cl34 states:

*(1) This clause applies to any plan change that is proposing or requesting changes to a relevant residential zone or a new residential zone if—*

...

*(c) the MDRS is not already being incorporated through any proposed rules.  
(emphasis added)*

Comment: it is presented in the documentation that the proposed plan change has incorporated the amendments required by the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021, namely the Medium Density Residential Standards (MDRS). As the MDRS has yet to be incorporated into the Mixed Housing Urban zone and the plan change request does not include the MDRS in a precinct, cl34 is not met.

Information request: please incorporate the MDRS provisions into the plan change request, if not, why not?

12. Section 8.6 of the Assessment of Environmental Effects addresses the Auckland Unitary Plan Regional Policy Statement (RPS). This covers Chapter *B2 Urban Growth and form*, *B3 Infrastructure, transport and energy* and *B10 Environmental risk*. This assessment does not mention any specific objectives or policies under the RPS.

**Information request:** Can you please include in your assessment the specific objectives and policies under the RPS assessment. If not, why not?

**Information request:** Can you please include in your assessment how the objective of the plan change meets the relevant objectives and policies of the RPS. If not, why not?

## Planning - Assessment of Environmental Effects

13. Section 6.2 of the Plan Change Request covers s31 Functions of territorial authorities under this Act (RMA). It is stated in this section:

*“The use and development of the land for the purposes outlined in this request is clearly within the scope of the Council’s functions under s31 and integration of effects of the activities with infrastructure and other nearby activities is a key issue addressed by the plan change.”*

It is unclear how the Plan Change Request addresses infrastructure, whilst not providing reference to specific Local Government documents that outline funding, financing and staging.

**Information request:** Can you please clarify the purpose of including s31 in your assessment and how the Plan Change Request will fund and finance infrastructure within the Plan Change area, the mechanism that will be used to trigger the funding and also the funding that your client will make to the infrastructure upgrades required in the surrounding area(s) / wider networks. This is likely to include funding agreements with Auckland Transport and Watercare. If not, why not?

14. Section 7 is the Assessment of Environment Effects as required by cl22(2) of Schedule 1 of the RMA. You have quoted s7 of Schedule 4 of the RMA, but it is not clear if you have considered s6 of Schedule 4.

**Information request:** can you please direct me to where s6 of Schedule 4 of the RMA has been included in this AEE. If not, why not.

15. Section 7.4 addresses Transport Effects and is supported by Appendix 5, an Integrated Transport Assessment prepared by Traffic Planning Consultants. The first bullet point makes reference to an upgrade to the intersections with Mamari Road and Brigham Creek Road. Apart from this, it is not clear from the Plan Change Request what the transport effects will be on the wider network. It is also not clear if modelling to support the plan change considered future scenarios in the area to understand the greater effects, and what infrastructure upgrades in the may needed.

**Information request:** Can you please clarify what the effects will be on the greater transport network? If not, why not.

16. Section 7.5 addresses infrastructure effects and states there is an Infrastructure report that is not included in the documents attached to the application. The application has summarized what water infrastructure requirements are needed to support the site, but there are no references on who will deliver these upgrades, who will own these services or any documents that reference the 2024 timeframes. Further there are no references to your summary, but it is stated:

*“The AUP OP provisions contained within E38 and H5 provide sufficient coverage of development on the site that site specific provision for infrastructure and servicing of the site are not required.”*

**Information request:** What specific provisions under E38 and H5 will manage the wider infrastructure costs.

**Information request:** Plan Change 5 and Plan Change 59 all contain site specific provisions to provide for with infrastructure delivery, and provisions that require developers to provide their proportionate share of infrastructure costs. Please provide details of the equivalent provisions that will be included in this plan change.

17. Section 7.6 addresses Stormwater Management, this section states the existing provisions contained in the AUP (OP). This section does not reference any Stormwater Management Plans. The Whenuapai Structure Plan, Auckland Plan and other Council documents establish<sup>1</sup> that the Upper-Waitemata Harbour is a sensitive catchment. Further, there are specific stormwater requirements in Proposed Plan Change 5 that are designed to deter birdlife to minimize bird strike at the Whenuapai Airbase.

