

1.0 APPLICATION DESCRIPTION

Application and property details

Fast-Track project name:

Fast-Track application number:

2.0 Technical Specialist Memo – Development Engineering

To:

From:

Qualifications
& Relevant
Experience:

I hold a Master of Engineering (Hons) from Auckland University, a Bachelor of Applied Technology Engineering from Unitec, and a level 3 certificate in Regulatory Engineering Compliance from New Zealand Qualification Authority.

I have over 15 years of experience as a land development engineer and transportation specialist at Auckland Council, Auckland Transport and GHD with extensive involvement in regulatory engineering consenting processes for land development projects and the delivery of public infrastructure improvement projects.

I am a full member of Engineering New Zealand. I have prepared expert evidence and technical assessments for resource consent applications, plan changes, notices of requirement for designation and fast-track applications, and have appeared as an expert witness before consent authorities and the Environment Court on multiple occasions.

Preparation in
Accordance
with the Code
of Conduct:

I confirm that I have read the Environment Court Practice Note 2023 – Code of Conduct for Expert Witnesses ([Code](#)), and have complied with it in the preparation of this memorandum. I also agree to follow the Code when participating in any subsequent processes, such as expert conferencing, directed by the Panel. I confirm that the opinions I have expressed are within my area of expertise and are my own, except where I have stated that I am relying on the work or evidence of others, which I have specified.

Signature:



Date:

17/03/2026

3.0 Executive Summary / Principal Issues

In response to the Fast-track brief for the subject application, this memorandum outlines my assessments and associated discussions on the key development engineering matters identified, along with my recommended conditions and advice notes.

4.0 Documents Reviewed

The following documents have been reviewed in preparing this memorandum:

- *Substantive Application for The Point Mission Bay to Construct and Operate a Comprehensive Retirement Village (Integrated Residential Development) on the Site at 217 Kupe Street, 106 Rukutai Street, 95 Aotea Street, Rukutai Recreation Reserve, and Aotea Street Recreation Reserve, Orakei, Auckland (AEE) by Bentley & Co dated 11/2025*
- *Infrastructure Report (Attachment 007A) by CLC dated 13/11/2025*
- *Infrastructure _ Topo Plan (Attachment 007B) by CLC*
- *Infrastructure Plan _ Earthwork and Drainage (Attachment 007C) by CLC*
- *Infrastructure Assessment (Attachment 007D) by CLC*
- *Flood Risk Assessment (Attachment 026) by CLC dated 17/11/2025*
- *Draft Earthworks Management Plan (Attachment 027) by CLC*
- *Architectural Drawing (Attachment 017A) by Warren and Mahoney*
- *Architectural Drawing (Attachment 017C) by Warren and Mahoney*
- *Proposed Conditions of Consent. (Attachment 023)*

5.0 Additional Reasons for Consent Not included in AEE / Incorrect Reasons for Consent

As the proposed impervious area exceeds 5000 m² up to approximately 17,223 m², it is a brownfield large development. As such, the proposal triggers the requirement for a Stormwater Management Plan (SMP) to be approved by the regionwide stormwater network discharge consent (NDC) holder, Healthy Waters (HW).

Although this is not a resource consent matter and is subject to third-party approval, it is worth noting that the NDC largely aims to achieve stormwater management outcomes, which are aligned with several relevant Auckland Unitary Plan (AUP) chapters. For example:

E8 Stormwater - Discharge and Diversion

E9 Stormwater Quality - High Contaminant Generating Car Parks & High Use Roads

E10 Stormwater Management Area – Flow 1 and Flow 2

E26 Infrastructure

E36 Natural Hazards and Flooding

It has been noted that this SMP has not been provided in the application package. Instead, information relevant to the SMP required components has been presented in multiple application reports.

6.0 Specialist Assessment

According to the AEE report, I understand that the proposal is to build a comprehensive retirement village, which involves the demolition of the existing retirement building blocks on the eastern portion of the site, the refurbishments of the existing aged care facility on the western portion, and the creation of five interconnected buildings with associated connecting pathways and landscaping across the site, ranging from 5 to 8 stories.

