6 October 2022

Auckland Council
Central & South Planning - Plans and Places
Attn: Joe McDougall – Policy Planner

By email

Dear Joe,

RE: Beachlands Souths Private Plan Change – Response to Clause 23 Request for Further Information

In response to your Clause 23(2) request received on 16 September 2022 requesting for further information in respect of the private plan change request by Beachlands South Limited Partnership (BSLP), we provide the enclosed response for your review and consideration.
The following is a consolidation of responses provided from BSLP's independent experts relative to the respective disciplines of the information requests.

For ease of reference, our response follows the same tabulated format as your Clause 23(1) further information request and we have included our response in the 'Applicant's Response #2' column. This response is supported by the following attachments:

- Appendix 1: Updated Section 32 Report
- Appendix 2: Draft Funding Plan
- Appendix 3: Flood Maps and ESCP Catchment Plans
- Appendix 4: Updated Precinct Plan 4

We trust that this response sufficiently addresses the matters raised. Should you have any questions or wish to discuss further please do not hesitate to contact us.

Yours faithfully
Unio Environmental Ltd

Copied to:

- John Dobrowolski – Beachlands South LP, Program Director
- Russell Bartlett KC – Counsel for Beachlands South Limited Partnership
- Bill Loutit / Sarah Mitchell – Simpson Grierson, Counsel for Beachlands South Limited Partnership

UNIO Environmental
PO Box 91562, Victoria Street, Auckland 1142, New Zealand

#	Category	Further information requested	Reasons for request	Applicant's Response	Additional information requested	Applicant's Response #2
Planning, statutory and general matters – Joe McDougall and Chloe Trenouth						
P4	Urban Growth	Please include an assessment of all relevant RPS objectives and policies relating to urban growth, specifically address Objective B2.2.1(2).	Section 8.1.2 of the section 32 discusses the objectives and policies of B2.2 Urban Growth. While Objective B2.2.1(2) is listed as relevant there is no assessment provided against this objective. The section 32 report discusses the AUP objectives further under themes in section 10.4. Theme 1 includes all relevant objectives apart from Objective B2.2.1(2) which seeks that urban growth is *primarily* accommodated within the urban area 2016. This objective is a key element of the AUP growth strategy and needs to be assessed in the section 32 evaluation to understand	Section 8.1.2 of the Section 32 Analysis Report provides an assessment of the relevant objectives and policies for B2.2 Urban Growth Form. Objective B2.2.1(2) refers to urban growth within the RUB. As this PC is outside the RUB and is for the expansion of an existing coastal town, this objective and associated policies are considered to be of little relevance to this Plan Change request. The Plan Change request is for an expansion to an existing coastal town under section B2.6 of the RPS and an assessment of the corresponding relevant objectives and policies has been provided in section 8.1.1 of the Section 32 Analysis Report. In any case, Objective B2.2.1(2) seeks that urban growth is *primarily* accommodated within the urban area 2016. This objective relates to development contemplated within the RUB and not to plan changes that seek to extend the RUB or expansions of existing coastal towns as is the case here. For completeness, a full analysis table of the PPC request against the RPS objectives and policies has been prepared and this is enclosed as Attachment 4 of this response.	B2.1 Objectives set the overall growth strategy for Auckland and a key element of that is Objective B2.2.1(2). While it is identified in the Section 32 Report and also in Attachment 4 it is not assessed. It is acknowledged that the provisions of B2.6 are particularly relevant but a response to how the proposal sits within the wider strategic growth context is important to understand. Please update the Section 32 to address Objective B2.2.1(2).	This matter is addressed in the updated section 32 report in **Appendix 1**.

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			whether the plan change gives effect to the RPS as a whole.			
P8	Infrastructure	Please confirm whether there is any proposed transport, wastewater, stormwater management and any other infrastructure proposed for servicing the land to be 'live' zoned, which would be located within land not owned by BSLP.	We require this information to understand the potential effect of proposed infrastructure provision on land not owned by BSPL. This potentiality presents additional complexity if any proposed infrastructure cannot be completed due to landowner conflict. This information is also interest of the other landowners whose land is part of the plan change area.	We confirm that all transport, wastewater, water supply and stormwater requirements for the 'live' zoned land will be provided within land owned by BSLP. Therefore, BSLP has full control to deliver the necessary infrastructure to support future urban development on the live zoned land.	Please provide clarity regarding the infrastructure upgrades identified in Table 2 of the Precinct which include transport network upgrades that are not within BLSP control, including capacity of the ferry and intersection upgrades.	As confirmed in the section 32 report submitted with the application, the transport and infrastructure requirements for the private plan change will be funded without any reliance on Council funding to deliver the infrastructure upgrades specified in Table 2 of the proposed precinct provisions. The transport and infrastructure requirements for the plan change are to be funded by the development partnership or through Crown Infrastructure Partners, with no reliance on Council funding.
P9	Infrastructure	Please provide the latest update on the funding plan for future infrastructure network, including upgrades to roads and ferry	A SPV under the Infrastructure Financing and Funding Act has been proposed to fund infrastructure that is	From a planning perspective, the key point to note here is that the infrastructure required to provide for the development outcomes enabled by the Plan Change are controlled through the plan change provisions. This means that the transport,	The Section 32 states that all infrastructure requirements can be provided on site and delivered by the applicant. This is not the case for ferry	A draft funding plan is included as **Appendix 2** of this response. Note that this draft funding plan identifies there will be a contribution to ferry services and infrastructure.