**Information request:** Please provide the technical documents and references to support your approach, if not, why not?

**Information request:** How will the site provisions manage the effects of bird strike?

18. There are multiple statements in the Plan Change Request stating the Auckland has a housing shortage and this plan change will help reduce this shortage. You have not referenced any documents outlining the shortage or how much of the shortage will be reduced.

**Information request:** Please provide the documents that you have gathered information on Auckland's housing shortage and how this plan change will lower this shortage.

**Information request:** Do you consider that an economic assessment is required to support your application to identify the shortage the plan change is addressing? If not, why not?

### Urban Design Assessment

Ms Jennifer Estermen from the Urban Design Unit, Plans & Places, Auckland Council has addressed Urban Design issues on behalf of the Council. The following requests are from Ms Estermen:

19. Urban Design Assessment - Please provide an addendum to the urban design assessment. It is considered the current assessment provided assesses what would be included in a future land use consent application, not the plan change. Further detail is required to understand the rationale for the block patterns, roading structure and connections back into the Whenuapai neighbourhood. This addendum should include the following:
- a. Context:
    - i. A robust assessment of the immediate context as well as the wider context. Reliance on the Whenuapai Structure Plan is not considered adequate for a plan change of this scale. Please consider aspects such as walking / cycling connections to key amenities such as schools, local reserves, playgrounds, shops, public transport stops (and other key everyday facilities). Please

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<sup>1</sup> Page 58 Whenuapai Structure Plan – September 2016 - <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/place-based-plans/Documents/whenuapai-structure-plan-september-2016.pdf>

- provide details of how safe and direct access can be provided across Brigham Creek Road
- ii. Further justification is required in terms of proposed zoning ie. why is Mixed Housing Urban zone proposed. The justification appears to be this zoning is in line the Whenuapai Structure Plan. Please provide a robust analysis detailing how the proposed zoning is in line with the relevant parts of the Regional Policy Statement of the AUP and National Policy Statement on Urban Development.
  - iii. Please provide further assessment in terms of the zoning proposed in relation to the interface with adjoining sites. Given development of this area is not anticipated for some time, due to infrastructure funding timeframes, what is the reason that no transition is proposed between the site and adjoining FUZ zoned sites?
- b. Block Structure:
- i. Please provide rationale for the block depths proposed. The blocks appear to be too deep to provide good frontages to the street without the reliance on additional lanes.
  - ii. Please provide rationale for the placement of the local roading connections. I note fixed intersections are shown, what has defined these 'fixed locations'?
  - iii. Please provide details of what alternative block structures have been considered. This information is required to understand if the most efficient urban block structure is being proposed for the subject site. If additional internal roads (such as Jointly Owner Access Lots) are to be relied upon, please provide assessment in terms of the benefits and costs of such mechanisms (ie. the long term costs on future residents to maintain the surface, lighting, any landscaping, establishing legal mechanisms such as residents societies to oversee the long term maintenance of such spaces)
  - iv. Please detail how the proposed block structure responds to the constraints of flood prone land on the north east corner and also the overland flow path.
- c. Roading Connections:
- i. Rationale for the pedestrian throughfare proposed. If this east-west link is an important connection, please detail why a pedestrian only link is proposed rather than a road connection.

### Transport report

Ms Chloe Davison from Harrison Grierson has addressed the transport/traffic issues on behalf of council. The following requests are from Ms Davison and have been included in this letter for convenience.

### *Modelling and trip generation assessment*

20. Information request: Please provide details, year, assumptions and methodology of the base model provided in the ITA.
21. Information request: The modelling is based on 260 medium density dwellings. However, the mixed housing urban zone allows for low-rise apartment buildings (up to three storeys). Please confirm the maximum number of dwellings that could be established on the site as part of the mixed housing urban zone as well as changes relating to the National Policy Statement for Urban Development and the medium density residential standards (MDRS). A sensitivity analysis should be undertaken using the highest density of dwellings that can be established as a result of the plan change. Please provide sensitivity testing of the maximum yield.