Stormwater Management Plan (SMP) – NDC Brownfields Large

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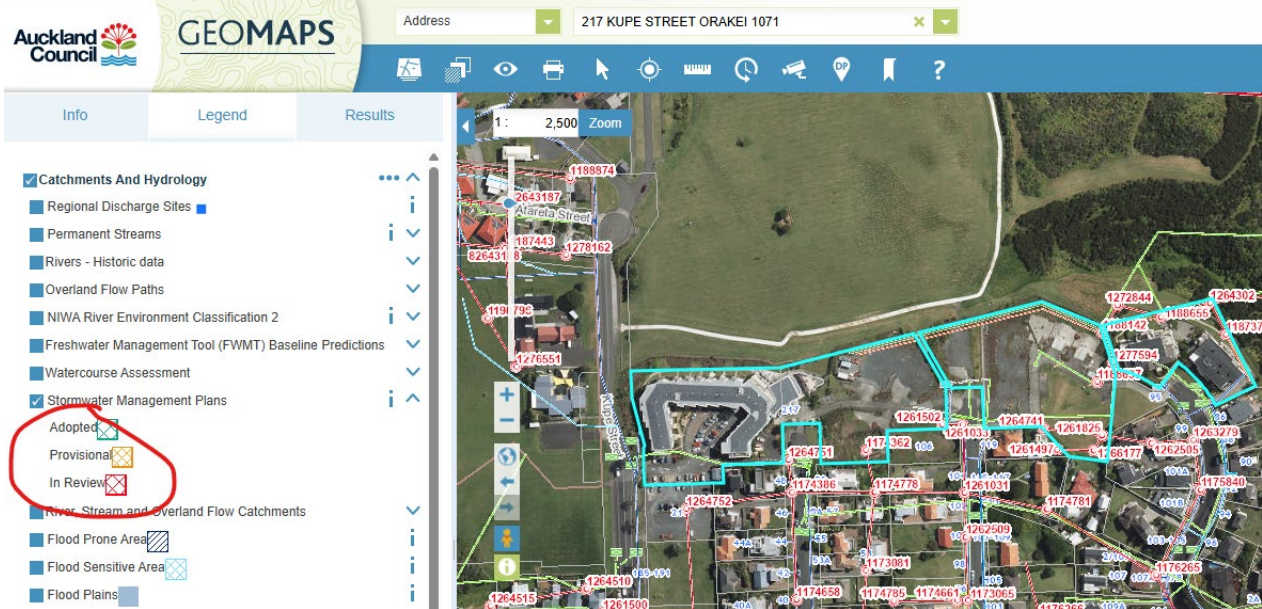


Figure: Adopted SMP Information (Source: GeoMaps)

It is a 'Brownfields large' development as defined by the NDC requirements.

Auckland Council's GeoMaps shows that currently there is no adopted SMP for the subject sites and adjoining areas. According to the application report, I understand that HW was involved in the pre-app review and requested a SMP. However, no SMP has been provided. Instead, information addressing the SMP required components has been presented across application reports.

Given that there is no adopted SMP, I advised during the S92 process that the applicant needs to prepare an SMP covering **catchment, water quality, stream hydrology, and flooding** in accordance with the NDC

requirements. This SMP needs to be approved by HW. This third-party approval is not part of the RC, but it can be undertaken in parallel with the RC process.

Once HW approves the submitted SMP, the relevant stormwater provisions/arrangements will need to be designed in accordance with the SMP recommendations.

The absence of an adopted SMP to guide the developments within the catchment at the RC stage has been discussed with the processing planners. Accordingly, the importance of obtaining SMP approval for the development will be emphasised by an advice note.

Noting that at the time of drafting this memo, there is no approval or approval in principle from HW for the proposed stormwater management approach.

It is also worth noting that this SMP review and approval by HW as the asset owner/ controlling authority is intended to help understand whether a practicable long-term stormwater management solution for the subject sites and the surrounding catchment area has been considered and established.

This memo has been prepared in absence of the required SMP, with a focus on the stormwater serviceability and the potential flood effects of the development within the site and on immediately adjoining properties due to the OLFPs in line with the AUP framework. The NDC has specific requirements and interest in a broader catchment area.

Furthermore, I consider it necessary that **the internal stormwater specialist be given an opportunity to review the final stormwater management proposed in accordance with the approved SMP to ensure that no E8 matters are overlooked.**

Stormwater

Connection to Existing Reticulation Network

According to Council 's GeoMaps, there are existing public stormwater reticulation networks within the area, and the subject site is not within any SMAF zones.

The Proposed SW and WW Drainage Overall Plan by CLC illustrates that the proposed stormwater discharge involves creating new public connections to the existing public networks and associated new private stormwater system, altering the existing public system, and utilizing the existing public connections, to serve the development. Based on my review of the proposed discharge, I consider the development to be serviceable in terms of stormwater discharge from a RC perspective.

