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17th July 2025

Sunfield Developments Limited Response to Auckland Councils Memorandum – S67 Matters.

The purpose of this note is to provide responses to Auckland Council's ("Council") 'Memorandum – s67 Matters' letter received in relation to the Sunfield Masterplanned Community on 16 June 2025. Minute 3 of the Expert Panel outlines that should the Applicant wish to respond to the Memorandum, it should do so by the 17th July 2025.

The below table is a succinct response to the queries raised, with the addendum reports providing more detailed responses, where merited. This includes:

Appendix A – A response from Maven addressing queries regarding Stormwater, Flooding, and Earthworks
Appendix B – A response from Maven addressing queries regarding Wastewater and Water Supply
Appendix C – A response memo from Commute addressing queries regarding Transportation

Reference	Auckland Council's Information Request	Sunfield Developments Limited (SDL) Response
Section 1	**Stormwater and Flooding**	
Section 1	Condition 13 of the NDC sets out the process for stormwater management plans to be adopted into the NDC to authorise the diversion and discharge of stormwater. In particular, for new greenfield development, which is not currently urban zoned, a Stormwater Management Plan (SMP) can only be adopted following a notified plan change, where the plan change is consistent with the SMP. The diversion and discharge of stormwater from this Fast Track application therefore cannot be authorised by the NDC and a consent for diversion and discharge of stormwater will be needed. In addition to assertions described within Section 5.6.2 of the Planning Report, the Applicant's agent has sought diversion and discharge consent in Section 5.2.	This commentary is noted, and it is recognised that the NDC (Network Discharge Consent) cannot be relied upon for this development proposal and section 5.6.2 of the original planning report is redundant. Proposed diversions or discharges of stormwater by private developers or applicants can be lawfully undertaken by obtaining a diversion and discharge resource consent under Auckland Unitary Plan (Operative in Part) Chapter E8. It is confirmed that a stormwater diversion and discharge consent for the Sunfield proposal has been applied for as outlined in section 5.2 of the planning report with the information contained within the respective application still being relevant.
1.1.1	A complex arrangement of attenuation ponds and catchment diversions are proposed in an attempt to mitigate the development's effects on flooding, however information is missing that describes and demonstrates how the proposed Attenuation Ponds (including Attenuation Ponds 1, 2, 3 and 4) are intended to operate, and how	Please see the response from Maven Consultants in Appendix A.

	flooding will be managed within these ponds during a range of design storm events. Due to the missing information there is insufficient evidence to support the Applicant's claim that the development will have no negative effect on flooding downstream of the Site.	
1.1.2	Given the very flat topography and downstream flooding constraints, there is insufficient information provided on the feasibility of stormwater infrastructure to provide primary drainage for the 10% Annual Exceedance Probability (AEP) storm event. The assessment provided is incomplete and does not describe the methodology, assumptions made, nor the effect of groundwater and other tailwater constraints.	The proposed development manages the 10% Annual Exceedance Probability (AEP) storm event through a combination of piped reticulation and swale systems for primary stormwater conveyance. The hydraulic and hydrologic modelling undertaken using HEC-RAS and HEC-HMS includes assumptions based on design rainfall intensity, catchment imperviousness, runoff coefficients, and pipe and channel roughness. Existing tailwater levels were applied at discharge locations to account for downstream conditions. The potential impact of a high groundwater table is considered minimal, as the proposed stormwater network is generally shallow and not expected to be significantly influenced by groundwater interactions. Further detail on the modelling methodology, assumptions, and outputs is contained within the Stormwater Modelling Report submitted in support of the application. Please see the response from Maven Consultants in Appendix A for further detail.
1.1.3	There is no information or assessment of the impact of the proposed development on downstream infrastructure in terms of peak flows and volumes during a range of design storm events, due to the modified catchments and increased impervious coverage. In particular, assessment of impacts on the below infrastructure is missing:	Responses to each item below.
1.1.3a	a) The McLennan Dam is a High Potential Impact Classification (PIC) Dam, which has been designed to manage specific flows and volumes for various storm events in accordance with its associated resource	Stormwater modelling of the Western catchment for the 2yr, 5yr, 10yr, 20yr, 50yr and 100yr storms with Climate change factors in accordance with the Auckland Council Stormwater Code of Practice version 4 has been undertaken.