22. Information request: The ITA does not consider the interim effects of the development prior to the public transport upgrades. Please provide a sensitivity test of the interim effects and prior to the public transport, pedestrian and cycling upgrades. Refer to Research Report 453 in Table 7.4<sup>2</sup>, the peak hour trips associated with a Suburban Dwelling is 1.2 trips per unit and an outer suburban dwelling is 0.9 trips per unit. Table 8.10 of RR453 shows that medium density residential developments have an associated peak hour trip rate of 0.8 per dwelling.
23. Comment: The modelling shows that the Joseph McDonald Drive intersection is likely to operate adequately based on the flows provided, except for right and through turning vehicles on the minor roads. Whilst the number of vehicles experiencing the delay is low, in some instances drivers would be required to wait for 182 seconds (over three minutes) and this increases driver frustration and risky driver behaviour. What is more likely to occur if there are significant delays, is drivers would detour to the Mamari Road intersection.

For safety reasons, cross priority control intersections are not the preferred intersection type and as we stated in our initial comments, we will not support this arrangement. Particularly given that as the area is developed and when Brigham Creek Road is ungraded, this intersection is unlikely to be suitable for the associated increase in traffic.

#### *Intersections with Brigham Creek Road and Mamari Road Design*

24. At pre-application stage of the project, we provided the following comments:

*It is stated in Section 3.1 of the ITA that the concept layout of the site is an example of the type of development the plan change will enable. It is stated that this is not the final detailed form of development but represents the likely development for the site. From a transport perspective, the design shows a cross intersection on Brigham Creek Road with Joseph McDonald Drive. It is further stated in the ITA that 'traffic modelling and assessment will be necessary to verify the intended layout of the intersections and their suitability to accommodate the anticipated traffic flows as land use occurs'. We agree with this assessment. A give-way controlled cross intersection is unlikely to be supported by AT and we consider that either a signalised intersection or a left in-left out configuration would provide the safest arrangement whilst also providing good outcomes for operation. Noting right turns could be accommodated via controlled movements from the signalised intersection at Brigham Creek Road/Mamari Road. We agree that the design of the intersection will be assessed at resource consent stage, however, consideration as to the effects of these upgrades should be considered as part of the proposed plan change.*

Information request: As requested at pre-lodgement, please provide an indicative intersection arrangement for both Brigham Creek Road and Mamari Road to demonstrate that the proposed plan change can be accommodated and integrated into the existing roading network and future roading network once the surrounding land becomes live zoned. This plan should indicate any land-take requirements with associated dimensions.

25. Comment: As noted in the ITA 'in terms of intersection design, crossroads on streets where traffic volumes are higher have been shown to have poorer crash records. In general, where traffic volumes are higher than 1,000 vehicles per day consideration should be given to controlling conflict at cross roads'. As per table 1 of the ITA, in 2019, Brigham Creek Road accommodated approximately 14,413 weekday daily trips and therefore we agree that a give-way/stop controlled cross intersection is not appropriate at this location.

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<sup>2</sup> [Research Report 453. Trips and parking related to land use \(nzta.govt.nz\)](https://www.nzta.govt.nz/research-reports/453-trips-and-parking-related-to-land-use/)

### Footpath/Cycleway on Brigham Creek Road

26. Figure 6 of the ITA details the pedestrian connectivity and also notes the deficiencies in the supporting text. Section 2.11 of the ITA states 'The future proposals in the area to the surrounding road environment look to provide walking and cycling routes on both sides of Brigham Creek Road and Mamari Road, which will provide direct links for future residents. These are intended to be provide in the form of segregated footways and cycleways'.

Information request: It is not clear whether the 'future proposals' will be provided as part of the proposed plan change. If yes, in principle, we support this proposal, however, no details have been provided pertaining to location within the road reserve and any land-take requirements. Please clarify. It is noted that on the road frontage of 35 Brigham Creek Road, there is insufficient space to provide a footpath within the road reserve and therefore future connectivity should be considered. This also impacts on the site connectivity to activities to the north, including the Primary School, Café and park. In addition, as part of the plan change, consideration of the upgrade of cycle facilities on Brigham Creek Road, along the site frontage should also be undertaken to match the northern side of the road.