Attenuation

The Site Coverage Details presented in the Infrastructure Report indicate that the development will have a building coverage of 12055 m².

The Infrastructure Report also states that “*Stormwater mitigation tanks are proposed and have been designed to mitigate the peak flows in the 10% and 1% AEP events back to pre development (existing scenario) rates. To achieve this, a total of five 22.5m³ tank are proposed to provide a total combined*

retention/detention volume of approximately 112 m³. Approximately 87m³ will be required for peak flow mitigation with the remaining 25 m³ being a combination of dead storage for sediment collection at the base of the tanks and for water retention volume to be utilised for irrigation (to be plumbed to the community garden area).”

The attenuation should be provided in accordance with the approved SMP to meet the recommended Stream Hydrology and Flooding requirements for Brownfield Large sites.

The final design of the new private stormwater system will be subject to Council’s Building Consent (BC) Approval. For creation of new public stormwater assets and any alterations/modification to the existing public networks and abandonment of existing public assets, Council’s Engineering Plan Approval (EPA) will be required.

Flooding

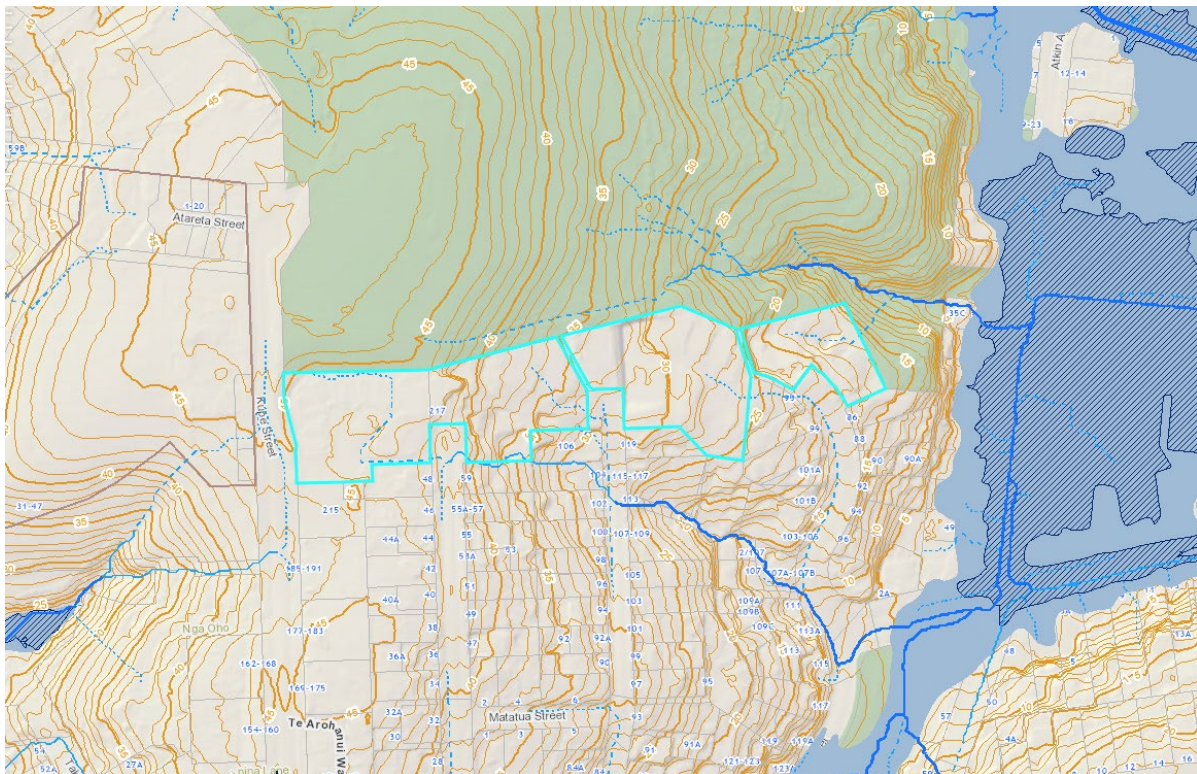


Figure: Flooding information Shown on GeoMaps

GeoMaps Information

According to the Council’s GeoMaps information available on 17/03/2026, there are a number of overland flow paths (OLFP) initiating from the site and flowing towards southeast and northeast, respectively.