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		services in accordance with Appendix 1.5.5(b) of the AUP(OP). The funding plan should: • itemise new or upgraded infrastructure the applicant believes is necessary to service the plan change area • estimated to cost to install and operate for each item • who is expected to pay for each item • if the applicant is proposing to meet that cost, identify whether it is by way of an SPV or another method. The above applies to transport, wastewater, water supply and stormwater infrastructure. Ideally the costs should be identified for the first 10-year period and for the subsequent two decades after that.	considered necessary for the development. This appears to include some but not all aspects of a ferry service upgrade, local roads, wastewater, water supply, stormwater and possible some external intersection upgrades. Also, there is some infrastructure that this will not include such as the AT designation. While acknowledging that this is likely to be an ongoing effort between the applicant and funding sources, could you please provide an update on the outcomes achieved to date towards a detailed funding strategy necessary to outline the programme for funding and delivery of infrastructure.	wastewater, water supply and stormwater requirements of development are required to be implemented as development within the plan change area progresses. From a planning perspective this is the key matter that needs to be taken into account and assessed. In support of the planning provisions, BSLP have been in discussions and working with Crown Infrastructure Partners (CIP) since August 2021 regarding a possible Infrastructure Funding and Financing (IFF) solution for the development of the plan change land. As is usual with such arrangements confirmation of zoning is necessary to enable a proper needs and benefit analysis to be completed and agreement on what infrastructure is required and when. These can only be finalised to the level of detail requested by Council once the zoning and the plan change provisions are confirmed. Regardless, CIP have provided the attached letter (refer Attachment 5) which confirms the following: • The letter supports the plan change which potentially proposes an IFF solution; • CIP confirms the discussions are positive and they look forward to progressing an IFF with BSLP;	capacity or intersection upgrades beyond the BLSP land. The letter from Crown Infrastructure Partners (Attachment 4) does not identify that infrastructure upgrades beyond the control of BLSP will be funded or implemented. The letter refers to infrastructure costs of $75M ex GST. Details of the infrastructure costs have not been provided to the Council and it is necessary to understand what is included within these costs to clarify whether the estimate provided to Crown Infrastructure Partners is an accurate reflection of the wider infrastructure costs. Please provide a funding plan (at least in draft) that identifies the upgrades required, who and how upgrades will be funded. This is required to understand whether BLSP is committing to fully fund upgrades or contribute to funding.	

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		If known, for the proposed Special Purpose Vehicle, please: • identify whether a recommender has been appointed • identify whether the recommender's report has been provided to the relevant minister under section 26(3) of the Infrastructure Financing and Funding Act 2020 • identify the levy area • provide the estimated levy cost per property. Please also confirm the dwelling yield and job numbers expected in total and by proposed urban zones.	Further understanding of the funding strategy necessary to outline the programme for funding and delivery of infrastructure required as a result of the plan change is required in accordance with Cl23. Noting in particular: Public Transport There are some PT project proposals or concepts that will need future funding to progress or be actioned: • Service changes – weekend Pine Harbour ferry services (trial currently underway). • Service changes – a new ferry feeder bus service, running from Maraetai to Pine Harbour ferry wharf (7 days a week).	• Approximately $75m of infrastructure funding levied per apartment and house appears to be reasonable; and • The balance of infrastructure costs for the Live Zone land will be funded from infrastructure connection fees to BSLP's wastewater, water supply and stormwater infrastructure. The $75m plus any connection fees is proposed to fund the following: ▪ Transport upgrades identified within the plan change as these are determined by the transport assessment as being attributable to the effects of development within the plan change land. This may also include some localised interim public transport feeder services ▪ Ferry service improvements ▪ Wastewater network ▪ Water supply network ▪ Stormwater network Overall, it is considered that sufficient information has been provided to respond to this infrastructure funding query.		

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			• A new terminal outside the marina to allow larger boats and more frequency – as the existing site cannot accommodate the larger vessels required or any increase in peak service frequency (noting this is very expensive and with a very long lead time). Roading There are no specific projects for Beachlands included in the Regional Land Transport Plan 2021-2031 (our 10 year funding document) or ATAP (Auckland Transport Alignment Project) the 2021-2031 investment programme developed by a cross-agency partnership including the Ministry of Transport, Waka Kotahi NZ Transport Agency, KiwiRail, the Treasury, Auckland			

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			Council, Auckland Transport and State Services Commission.			
P20	Character	Please clarify how the proposal will maintain or enhance the existing rural character of the Beachlands-Maraetai as a coastal settlement outside the RUB?	The PPC of a large scale, and the proposed growth will of an urban nature. As mentioned in the question above, it does contribute to the Auckland Plan aim of limiting residential development to that which maintains their values. The scale proposed in addition to the existing urban area of Beachlands-Maraetai raises concerns as to whether it would continue be a rural settlement if the PPC was approved. Changes to character relate to more than the built form and include a change to the level of activity that will be occurring throughout the	The relevant RPS provisions relate to rural and coastal towns and villages (B2.6). It is clear that this Plan Change application is for the expansion of an existing coastal town, and not for a rural settlement. Therefore, references to rural settlements are considered to be irrelevant. We note that objective B2.2.1 requires better maintenance of rural character and rural productivity. However, this is designed to apply to rural areas nearby urban environments to ensure that urban areas are designed in a way to maintain rural production and rural character. The land is currently zoned Countryside Living and therefore any character elements from rural productive activities is not the primary purpose or intent of this current zone.	Policy B2.6.2(1) requires expansions to rural and coastal towns and villages to be undertaken in a manner that maintains or enhances the character of the existing town or village. The assessment undertaken focuses on the change from rural to urban from the plan change but does not address any potential effects on the character of the existing settlement at Beachlands. Please provide an assessment that addresses potential effects on character of Beachlands.	This matter is addressed in the updated section 32 report in **Appendix 1**.

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			area. Further information is required for us to make an assessment on whether the PPC provides for the retention of the of existing rural character.			
P22	Section 32	Please provide information on the potential development capacity enabled by the Mixed Housing Urban zone in sub-precinct E Golf and how this will be managed.	While a 9-hole golf course is currently proposed, the underlying zone will be Residential: Mixed Housing Urban and the precinct anticipates complementary residential development (Policy 34). There does not appear to be any controls within the precinct to limit or manage residential development. Table IX.4.1 applies to all sub-precincts and accordingly establishes that up to 3 residential units per site would be a permitted activity (A1) and more than 3 residential units would be restricted	It is proposed to retain the golf course over this part of the plan change area. As Auckland Council generally opposes zoning land Open Space where they have not agreed to acquire the land, an alternative zoning is required. In this instance, the most appropriate 'underlying' zone is considered to be Residential: Mixed Housing Urban. Any additional housing capacity from any future development over the golf course land will be managed by Standard I.7.3 Staging of Development with Transport Upgrades which contain residential thresholds in the Plan Change. It is therefore not necessary to forecast residential development potential over the golf course land as the effects will be appropriately controlled by the proposed precinct provisions of the plan change. In terms of Sub-Precinct E, it is confirmed these provisions will apply to this sub-precinct.	Comment – not additional information required under cl23. Further consideration is recommended around how potential future development of the Golf Course for housing is managed by precinct provisions to give certainty that potential adverse effects of additional growth is sufficiently considered through a resource consent process.	It is noted that this is not a Cl23 matter. Notwithstanding this, it is acknowledged that the current drafting of the precinct provisions provides for the development of up to 3 residential units per site in the Golf sub-precinct as a permitted activity in accordance with the MDRS and the total number of dwellings that can be developed within the precinct will be managed by Standard I.7.3 Staging of Development with Transport Upgrades. Given that the potential adverse effects of additional growth in this precinct relate to traffic, wastewater, water supply and stormwater and there are provisions within the PPC that address these effects, it is considered no additional provisions are required.