We note the proposal for the footpath on the southern side of Brigham Creek Road as part of the proposed development, under the plan change application however, there is insufficient width outside 45 Brigham Creek Road. Please provide details of how the footpath can be implemented to ensure safe pedestrian connectivity.

Comment: If the 'future proposals' are to be undertaken by others, we consider that the plan change would not adequately provide for the demand generated by pedestrian and cyclists within the proposed plan change area and could result in safety issues.

27. Figure 5 of the ITA shows 400 metre Walking Contour from the Site but notes that no footpath directly connects to the road frontage of the plan change site and therefore pedestrians would be required to cross either Brigham Creek Road or Mamari Road to reach a footpath and walking connection.

Information request: please provide details on how the residents of the plan change will be able to cross Brigham Creek Road to access the wider development and footpath network noting that local area facilities are on the northern side, including cafes, park and Primary School

### Auckland Transport

28. Mr Rory Powers on behalf of Auckland Transport has provided the following information requests below. Please provide a response to each request:

**Information request:** Can you please identify the objectives, policies and rules in the AUP (OP) that support Appendix 2 Proposed Precinct Plan, and how the existing controls will manage the effects of future road widening of Brigham Creek Road and Marmari Road. If not why not?



**Information request:** Can you please identify the current provisions that will manage the location of the intersections on Marmari Road? If not why not?

**Information request:** Appendix 2 – Plan Change Plans contains a number of features, being the ‘local road’, ‘proposed intersections’, as these form as part of the proposal, how will these features be integrated into the AUP (OP) provided you have not supplied a precinct? Please note that these maps form part of the plan change and may be in scope of submissions.

**Information request:** Appendix 2 – Plan Change Plans identifies a pedestrian throughfare, can you please identify what this throughfare connects to? Can you also please confirm if it connects to public or private land and why the throughfare is required provided Brigham Creek Road is only a short distance to the north?

### Engineering and Infrastructure aspects

#### *Stormwater – Healthy Waters team*

29. A memo dated 23 December 2021 is attached (Attachment 1) from Ms Lydia Smith of Jacobs on behalf of Healthy Waters Department of Auckland Council, which refers to the lodged documents. Please provide a response to the matters raised in this memo.

#### *Water and wastewater – Watercare Services Limited*

Ms Katja Huls on behalf of Watercare Services Limited has provided the below further information request. Please provide a response to Watercare requests below:

30. **Comment:** Overall Watercare considers the Evaluation report and Assessment of Environmental Effects does not adequately establish that the site can be serviced by water and wastewater.
31. It is stated “the proposed wastewater network has been designed to have capacity for peak wet weather discharge. This will ensure that wastewater discharge into the public system will be kept at pre-development levels and as such, the proposed wastewater design will ensure that effects on downstream networks will be less than minor.”

**Information request:** Can you please clarify the meaning of this statement. If not, why not?

32. Prior to lodgement the Applicant was advised they will need to apply to Watercare for a capacity assessment for both water supply and wastewater supply. This assessment will not be undertaken as part of this review of documentation provided to support the Council for its pre-lodgement information request. This is a chargeable service and the applicant must apply directly to Watercare.

**Information request:** Has a water and wastewater capacity analysis been requested from Watercare? If not why not?

### Ecology and Biodiversity

Mr Mark Lowe of Morphem Consultants addressed the ecology issues on behalf of council. Please address the points below raised in that correspondence:

33. The Ecological Effects Assessment concludes that the potential wetland at the base of the eastern gully is a 'pond' and not a wetland. In the report this is based upon a soil core showing no evidence of hydric soils. Hydric soils can take many years to establish and therefore the absence of hydric soils alone is not sufficient evidence to determine the site is not a wetland (as it may have recently formed). During the site visit pooling water and a dominance of Ranunculus and Persicaria was observed in this area. The Ecological Effects Assessment also refers to the area as being 'seasonally wet' which would seem to indicate a wetland hydrology in excess of the thresholds outlined in the hydrology tool. If the applicant is to maintain that this area is not a wetland, further evidence including the use of the vegetation and hydrology tools would be required.
- a. <https://environment.govt.nz/publications/wetland-delineation-hydrology-tool-for-aotearoa-new-zealand/>
  - b. <https://environment.govt.nz/publications/wetland-delineation-hydrology-tool-for-aotearoa-new-zealand/>

I would also draw attention to the recent guidance from the Ministry for the Environment concerning induced wetlands: <https://environment.govt.nz/assets/publications/Defining-natural-wetlands-and-natural-inland-wetlands.pdf>

34. The Ecological Effects Assessment notes a potential natural wetland to the south of the subject site. From the site visit there would also appear to be an equally similar area approximately 30 metres to the west of the identified potential wetland.