Overland Flow Path

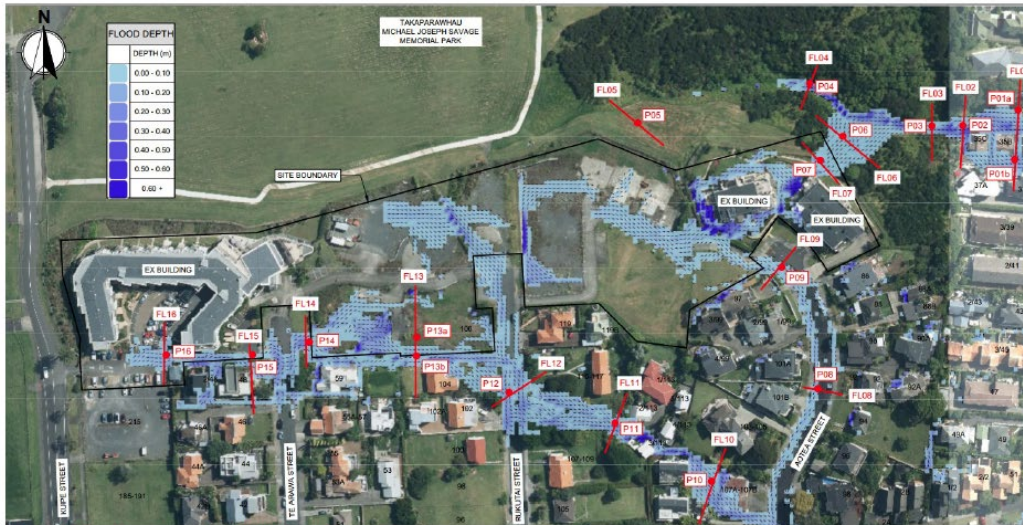


Figure 12: Pre-Development 1% AEP Flood Extents Plan

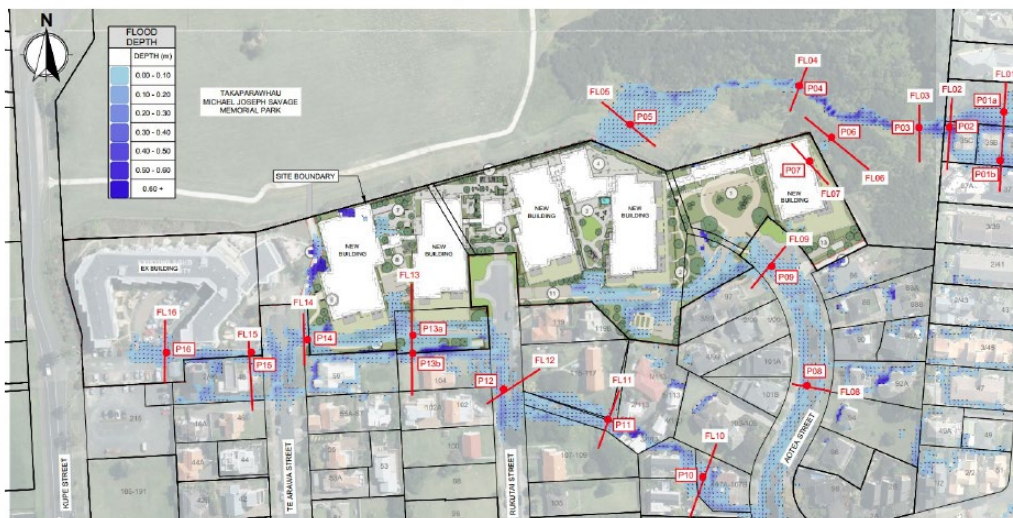


Figure 19: Post-Development 1% AEP Flood Extents Plan

Figure: Modelled 1% AEP Floodwater Extents showing pre and post development conditions (Source: Application Report)

A Flood Risk Assessment Report for the development by CLC has been provided to support this RC application. A site-specific flood assessment has been undertaken and presented in the report.

The 1% AEP floodwater extent plans contained in the report for the pre and post development conditions indicate that the alignment and exit of the OLPFs will remain largely unchanged from the existing condition.