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			discretionary (A2). In addition, subdivision is proposed as a controlled activity (A25). It is unclear whether these rules are intended to also apply to sub-precinct E and if they are whether the adverse effects of this potential development have been fully assessed as part of the proposal.			
P25	Precinct provisions	Please provide further explanation as to why the riparian planting required by Standard I.7.5 is appropriately included as part of any ecological offsetting or compensation package.	Ecological offsetting or compensation is necessary when mitigating the loss of ecological values associated with stream reclamation or stream works. This is a separate matter that should not be conflated with the mitigation of the effects of urban development in proximity to streams that are retained. Further information is required to understand why it is appropriate for the precinct provisions to enable riparian margin requirements to also achieve ecological offsetting or compensation.	To ensure that the proposed precinct provisions support best practice approaches to ecological effects management (including offsetting) and to avoid conflicts with the additionality principle of biodiversity offsetting, we have modified riparian margins standard I.7.5(2) – refer updated precinct provisions in Attachment 7. The modifications maintain the requirement to set aside a minimum 10m riparian yard setback but removes the *requirement* for this riparian yard to be planted. However, the option and proposition to plant the riparian yard setback remains available and where this is proposed as part of any offsetting or compensation package the standard requires this to be native species and maintained in perpetuity by an appropriate legal mechanism. Related to the above, other consequential amendments have been made to standard I.7.6(3) and policy I.4(9).	Comment – not additional information required under cl23. Further discussion is recommended to understand how the proposed amendments to standard 1.7.5 Riparian Margins will adequately mitigate potential adverse effects of urbanisation on the health of streams.	It is noted that this is not a Cl23 request. Notwithstanding this, it noted that the proposed amendments to standard I.7.5(2) riparian margins simply remove the requirement to plant the riparian yard setback in response to conflicts with the additionality principle. The requirement to maintain a minimum 10m riparian yard setback clear of buildings or structures is still maintained and compliance with this standard will contribute to avoiding and/or mitigating potential adverse effect of urbanisation on the health of streams. This is similar to the minimum 10m riparian yard standard which applies to other Auckland-wide urban zones whereby a minimum building setback is required and the standard does not specifically require this to be planted but does not preclude the opportunity or option to do so. Further, the special information requirements I.10(1) and (2) for a Riparian Planting Plan and Biodiversity Management Plan remain unmodified with the changes to the riparian margin standard. It is considered that the provision and subsequent implementation of these documents through the resource consent process

						will contribute to the mitigation of potential adverse effects on stream health.
Transport matters – Wes Edwards, Arrive Ltd						
T52	Integration with Transport Policy	Please provide an assessment of the proposal against the transport-related aspects of the Regional Policy Statement.	The ITA sets out an assessment of the proposal against several items of transport planning policy. For the Auckland Unitary Plan, the objectives of Chapter E27 Transport are considered. The Regional Policy Statement section on urban growth and form in Chapter B2 have not been evaluated in the ITA.	This evaluation against Chapter B2 of the RPS is provided in Section 32 Analysis Report and the objectives and policies table (see Attachments 3 and 4).	The further information provided addresses the transport related aspects of the RPS in Attachment 3 but refers to the section 32 analysis in Attachment 4 which has not been provided. Please provide Attachment 4.	This matter is addressed in the updated section 32 report on **Appendix 1**.
T57	Precinct provisions	New request due to amended precinct			Comment Proposed Special Information Requirement I.10 (6) requires a Travel Management Plan for commercial activities greater than 500m2. (The AUP defines commercial activities as office, retail, or commercial services). Item (b) states "Operational measures to be established to restrict the use of any employee parking area(s) during peak periods;" It is not clear what the purpose of the restrictions is. For example, this could be interpreted as restricting non-	It is noted that this is not Cl23 request but more a general comment expressing uncertainty for this special information requirement within the precinct provisions. The provision of a Travel Management Plan (TMP) is an information requirement for the development of commercial activities greater than 500m^2 within the precinct. Providing a TMP considered to be consistent with best practice for reducing private vehicle use in commercial activities and will further strengthen the sustainability initiatives of this plan change which encourages and promotes modal shift. In particular, 'Transport – Modal Shift and Healthy

					employees from parking in employee parking areas, or restricting employees from parking in employee parking areas, or restricting the provision of employee parking.	Streets' is included as a key focus area in the Beachlands South Sustainability Strategy and this Sustainability Strategy is specifically included in the assessment criteria of the precinct provisions. Overall, the purpose of this TMP is to reduce car dependency, promote modal shift and give effect to the sustainability initiatives of the plan change.

Economic matters – Derek Foy, Formative						
ECO2	Growth projections	a. Please discuss the implication of the most recent Statistics NZ population projections on assessment of retail and residential demand.	Statistics NZ has now released 2018-base Statistical Area 2 population projections for Auckland. The Property Economics report notes	We do not consider this to be a valid clause 23 further information request as population projections and demand are not relevant district plan considerations. Regardless we provide the following response.	Comment – not additional information request under cl23. AUP RPS Policy B2.6.2(3) requires structure planning in accordance with the structure planning guidelines in	We note that this is not a Cl23 matter. Notwithstanding this, Property Economics provides comment that although the HBA has identified significant redevelopment potential in Auckland's urban areas that will have only been increased following Council's recently released plan changes to implement the MDRS and NPS UD, this supply is not appropriate to support the needs in terms of location for potential residents of the Beachlands Area. Supply has to have some geographic context. Whilst some demand is transferable across areas in close proximity, it is considered inappropriate to utilise supply \ capacity in areas such as south or west Auckland, North Shore (and even large tracts of the Central Isthmus) to offset Beachlands demand. It is quite different demand in terms of lifestyle location, price point, amenity, views, etc. A potential purchaser at Beachlands is not likely to be looking at capacity in Manurewa. As identified in the initial RFI response, the demand projections for Beachlands / Maraetai have increased as the area continues to exhibit high demand. This is demand for this area, not an alternative suburb. Furthermore, the rise of remote working options a greater emphasis on location lifestyle, suburb amenities, flexi-time working options, work from home options, hot desking, etc has increased the attractiveness of locations further away from Auckland's central urban area. It is increasingly attractive to live a greater distance from the CBD as the requirements to travel into the city centre is reducing. The proposed development will also catalyse demand in the area. This has been experienced in other large new urban developments. Such development can change the projection profile of an area. This development will be no different. The likelihood demand for Beachlands will

						increase further and there is only a limited supply of residential plots available to accommodate growth. This is short of the supply requirements based on the updated growth projections.