**Information request:** Please comment and update assessment as necessary.

35. The Ecological Effects Assessment includes a copy of drawing C461 (Rev A) showing a Q100 discharge in the vicinity of the identified potential wetland to the south of the subject site of 0.45 m<sup>3</sup>/s. However, the Stormwater Management Plan includes the same drawing (same revision) with a Q100 of 0.3 m<sup>3</sup>/s.

**Information request:** Please clarify.

36. With regard to the effects on the potential wetland to the south, the Ecological Effects Assessment notes that there will not be a significant change to the pre-catchment areas following development.

**Information request:** Can the applicant please confirm the existing and post development drainage catchment areas contributing to the potential wetlands to the south of the site. Please also confirm the percentage of imperviousness in the pre and post development scenarios. In preparing this response also consider that there is a proposed public stormwater line collecting flows intercepting the southern boundary and conveying flows to a proposed public stormwater line to the south east of the site (drawing C450).

37. The Ecological Effects Assessment also notes there will be little change to flow rates into the southern or eastern catchments and that the rates post-development will be slightly increased.

**Information request:** Noting the discrepancy in the Q100 flow from drawing C461, can the applicant please confirm the pre and post development flow rates contributing to these potential wetland areas across a range of rainfall events. Also please comment on the potential effects of increased imperviousness on the potential wetland hydrology, including both surface water and shallow groundwater.

38. While drawing C461 referred to in the Ecological Effects Assessment shows the Q100 stormwater overland flows, drawing C450 in the infrastructure report shows the Q10 Stormwater Catchment Plan. C450 shows a proposed public stormwater line collecting flows intercepting the southern boundary and conveying flows to a proposed public stormwater line to the south east of the site.

**Information request:** Please assess the effects of this stormwater infrastructure on the potential wetlands to the south of the sites – in particular how this is in accordance with the assertion that there will be little change to flow rates into the southern or eastern catchments.

If you have any queries please do not hesitate to contact me by phone or email on 021 282 870.

Yours sincerely

Prepared by:



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Request No.	Category of information	Specific request	Reason for request
SW 1	SMP	The SMP refers to the Whenuapai SMP which has not been adopted into the NDC into Schedule 10. Please revise the SMP in accordance with the NDC requirements for greenfield developments in Schedule 4 and demonstrate how the devices are designed to meet the GD01 requirements.	For the SMP to be adopted under Schedule 8 into the NDC which will authorise stormwater diversion and discharge from the development, the SMP must meet all the performance requirements in Schedule 4 of the NDC as Healthy Waters will be responsible for compliance and discharge from the stormwater network as well as ongoing operation and maintenance of the assets.
SW2		The SMP does not specify any recommendations for the next stage of development. Please outline the recommendations that require further investigation to support the next stage of development.	The template and explanatory document provided in the Auckland Design Manual should be used for the SMP preparation. <a href="http://www.aucklanddesignmanual.co.nz/NDC">www.aucklanddesignmanual.co.nz/NDC</a>
SW3		The SMP states " <i>there are no known departures from Auckland Regulatory and design standards</i> ", however the outlet pipe has a velocity greater than 4m <sup>3</sup> /s which does not meet the required minimum standards. Confirm if any departures are proposed and provide evidence of consultation of the departures.	
SW4		The SMP only provides an assessment of wastewater related dependencies (being the pumpstation). Provide an assessment of the stormwater related dependencies (e.g.	