Node ID	Adjoining Flowpaths		Catchment Area (m ²)		Peak Flow (m ³ /s)	
	Pre-Development	Post-Development	Pre-Development	Post-Development	Pre-Development	Post-Development
Node A	SA04a, SA04b, SA03	SA04a, SA04b	22,410 m ²	14,245 m ²	0.991 m ³ /s	0.630 m ³ /s
Node B	SA02	SA02	7,155 m ²	7,795 m ²	0.316 m ³ /s	0.355 m ³ /s
Node C	SA01, SA06	SA01, SA03, SA06	40,916 m ²	49,707 m ²	1.606 m ³ /s	2.004 m ³ /s

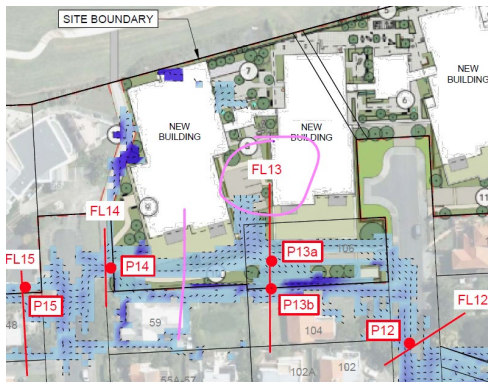
Table 6: Comparison of Pre Development and Post Development Flowpath at the critical nodes.

Figure: Identified Flow at Critical locations (Source: Application Report)

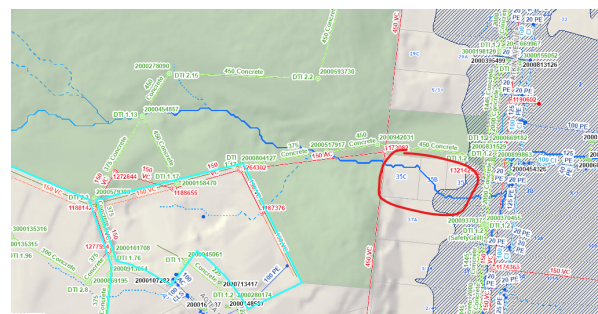
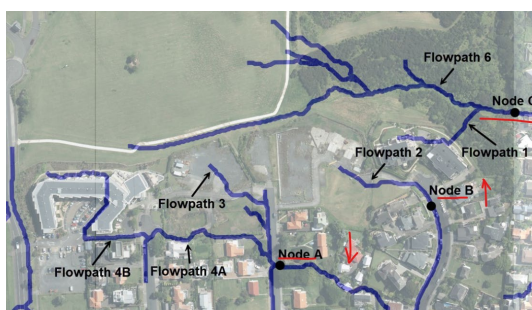
Based on the findings of the modelling studies, the assessment report states that “As noted above, peak flows through Node A (flowpath located to the south of the site) are significantly reduced post development. Peak flows through Node B (flowpath in Aotea Street) generally remain the same, although there is a slight increase, while peak flows through Node C (flowpath to north) are increased.”

It is noted that the identified increase in flow post-development at Node B is minor and occurs within the road reserve of Aotea Street, therefore, I have no concern. Regarding the increase at Node C, concerns about the potential effects on downstream properties were raised during the S92 process, together with a couple of other queries as a result of my review of the modelling study findings and associated assessment. These are outlined in italics below.

- The earthwork plan indicates that fill within the subject sites to the south of Buildings 4 and 5, please provide the cross-section plan annotated as FL13, and a new cross section as per my markup below to demonstrate that the OLFP will retain within the sites.



- For the identified post-development flow increase at Node C and its potential effects on downstream properties particularly those right on the OLFP, please advise whether any mitigation measures have been considered.



- *If there are any entrances at the locations of Building 5 where the modelling results indicate floodwater ponding during major storm events, please provide a cross section incorporating the profile of the adjacent entrances and label the 1% AEP floodwater level and adjacent FFLs.*

Noting that HW will review the required SMP and determine its acceptance based on the potential effects on Catchment, Water Quality, Stream and Flooding due to the development. This review and acceptance will address the queries regarding the potential external effects I raised.

Freeboard

The sites are located near the top of the catchment area with no floodplain and prone areas contained within the sites. Based on the modelled post-development 1% AEP flood extent plan, the 1% AEP floodwater associated with the OLPFs largely remains clear of the proposed new buildings. As such, I am not particularly concerned about the freeboard. However, I still consider it necessary to prepare cross-sections at the critical locations (e.g. building entrances and basement access) to demonstrate that floodwater will not enter the buildings at these points during major storm events.