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			that those projections had not been released at the time of writing. Projected population growth underpins much of the economic assessment, and it will be important to understand how sensitive the assessment is to different demand projections used, and the assumptions on which those projections are based. The most recent projections have changed from previous projections, and it will be important to understand whether they affect the conclusions drawn in relation to both sustainable retail space and the residential dwelling demand-supply balance. The Statistics NZ	Population estimates at the Statistical Area 2 (SA2) level were released last year by Stats NZ. All the growth projections have increased from the projection series available at the time of preparing the Economic Report. The immediate Beachlands area had a high projection of 17,800 by 2048. This projection has now increased to 21,000 by 2048. The medium projection, similarly, was 15,800 by 2048 and has now increased to 18,600 by 2048. The larger area, including the Howick Local Board, has the highest project of 234,900 people by 2048. This is has also increased to 240,500 by 2048 under the latest projections. Similarly, the medium projection was 208,700 by 2048 and is now 209,000 by 2048. As these projections reflect anticipated growth by area, the projected number of households has also increased. Stats NZ has updated their Household projections to reflect changes to the growth in people per dwelling. Previously, Stats NZ's household projections had a notable decline in the number of people per dwelling over the projection period.	Appendix 1 to the AUP. A key consideration of structure planning is future supply and projected demand for residential and business land in the structure plan areas to achieve an appropriate capacity to meet the subregional growth projections in the Auckland Plan (1.4.1). The need for the development (due to there being inadequate supply, but high demand) is a core feature in the Property Economics report. The further information requested will help to better understand the need for the proposal.	

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			projections are available here. The inclusion of the Auckland Council Growth Model projections will be useful to understand consistency of the proposal with Council's internal assumptions about the sub-regional distribution of growth.	The new projections show a more muted decline to reflect the rise in multigenerational households, communal living, and difficulty for many people to enter the housing market. These are trends particularly true in urban fringe locations with newer, low density housing stock. Overall, the population and household projections have increased from when the Economics Report was originally completed which only increases retail and residential demand in the area.		
		b. Please confirm whether the Statistics NZ projections used in the Property Economics assessment are constrained or unconstrained as to capacity and the supply of residential land.	Please note that gaining the Auckland Council Growth Model data to assist with this can be facilitated by the processing planner or economics peer reviewer. This may need to occur in liaison with Council officers from the Research and Evaluation Unit (RIMU) and could be facilitated by the processing planner or economics peer reviewer.	We do not consider this to be a valid clause 23 further information request as population projections and demand are not relevant district plan considerations. Regardless we provide the following response. Whether the projections are "constrained" or "unconstrained" is a question for Stats NZ as Property Economics have utilised their projection series. However, it is our understanding that Stats NZ does consider the available capacity in an area to accommodate growth in population / households when generating their projections.		

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				It is unclear to us if Stats NZ considers residential market factors such as development feasibility. However, we consider that their modelling does not include such changeable variables because these would introduce significant sensitivities and a loss of generality.		
		c. Please confirm at what geographic resolution the base Statistics NZ projections were published, what statistical areas the Beachlands catchment in Figure 2 (page 20) is an aggregation of, and what assumptions (if any) were used in spatially allocating growth from the base statistical areas to the statistical areas that comprise the catchment.		We do not consider this to be a valid clause 23 further information request as population projections and demand are not relevant district plan considerations. Regardless we provide the following response. As identified above, the projections for Beachlands were based on Stats NZ previous projection series. These utilised base geostatistical areas that have now been updated. These earlier projections from Stats NZ were based on Area Units 2017, and are roughly equivalent in size to today's Statistical Area 2s though not in extent. For completeness, the Beachlands Catchment in the Property Economics report comprised the area units of Beachlands-Maraetai and Tūranga.		

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Landscape and visual effects – Rebecca Skidmore, R A Skidmore Urban Design - VJ						
LV4	Viewpoints	Please provide additional visual simulations (particularly for Viewpoints 6 – 9) that depict development in accordance with the current proposed provisions (live zoning only).	The visual simulations depict full development across the Plan Change area (including the land within the proposed FUZ). While it is helpful to understand the potential effects resulting from the ultimate development pattern, the current PC only seeks live zoning of or the northern portion of the PC area. This information is required to better understand the nature of the effect the plan change will have on the visual environment in respect to your provided assessment on the landscape.	Refer to response provided in Item 4 and Annexure B of Attachment 14.	The response notes that amended simulations for Viewpoints 6-9 have been prepared and are included in Annexure B. However, these viewpoint images are not contained in the package I've been provided (just the new Viewpoints 10-12). Please provide these images. Note: Viewpoints received 16/09/22 and provided to Rebecca to review but still awaiting confirmation.	We note that the requested viewpoints have now been provided and we await comments from Rebecca in due course.
Stormwater and flooding matters – Eseta Maka-Fonokalafi, Zheng Qian, Healthy Waters						