		staging the development to complete raingardens prior to the lots being created).	
SW5		The SMP uses terminology such as shared accessways, JOAL, private driveways, private ways interchangeably which creates confusion. Use consistent terminology e.g. JOAL for the stormwater management approach to avoid ambiguity at implementation stage.	
SW6		The outcomes sought for the stormwater management approach proposed in the SMP are unclear. Clearly identify the outcomes sought that the stormwater management approach will achieve.	
SW7	Water Quality	Provide an assessment of how the stormwater management approach addresses stormwater quality in accordance with objectives and policies under E1.	Schedule 4 requires the SMP to provide an assessment in accordance with Chapters E1.3.8, B7 and B8 which seeks to avoid as far as practicable, or otherwise minimise or mitigate adverse effects of stormwater runoff from greenfield development on water quality (such as freshwater systems, freshwater and coastal water). This includes minimising the generation and discharge of contaminants into sensitive receiving environments and improving water quality through implementing a robust stormwater management approach for treating stormwater for water quality to avoid adverse effects of the development.
SW8		Inert roofing materials are not sufficient to mitigate contaminants entering the public network and receiving environment. Although they can reduce the risk of contaminants being generated from the roof, the surface still acts as a pathway for airborne contaminants, which has the potential to be significant given the location	

		<p>of the development in close proximity to the NZDF Whenuapai Airbase and High Contaminant Generating Roads (HCGR).</p> <p>Amend the SMP to address water quality for the roof area for development.</p>	<p>Schedule 4 requires treatment of all impervious areas by a water quality device designed in accordance with GD01 for the relevant contaminants. Treatment is particularly relevant and important given the location of the site near the NZDF Whenuapai Airbase and HCGR.</p>
SW9	<p>Amend the SMP to provide the details of the permeable paving to confirm retention and detention.</p>		
SW10	<p>Where proprietary devices are to be provided, amend the SMP to specify the required efficacy of the proposed treatment (e.g. 75% Total Suspended Solids)</p>		
SW11	<p>Amend the SMP to provide details of how the runoff from car parks will be managed due to potential significant contaminants.</p>		
SW12	<p>The proposed stormwater treatment devices such as raingardens located within the road are very small and do not meet AT requirements set out in the Technical Design Guide (TDG). Provide an assessment to explain larger centralised or combined devices for roads have not been provided and considered for this development rather than the proposed multiple smaller stormwater devices in the road reserve.</p>		

SW13	Hydrological Mitigation	Please provide an assessment of how the proposed stormwater management approach using the SMAF1 meets the required retention and detention under Chapter E10 of the AUP (OP) and avoids or remedies changes in hydrology which will result from the urban land uses proposed in the plan changes.	<p>The SMP proposes the development to apply the SMAF1 overlay. Schedule 4 requires the stormwater management approach to achieve the required hydrological mitigation (retention and detention) for all impervious area in accordance with the SMAF-1 requirements under Chapter E10 to ensure adverse effects of development are avoided as practical or otherwise remedied or mitigated including changes in hydrology.</p> <p>Further assessment is required to demonstrate compliance with the SMAF-1 controls to provide hydrological mitigation. Providing a robust stormwater management approach for treating stormwater for water quality to avoid adverse effects is required.</p>
SW14		Amend the SMP to specify the SMAF-1 requirements are under Chapter E10 and how the proposed stormwater management approach is designed to meet these requirements for retention and detention.	
SW15		<p>The NDC requires SMAF1 hydrological mitigation. If the road areas cannot use reuse and infiltration is not feasible then it is required to provide detention.</p> <p>Provide evidence to demonstrate retention is achievable such as a geotechnical assessment to confirm.</p>	
SW16		The SMP needs to confirm whether retention through infiltration will be provided in the proposed stormwater management approach. If yes, specify the minimum requirements and how this is met.	

		If not, provide an assessment of why only detention is provided.	
SW17	Public Stormwater Network	The SMP does not provide the layout of the stormwater network to serve the development.  Provide a plan showing the location of the SW network to ensure developed is staged and serviced appropriately.	This assessment is required to ensure that stormwater effects from the proposed diversions and discharges from the public network will be mitigated/managed appropriately and will not result in any downstream/upstream effects and is an integrated stormwater management approach (refer to Policy E1.3 (8)).
SW18		It is noted that a new pipe network is to be created within the Mamari Road corridor. Confirm if the proposed stormwater pipe network will be designed for this development and developments upstream and downstream, and how will stormwater be discharged.	
SW19	Stream Hydrology	Provide a plan showing the hydrology features of the site; including the potential wetland areas downstream, stream classification and other features relevant to site assessment.	This site assessment is required to determine what the existing condition of these features are and whether the stormwater management approach proposed will maintain or enhance water quality, flows, stream channels and their margins and other freshwater values.
SW20		In terms of the potential wetland located downstream, provide an assessment of how the proposed plan change meets the outcomes and requirements of NPS-FM.	