In addition, the flood hazard assessment against the Australian Emergency Management Institute standards has been undertaken and presented in the report. Based on the findings, the report concludes that *“Generally the site has a classification of H1”* The report also notes that *“The areas that have been classified as H4/H5 within the site, have a maximum flooding depth of less than 80mm, and are confined as being located in areas which are not accessible by people and vehicles (i.e. steep vegetated slopes).”*

Wastewater and Water Supply

I understand that the applicant’s professional team is communicating directly with WSL regarding the relevant provisions.

Geotechnical and Earthwork

A geotechnical specialist has been engaged to undertake the relevant review. It is anticipated that the matters raised will be addressed by the specialist.

7.0 Section 67 Information Gap

As discussed above, a SMP prepared in accordance with the NDC requirements is required and is considered significant for the development

To better understand the potential flood effects, several queries were raised during the S92 process. These may affect the final design and will need to be addressed for the approval of the final SMP.

In addition, some plans referenced in the report are missing and additional plan annotations may be required to demonstrate the appropriateness and feasibility of the proposed servicing. These can be addressed at the EPA stage.

8.0 Recommendation

Based on my review of the applications report and plans, I consider that the development is serviceable even though WSL's review is still underway and the development will be subject to HW's review of the final SMP and the final design of the relevant provisions. It is anticipated further design improvements will be made following the SMP review and approval by HW, which should include additional mitigate measures where necessary to properly manage the potential effects to the surrounding areas. I am of the opinion that the development can be supported from a DE perspective, subject to the acceptance of the SMP by HW and alignment of the final provisions with the approved SMP.

9.0 Proposed Conditions

I have reviewed the draft conditions related to my scope and consider them generally acceptable. However, given the pending SMP, the associated approval, and the likely design adjustment. I have the following conditions and advice notes to guide the design and implementation.

SMP

Advice Note

- The Stormwater Management Plan (SMP) is subject to review and approval by Healthy Waters as required under the nationwide stormwater network discharge consent (NDC).

Stormwater

- The consent holder must design and construct the proposed stormwater connections to serve the development in general accordance with the Proposed SW and WW Drainage Plans Stormwater Plans by CLC, and the requirements of the stormwater utility service provider. Certification from the utility provider that works have been satisfactorily undertaken must be provided to the Council at the completion of the works

Advice Note:

- Acceptable forms of evidence include Engineering Approval Completion Certificates.
- Stormwater utility provider is the Auckland Council Healthy Waters Department.
- Public connections are to be constructed in accordance with the Stormwater Code of Practice.
- Alterations to the public stormwater reticulation network require Engineering Plan Approval.
- Plans approved under Resource Consent do not constitute an Engineering Plan

Approval and should not be used for the purposes of constructing public reticulation works in the absence of that approval.

Recommended Covenant

- The consent holder shall register against the Record of Title for the site detailing the obligations of the lot owner to provide and maintain the detention tank in perpetuity:
- Stormwater runoff from the site is disposed via stormwater detention tanks. The on-going operation and maintenance of the detention tank are the responsibility of the Lot owner. The stormwater management devices shall be operated and maintained in accordance with best practice for the device or system.

Wastewater

- The consent holder must design and construct connections to the public wastewater reticulation network to serve the development in general accordance with the Proposed SW and WW Drainage Plans Stormwater Plans by CLC, and the requirements of the wastewater utility provider. Certification from the utility provider that works have been satisfactorily undertaken must be provided to the Council at the completion of the works.

Advice Note:

- Acceptable forms of Evidence from the Utility Providers include a Certificate of Acceptance.
- Alterations to the public wastewater reticulation network require Engineering Plan Approval. Additional approval is required from Watercare/Veolia as part of the Engineering Plan Approval Process.
- Public connections are to be constructed in accordance with the Water and Wastewater Code of Practice.
- Plans approved under Resource Consent do not constitute an Engineering Plan Approval and should not be used for the purposes of constructing public reticulation works in the absence of that approval.

Flooding

- A written statement from a qualified engineer must be provided to confirm that the stormwater overland flowpath has been maintained within the kerb channel and does not enter the site at the upgraded vehicle crossing. This statement must be provided to the Council at the completion of the works.
- Boundary fencing at the locations identified within the extent of the overland flow path entry and exit points as illustrated within the post-development 1% APE Flood Map (Rev A) by CLC must be constructed such that there is an opening of at least 150mm from ground level. This is to ensure conveyance of the floodwaters and to minimize obstruction of floodwaters. This must be an ongoing requirement in perpetuity.