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SW1	Flood Risk and Hazard - Modelling	Please revise the following model parameters for flood risk impact assessment and provide an updated hydraulic model for review. • Design rainfall depth Use current rainfall data without climate change factor for ED scenarios. • Boundary condition Use 2.58mRL as boundary condition: 1.58mRL (MHWS10) plus 1.0m sea level rise. • Ground model Clarify what LiDAR data and topographical survey data has been used in the model. Clarify where model ground surface was modified to facilitate drainage on page 52 of the SMP. Comment on data accuracy in relation to model reliability in predicting flood impact assessment. • Culvert structures	This is a fundamental piece of information required to understand flood risk effects within the plan change area and beyond to inform our assessment of stormwater, flooding and freshwater effects of the plan change.	Current rainfall depth with climate change was used for the 10% and 1% AEP ED scenarios. This is done to enable comparison of the impacts of the development on the flood hazards within and beyond the site independent of the projected impacts of climate change. Comparing ED without climate change to MPD with climate change does not provide for a like-for-like comparison of effects associated with the earthworks, streamworks, and land-use changes anticipated by the Plan Change. For reference the 10% and 1% AEP rainfall depths would reduce from 154 and 243 mm (per SMP Table 10, Section 6.2) to around 136 and 208 mm respectively with climate change removed which is a significant change from the MPD values. The coastal boundary level used in the assessment is 4.5 m RL based on an assumed coastal boundary level of 2.5 m RL plus 2 m SLR (per SMP section 6.2.1). This is based on the recent work undertaken by Auckland Council contained in the Technical Report 2020/024 'Auckland's Exposure to Coastal Inundation by Storm-tides and Waves', and presented on GeoMaps in the 'Coastal Inundation' layer within the 'Climate Impact' dataset. The 1% AEP coastal inundation extent including 2 metres of sea-level rise correlates with the 4.5 m contour across the subject site boundary.	The ED scenarios without climate change are required to understand the current situation and determine the change to MPD (including climate change). This information is needed to understand the real effects of the proposal in terms of risk outside of the plan change. Using a coastal boundary level of 4.5mRL will illustrate that everything below that level is flooded, and it will be impossible to see any changes in flooding impacts below that level. In particular Healthy Waters is concerned about existing flooding at the Marina which is below this level and ensure that the proposal does not exacerbate any downstream flooding effects. A 2.58mRL will enable potential effects to be understood. There are issues with the modelling undertaken because there are results that can't be explained, e.g. sections of streams with no flow in 10 year model runs. It appears that the LiDAR data used in the hydraulic modelling has the Formosa dam still operating while in reality the dam has been	Two new flood maps are enclosed as **Appendix 3** which show the ED scenarios without climate change as requested. Model scenarios include the effects of climate change on rainfall but with a 2.58mRL tidal boundary have been run and results maps are attached to this response. These figures indicate there are only minimal differences between pre-development and unattenuated post-development scenario flood extents in the low-lying area at the marina. The LiDAR data used for the hydraulic model is the 2013 Auckland Council surface. The neighbouring site to the north has changed since the 2013 LiDAR was flown and new development has also taken place whereas the hydraulic model represents this area with an existing topology. This explains the short stream reach showing no flow as the dam has since been removed and the stream realigned with what appears to be a detention pond constructed in its place. This surface can be updated to more recently published Council LiDAR DEM for consenting and engineering approvals purposes. We do not anticipate there to be significant adverse effects caused by using an updated surface for this area should one be available. The area to the north though was modelled with an assumed 60% impervious coverage so we don't consider the introduction of the detention pond instead of the dam would materially change the runoff volumes from this catchment.

						 Surface roughness values used in the flood risk impact assessment are given in Figure 27 and Section 6.2.4 in the SMP. The model uses a background Manning's surface roughness value of n = 0.050 for areas beyond the site boundary. The Existing Scenario model uses CN=88 for the northern urban area based on 60% impervious coverage, and CN=75 for the site area based on 10% impervious coverage. The surface used to model the subject site is based on drone survey.

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		Clarify any culvert structures in the mode, if not, add key culvert structures in the model. • Imperviousness Clarify the percentage of imperviousness of current land use in the model. • Surface roughness Revise the surface roughness values used in the model. • Unrealistic model outputs in the SMP Revise the model and model results quoted in the SMP.		The coastal boundary levels used in the SMP are higher than those recommended by the Council in the RFI and are therefore more conservative (assuming a more extreme coastal event and further restricting the conveyance capacity of the receiving streams). The existing and finished levels of the developable areas of the site are raised at least 10 metres above this coastal boundary level in all cases. Re-running the model with reduced coastal boundary levels (to 1.58/2.58 m RL) will not have any effect on the model results and should not be required at this stage. Topographical survey data provided by SurveyWorx has been combined with Council LiDAR data to create a surface covering the subject site and adjacent catchment areas. Refer to the attached map in Attachment 10 'Map002-A2001228-RFI-02-Topography' indicating the extents of the topographical survey data and LiDAR data forming the combined surface. Major drainage culverts were only included in the model where required to facilitate drainage through the site and across the adjacent Jack Lachlan Drive. Please refer to the attached map in Attachment 10 'Map003-A2001228-RFI-03-Culverts' indicating the	decommissioned and the stream channel realigned around seven years ago. Please comment on the data accuracy with relation to flood risk assessment. Clarity on the following data will help identify where the issue lies: - What Council LiDAR data is being used? - Surface roughness values used in flood risk impact assessment - Percentage of impervious area for current scenario Please provide the hydraulic model for review.	

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				locations of culvert structures included in the hydraulic model.		
SW2	Flood Risk and Hazard - Attenuation	a. Please confirm how the contributing catchment of each attenuation pond has decided, and whether the ponds cover the entire plan change area including the future urban zone.	Insufficient information has been provided on sizing and location of the ponds to provide flood attenuation. Indicative sizing and location is needed to understand if the effects of development can be managed within the plan change area. There are significant flooding problems caused by high flow in the stream on Jack Lachlan Drive downstream of the proposed development. The flood hazard that could be posed by the proposed plan change needs to be minimised.	The SMP proposes peak flow attenuation of rainfall events to the peak pre-development flow rate in events up to the 1% AEP event for all northern (stream) catchments, and peak flow attenuation of rainfall events to the peak pre-development flow rate in events up to the 50% AEP event for the western (coastal) catchments. The contributing catchments of the attenuation ponds were determined by assessing the existing sub-catchment boundaries and an early draft concept development earthworks surface for the site. Those catchments which are sufficiently large to be feasibly mitigated by large-scale communal devices were labelled as 'communal stormwater management catchments' with high-level supporting calculations for treatment and peak flow attenuation devices provided in the SMP. Smaller sub-catchments which are typically located along the coastal site boundaries or having diffuse runoff pathways were labelled as 'onsite stormwater management catchments' and are intended to be mitigated using smaller-scale treatment and peak flow devices within those catchments.	Comment – additional information is not sought under cl23. Please update the SMP to include a map of the earthworks catchments to confirm how the stormwater sub-catchments have been identified.	It is noted that this not a Cl23 matter. However, a copy of the ESCP catchment plan is included with **Appendix 3**.