SW21	Assets	<p>The SMP states that all stormwater management devices and all public roadways will be vested to Auckland Transport. However, there is no evidence of consultation with Auckland Transport or demonstrating of how the all-stormwater management devices will be designed to AT requirements.</p> <p>The SMP provides no evidence of any consultation with Auckland Transport to confirm the proposed stormwater management approach is accepted by AT for stormwater management assets vesting including assets proposed within a 'paper road' (Mamari Road), 100-yr runoff overtop of the road centreline crest, undersized rain gardens, and no consideration of consolidation of devices.</p> <p>Provide evidence of consultation with Auckland Transport, and how the proposed stormwater management assets are designed to meet AT requirements as well as the Stormwater bylaw and SW Code of Practice.</p>	<p>Schedule 4 requires that all new assets to be vested as part of the public stormwater network are to be designed and constructed to meet Auckland Transport requirements as this may change the stormwater management approach. All assets must be designed to be durable and perform to the required level of service for the life of the asset and have reasonable asset maintenance.</p>
SW22	Flood Risk and Hazards	<p>Provide a plan and assessment of the overland flow paths and 100yr floodplain within the development area and on adjacent sites located upstream and downstream.</p>	<p>This assessment is required to determine whether the stormwater flows can be conveyed safely to the receiving environment from the subject area and not give rise to downstream/upstream effects to adjacent person/s.</p>

		Justify as the best practicable option to mitigate any adverse effects associated with this.	
SW23		Provide a high-level analysis of the pre and post development flows due to the significant increase in flows.	
SW24		Amend the SMP to demonstrate how the proposed stormwater management approach will be designed to meet the SWCoP and Stormwater bylaw requirements.	
SW25		Provide an assessment of how the development within the floodplain and flood prone land will be managed. Confirm if this will be removed or incorporated into the development.	
SW26		Confirm if the entry and exit points of the overland flow paths will be maintained by the development.	
SW27		Confirm if AT accept the proposed post-development 100-yr runoff overtop of the centreline crest and discharge onto Joseph McDonald Drive.	
SW28		Demonstrate how the proposed stormwater management is designed to mitigate the impacts from and accommodate climate	

		change to achieve an integrated stormwater management approach.	
SW29	Mana Whenua Engagement and Consultation	<p>The SMP does not provide evidence of consultation with Mana Whenua for the stormwater management approach to confirm that mana whenua values are not affected.</p> <p>Amend the SMP to provide evidence of engagement with Mana Whenua to confirm how the stormwater management approach has been designed to account for mana whenua values.</p>	<p>Mana whenua engagement must be undertaken as per Schedule 4 of the NDC for greenfield sites.</p> <p>Schedule 2 NDC Objectives and Outcomes require mana whenua to be <b>appropriately engaged</b> in the stormwater management to recognise and integrate the cultural values mana whenua have with their waterways.</p>
SW30	Geotechnical	<p>The SMP provides no information or assessment of the geotechnical conditions which will impact the stormwater management approach.</p> <p>Update the SMP to include a summary of the geotechnical conditions and the effects on the proposed stormwater management approach.</p>	<p>A soakage assessment is required to determine what the soil conditions are and their properties and whether the infiltration rates will support appropriate retention times. Soil infiltration testing should be provided at indicative locations across the plan change area.</p> <p>This assessment is required to demonstrate the stormwater management approach such as raingardens will achieve the required retention stormwater volumes and whether runoff can permeate the soil and the rate at which this will occur. If not, this has the potential to result in ponding or unintended overland flows.</p>
SW31		<p>Provide soakage assessment and soil infiltration analysis within the development area.</p>	