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				The attenuation ponds presented in the SMP are sized to mitigate runoff from the communal stormwater management catchments. This includes the live zoned and Future Urban zone within the site. These catchments are shown on drawings A2001228-470 to -473 Rev 2 within Appendix 1 of the SMP. The remaining catchments, which are mostly small and located near the coast, would likely be serviced by smaller scale devices with small outlets into minor tributaries or to the coast. The calculations provided form a high-level assessment based on the TP108 graphical method that can be refined through future approvals processes for the subject site. The use of these large-scale attenuation devices in conjunction with smaller devices in local catchments is sufficient to mitigate the flooding problems caused by high flows in the stream north of Jack Lachlan Drive. Please note that the attenuation devices are not included in the modelling undertaken to date, i.e., the hydraulic modelling results show un-attenuated discharges based on the current and proposed catchment boundaries, earthworks, and land uses. Further modelling assessments required to be undertaken to support future consent and engineering approvals processes should include		

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				treatment and attenuation features to demonstrate this.		
		b. Please provide a clearer plan that identifies the locations of attenuation ponds, proposed zoning and current land ownership.		Large-scale stormwater treatment devices will sit at the foot of each sub-catchment and will be vested in Auckland Council. Specific locations for these devices within each catchment have not been determined.	Please provide a plan that clearly identifies the location of all stormwater assets to be vested to Auckland Council in relation to the parcel boundaries with the current landownership details to confirm that these are on land owned by the applicant. Should any devices be located on third party land, landowner approvals are required prior to adoption of the SMP. The SMP (A2001228-471) identifies a pond on land that is within the Future Urban Zone and does not appear to be in BLSP ownership. It may not be appropriate to include land that is not being lived zoned within the SMP because it will be subject to a future plan change process when this can be considered.	This is considered to be a detailed design matter more appropriately addressed at future resource consent stages. In terms of land ownership Pond 8 will only be constructed if the land upstream of the pond is developed. While the location of Pond 8 is outside of the applicant's landholding, if access could not be gained and this pond cannot be constructed, there are alternative options such as any or all of Ponds 1, 3, 5, 6, 7, 9, and 10 can be increased by a proportional volume to offset the volume lost in Pond 8. As stated above, this is considered to be a detailed design matter more appropriately addressed at resource consent stages.

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		c. Please consider revising the number of attenuation ponds to provide less ponds and larger ponds if possible.		The number of ponds and sub-catchment in the plan change area has been reduced from initial estimates throughout the concept design and modelling process. Further reducing the number of attenuation ponds from what has been proposed would likely compromise the integrity of the sub-catchment boundaries delineated as part of this SMP and cause unwanted diversions altering the hydrology of different on-site tributary stream reaches.	Comment – not further information is not sought under cl23. Please update the SMP to identify the Best Practical Option for stormwater devices. Healthy Waters supports the treatment train approach and use of green infrastructure. However, the number of ponds proposed raises an issue in terms of efficiency of operation and maintenance. Healthy Waters would like to meet with the applicant to discuss the SMP and resolve issues prior to notification. This process is required to ensure the SMP can be adopted under the NDC. This process can occur concurrently with the plan change process.	It is noted that this is not considered to be a Cl23 matter. While we are happy to meet with Council to discuss the BPO again we do not consider that it is appropriate to conclude the BPO as part of the plan change process. This is matter that again can be further discussed and agreed as part of a future resource consents utilising the toolbox of options outlined currently in the SMP.
		d. Please confirm whether the attenuation ponds will be public or private. If they are to be public, explore the opportunity to combine with the water quality treatment devices.		The intention is for the attenuation ponds to be public and vested with the Council. All attenuation devices should have a treatment function included as part of a stormwater treatment train approach. In some catchments, multi-function devices incorporating wetland treatment and peak flow attenuation may be the BPO. Table 13 in Section 6.3.2 of the SMP provides for treatment of runoff	Comment – not further information under clause 23 Please update the SMP to assess downstream effects for the 2- and 10-year events to whether attenuation of more frequent events is required. Healthy Waters accepts that attenuating	It is noted that this is not considered to be a Cl23 matter. However, further discussions with Healthy Waters will be worthwhile to agree additional storm events to ensure adverse effects are identified and appropriately addressed. As a preliminary observation, we do not agree that attenuation of the Jack Lachlan Drive catchments to 80% predevelopment flows is necessary given modelling of these events, climate change considerations and position of site in relation to the coast and the catchment. Flood risks can be adequately identified and mitigated using flood models and flood attenuation devices in strategic locations instead of a blanket rule like attenuating to 80% of the peak pre-development rate.

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				from all new impervious areas prior to discharge into the receiving environment as part of the 'minimum requirements' imposed by the SMP. The 'recommended approaches' included in Table 13 also lists the use of a treatment train approach comprising at-source pre-treatment with a second stage of treatment prior to discharge along with the use of multi-purpose devices to create resilience in the network.	the 1% AEP will provide sufficient storage for attenuating the more frequent events. Please consider for the area that drains to the stream along Jack Lachlan Drive to attenuate post development flow to 80% of predevelopment flow for 100 year ARI storm event to minimise flooding risks posed by the proposal. This is the approach taken by development north of the proposal.	
		e. Please provide 2-, 10- and 100-year flood attenuation within northern stream catchments 1 & 2.		Provided for in the SMP per Table 12. The 1% AEP peak flow attenuation ultimately drives the peak flow attenuation device storage volume. Smaller/less extreme rainfall events can be attenuated within this storage volume also.		Response as above in SW2e.
SW3	Stream Hydrology - Water Quality Treatment / Hydrology	Please confirm the design standard for: bioretention rain gardens and swales for water quality treatment; retention and detention component for hydrology mitigation; the target surface area; and location of any communal the devices.	Section 6.3 discusses the stormwater management approach but does not contain sufficient details to understand how stormwater will be managed. Further information is required to understand whether	The design standard is per Auckland Council Guidance Documents. This is outlined in the 'minimum requirements' in Table 13. The requirements for stream hydrology are aligned with the current SMAF1 requirements set out in AUP OP Table E10.6.3.1.1 Hydrology mitigation requirements.	Comment – not further information under cl23 As per comment above under SW2, please update SMP to demonstrate BPO for all devices.	It is noted that this is not considered to be a Cl23 matter. However, we note that we would be agreeable to updating the SMP at a later stage as there are likely to be other updates requested and/or required and it would efficient to make any updates at one time as opposed to incrementally.

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	mitigation		potential adverse stormwater effects will be adequately managed. Section 6.3.4 of the SMP indicates a range of options to achieve hydrological mitigation for private lots. However, there is insufficient detail to understand how the toolbox approach will be implemented. Further discussion within the SMP is required to understand this. It is noted that the precinct provisions require rain tanks Section 6.3.8 of the SMP identifies that water quality treatment will be provided for runoff from all new impervious areas through bioretention swales, rain gardens, and	The requirements for water quality treatment are aligned with standard requirements under the Auckland Council Code of Practice for Stormwater. The design standard should be informed by Council's guidance documents, i.e., the use of the Water Quality Volume (WQV) or Water Quality Flow (WQF) method as appropriate for volume-based or flow-based devices.		
		Please confirm whether any wetlands are proposed for water quality treatment and/or hydrology mitigation and the intended design standards for these.	The high-level sizing completed for the attenuation devices includes WQV treatment volumes in line with the standard design approach for GD01 wetlands. In line with Council's preference for multi-purpose devices, these devices can be designed to provide water quality treatment, hydrological mitigation, and various peak flow attenuation functions up to the 1% AEP event (northern catchments 1 & 2) and up to the 50% AEP event (western catchments 3, 4, & 5).	Comment – not further information under cl23 Please update the SMP accordingly.	Response as above in SW3.
		Please confirm whether all private lots will be installed with rainwater tanks to provide retention and detention.	All private lots can be installed with rain water tanks to provide hydrology mitigation volumes in line with the precinct provisions.	Comment – not further information under cl23 Please update the SMP accordingly.	Response as above in SW3.

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		Provide clear information on the devices including their design standard, intended catchment area, location etc.	communal wetlands. However, the SMP is not clear how this will be achieved. It is noted that the proposed precinct provisions (I.7.7 Stormwater Quality) require carparks and roads to be treated and use of inert building materials. The s32 report (p112) only identifies runoff from roads and high contaminant generating carparks. The SMP (section 6.3.9) identifies an estimated 1,500 lineal metres of bioretention rain gardens and 4,300 lineal metres of bioretention swales to provide for hydrological mitigation for the proposed public roads. The quantity of the proposed rain gardens and swales is very large and has not	Specific locations of these devices within each catchment have not been determined. The quoted extent of bioretention devices provided within the subject site is a high-level estimate based on a percentage of the new impervious areas anticipated within future public roads based on a concept layout used in this assessment. These devices would be located within the road reserve as far as practicable to align with Auckland Council's preferences for at-source management of runoff. Healthy Waters prefers a smaller number of large-scale treatment and attenuation devices as well as a treatment train for stormwater management. The raingardens and swales anticipated in the road reserves of the developed site comprise the initial stage of water quality treatment in that treatment train for contaminant-laden runoff generated on road surfaces.	Comment – not further information under cl23 Healthy Waters wishes to discuss these matters in relation to the NDC. Please update the SMP to include indicative design details for each type of stormwater management devices to understand whether it is appropriate in mitigating the adverse effects associated with the proposed plan change. If the location of these devices is located within the road reserve this should be discussed with Auckland Transport. It is not clear what the intergrated stormwater management approach is if we have no indications of the sizing and location of devices and intended catchment areas which can impact proposed development layout.	Response as above in SW3.

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			been adequately justified. It is also not clear whether devices will be located within the road reserve because they are not identified on the road cross sections within the precinct and are only identified in some of the road types. The SMP identifies that hydrological mitigation and peak flow attenuation within multi-purpose attenuation basins as a second line of defence. The use of on-site hydrological mitigation in accordance with SMAF1 controls through capture and non-potable reuse of roof runoff. Healthy Waters prefer larger but fewer communal devices to provide both water quality			

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			treatment and flood attenuation as well as fewer wetlands and raingardens. We require this further information to understand how the stormwater management approach is likely to be implemented and its effects on the environment.			
SW6	SMP	Please amend the SMP to include an assessment to determine that the proposed stormwater management approach is the Best Practicable Option.	Section 6.3 of the SMP sets out the proposed stormwater management approach. However, the SMP does not demonstrate that this is the best practicable option which is a requirement under the NDC. The SMP should reflect what public assets will be vested, the number, location and scale. It is accepted that this detail	The SMP includes a multi-criteria analysis and a life-cycle cost assessment of different devices (refer to Appendix B) in the toolbox, that can be used to achieve the stormwater management requirements. These assessments combined with the expectations set by Ngāi Tai ki Tāmaki clearly indicate a preference for bioretention devices and that the total life-cycle cost of the stormwater management devices does depend on the type of devices used. Given the large size of the site and the varying nature and requirements of the difference catchments there is no one BPO however a set of devices that together form the BPO - comprising communal wetlands with peak flow attenuation functions supported by	Comment – not further information under cl23 The multi-criteria analysis is too general and not site specific. Site specific assessment is required to demonstrate the proposed stormwater management is the BPO if schedule 4 requirements cannot all be met. Please amend the SMP. It is recommended that the applicant meet with Healthy Waters to confirm what amendments may be required to the SMP to enable it to be adopted in	It is noted that this is not considered to be a Cl23 matter. However, as noted above, we consider this level of detail to be more appropriately addressed in future resource consent stages which will be done in conjunction with Ngāi Tai ki Tāmaki as BSLP's development partner for this plan change. We also note that the SMP does include a range of bioretention devices as part of the BPO.

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			does not need to be fully provided at the cl23 stage but will be required to enable the SMP to be adopted in principle by Healthy Waters. It is recommended that the applicant meet with Healthy Waters to confirm what amendments may be required to the SMP to enable it to be adopted in principle prior to notification of the plan change.	bioretention swales and rain gardens within the public roads and rain water tanks on the site.	principle prior to notification of the plan change.	
Heritage – Rebecca Ramsay, Heritage Unit, Plans and Places						
H5	Significance Evaluations	Please identify how any adverse effects on any potential significant historic heritage place/s identified within the proposed plan change area will be managed in		Avoidance of adverse effects on the significant pa site R11/1619 and future protection are proposed through appropriate planning provisions, as discussed on p. 66 of the assessment report. The standards in 1.7.10 Mana Whenua should ensure that no buildings or structures are permitted, that any modifications to the pa or earthworks within its	Please clarify if there has been any ongoing consultation with Mana Whenua and the project archaeologist regarding how the pā site will be managed long-term. If so, a summary should be provided.	There has and continues to be close consultation with Mana Whenua and our project archaeologist and this will be ongoing. In our view, given the investigations to date carried out for the pā site, the proposed precinct which specifically identify and provide protection over this by way of Precinct Plan 4 and standard I.7.10 Mana Whenua, and Ngai Tai ki Tamaki being specifically engaged as a development partner for Beachlands South (with specific record of this in the precinct description) it is considered that additional long-term management of the pā site is not considered to be required at this stage of the planning process. The extent of the pā site is already mapped on Precinct Plan 4 and standard I.7.10 has been intentionally drafted to manage subdivision and development within the pā site extent.

						Subdivision and/or development which does not comply with standard I.7.10 is a discretionary activity which is the same activity status if the pā site were to be scheduled as a Site and Place of Significance to Mana Whenua in the Auckland-wide overlay. Accordingly, it is considered that an equivalent level of protection is afforded to the pā site in the precinct provisions and the discretionary activity status will provide full discretion to assess any potential adverse effects on mana whenua values associated with this pā site in the future where subdivision and/or development is proposed within this extent.

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		accordance with the B5 objectives and policies.		surrounds are discretionary activities and that subdivision resulting in the pa extending across contiguous lots is also a discretionary activity. In addition, it is noted that the pa is protected under the provisions of the Heritage New Zealand Pouhere Taonga Act 2022, and that authorities to modify pa sites are only granted by Heritage NZ in exceptional circumstances under their Statement of General Policy for the administration of the archaeological provisions of their Act. Avoidance of most of the other historic heritage sites is proposed, with proposed management and mitigation measures set out in section 6 of the report. These include a vegetation management plan and planting biodiversity plan to ensure the protection of archaeological sites within the EPAN. Any unavoidable adverse effects on pre-1900 archaeological sites can be appropriately mitigated through information recovery under the archaeological provisions of the Heritage New Zealand Pouhere Taonga Act 2014.	The pā site is identified as a significant component of the cultural landscape (Precinct plan 4), with corresponding provisions to manage, new buildings or structures, earthworks or modifications and subdivision, plus additional protection under the HNZPT Act. However, unlike the majority of the other identified archaeological sites the pā is located outside of the EPAN. As future development will be restricted within the identified extent of the pā, how will the space be managed to give effect to the Mana Whenua objectives and policies and while conserving the archaeological values of the site. For example, as a co-managed reserve. We note that further scheduling of the site is not proposed by the applicant as per their Clause 23 response information.	
H8	For information	Within the geotechnical investigation report for 620 Whitford-Maraetai Road provided		Noted - From this it was noted that shell material was identified in eight geotechnical testing locations (see Figure 1). These appear in two main clusters, with one isolated case. The first cluster, consisting	Comment – not further information under cl23	It is noted that this is not a Cl23 matter. Notwithstanding this, an updated Precinct Plan 4 is attached as **Appendix 4** as requested.

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	purposes	in Appendix D, a stratigraphic layer is described as follows: *"comprising black silt intermixed with shell fragments, was also encountered on the west facing slopes at the site. This surficial layer generally ranged between approximately 0.2 m and 0.3 m depth, however the material was encountered to a depth of approximately 0.9 m on the lower bench in the north western part of the site"* (Fraser Thomas Ltd 2012. page 7) Shell fragments and black friable soils were found in a number of test pits, machine boreholes and hand augers. It is highly likely this layer is archaeological in nature and corresponds with the archaeological sites recorded along the coastal edge. These results should be provided to the project archaeologist to further support and/or refine their		of Test Pits 10, 12 and 13, was situated in the area near the recorded sites R11/2523 and R11/2524. Within Test Pit 12 shell material was identified to a depth of 0.9m, which the FT report interprets as "deposited dredging materials, which are believed to have been spread over the west facing slopes" (Fraser Thomas Ltd 2012. page 7). It is considered likely that the material identified relates to R11/2424, which is described as loose shell spread across some 48m along the west facing slopes. These test results suggest the site is somewhat larger than that. These sites are situated within the EPAN and are unlikely to be impacted as a result of the proposed Plan Change, subject to the recommended vegetation and planting management plan which is included as a Special Information Requirement in the precinct provisions. The second cluster consists of Test Pits 5 and 6, Borehole 2 and Hand Auger 12. These testing sites were all positioned in between sites R11/2528 and R11/2529. The sites *primarily* describe loosely scattered material on the pine clad slopes, with these findings situated further to the inland of the recorded sites. This would suggest that the sites are somewhat larger than recorded. These sites, including the geotechnical test locations are situated within the EPAN and are unlikely to be	Please amend Precinct 4 – Cultural Landscape to reflect the archaeological review of the geotechnical results (H8), particularly to include the potential new archaeological site outside of the EPAN. Note: Further field work may be required to complete the revised mapping.	

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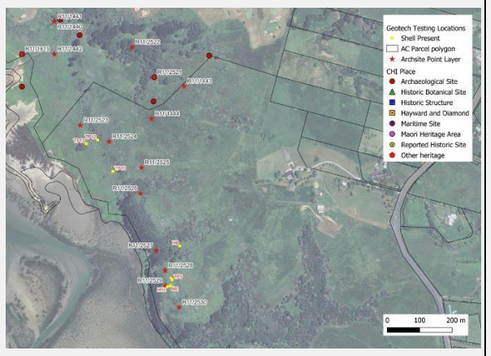
		provided site extents and identify other areas of archaeological potential.		impacted as result of the proposed Plan Change subject to the recommended vegetation and planting management plan. The isolated test pit, Hand Auger 8, identified shell on a small spur some 70m inland from the recorded location of R11/2527. This is potentially a new archaeological site. The site appears to be close to the edge of the EPAN, and therefore may be impacted.  Figure 1. Plan showing geotechnical testing locations in relation to recorded archaeological sites		