	consents. There is no assessment of the frequency or duration that the spillway would activate under a range of design storm scenarios	Modelling shows flood volumes are contained within the McLennan Wetland for the 2yr, 5yr, 10yr, 20yr and 50yr storms. Modelling shows the spillway to activate only for the 100yr storm event with 3.8 degrees warming due to climate change as per Auckland Council Stormwater Code of Practice 2025 (Version 4), in which the spillway is activated for 60 minutes. Flow across the spillway is shown to decrease in the post development scenario, where peak flow decreases from 14.71 m3/s to 13.10 m3/s (a reduction of 10%).
1.1.3b	b) The conveyance infrastructure in the Pāhurehure Inlet catchment including the Grove Road Box Culverts and the Artillery Drive Stormwater Tunnel.	The assessment of existing infrastructure was incorporated within the stormwater modelling report submitted as part of the FTAA application. The proposed stormwater strategy for the development controls peak discharge to pre-development conditions through the implementation of attenuation measures. These measures effectively manage and temporarily store stormwater runoff, thereby regulating the flow rate released from the site. As a result, there is no additional loading on the downstream infrastructure, ensuring that the existing system is not adversely impacted by the development.
1.1.3c	c) Stage 1 of the Awakeri Wetland, including weirs and boardwalks which are currently designed with a 2-year ARI level of service.	There will be no adverse effects from routing discharge through Stage 1 of the Awakeri Wetlands as the design peak flow has been maintained. The assessment of this existing infrastructure was incorporated within the stormwater modelling report submitted as part of the FTAA application. The proposed stormwater strategy for the development controls peak discharge to pre-development conditions through the implementation of attenuation measures. These measures effectively manage and temporarily store stormwater runoff, thereby regulating the flow rate released from the site. As a result, there is no additional loading on the downstream infrastructure, ensuring that the existing system is not adversely impacted by the development.

1.1.3d	d) Private farm drains and culverts downstream of the site within the Papakura Stream Catchment. The Applicant has not provided hydraulic modelling results for the downstream private farm drains and culverts, nor has it assessed the impact of discharging a greater volume of runoff to these drains. Additionally, the approved stormwater discharges from Ardmore Airport will need to be accounted for as part of the assessment for this sub-catchment.	The development proposes to maintain peak flow rates and flow levels at pre-development conditions through the use of attenuation ponds, a widely accepted and common practice in urban stormwater management within Auckland and New Zealand. Attenuation ponds temporarily store stormwater runoff during peak rainfall events and release it at a controlled rate, preventing sudden surges that could overwhelm downstream drainage infrastructure. For the Papakura Stream Catchment, this approach effectively protects private farm drains and culverts located downstream. While the total volume of runoff may increase due to the development, controlling the discharge rate ensures that flow velocities and peak loads remain consistent with pre-development conditions, thereby mitigating risks of erosion, flooding, and structural damage. In accordance with the Auckland Council Stormwater Code of Practice 2025 (Version 4) and supported by the NIWA Stormwater Management Devices Design Guidelines (2003), maintaining peak flows at or below pre-development levels is a key measure to prevent adverse downstream impacts. Given that existing downstream infrastructure has the capacity to accommodate these controlled flows, further detailed assessment of private farm drains and culverts is not warranted. This approach aligns with best practice and regulatory requirements, supporting sustainable stormwater management and protecting downstream infrastructure integrity. The modelling included assessments for the 1%, 10%, and 50% Annual Exceedance Probability (AEP) events, providing a comprehensive understanding of stormwater behaviour under a range of rainfall intensities. While these key design storms have been addressed, additional simulations—for example, 2%, 5%, or 20% AEP events—can be conducted if deemed necessary to further support the assessment.

1.1.3e	e) Catchment. The Applicant has not provided hydraulic modelling results for the downstream private farm drains and culverts, nor has it assessed the impact of discharging a greater volume of runoff to these drains. Additionally, the approved stormwater discharges from Ardmore Airport will need to be accounted for as part of the assessment for this sub- catchment.	Stormwater modelling has been undertaken as part of the development assessment, demonstrating that peak flow rates downstream are maintained at or below pre-development conditions through the implementation of attenuation ponds. The modelling included assessments for the 1%, 10%, and 50% Annual Exceedance Probability (AEP) events, providing a comprehensive understanding of stormwater behaviour under a range of rainfall intensities. While these key design storms have been addressed, additional simulations—for example, 2%, 5%, or 20% AEP events—can be conducted if deemed necessary by the Panel to further support the assessment. Their approach taken aligns with established best practices and the Auckland Council Stormwater Code of Practice 2025 (Version 4), as well as the NIWA Stormwater Management Devices Design Guidelines (2003). Although the total runoff volume may increase due to development, the controlled release of stormwater ensures that downstream private farm drains and culverts are not subjected to higher peak flows or velocities that could cause erosion, flooding, or structural damage. Given that the stormwater strategy maintains peak flows to pre-development levels and existing downstream infrastructure has sufficient capacity to accommodate these flows, further detailed hydraulic modelling of private drains and culverts is not considered. Regarding the stormwater discharges from Ardmore Airport, the current modelling has accounted for catchment conditions and downstream capacity; however, if additional data on these discharges become available, it can be incorporated to refine the assessment as required. Overall, the proposed stormwater management strategy effectively mitigates potential adverse impacts on the downstream drainage network while complying with relevant regulatory frameworks.
1.1.4	The hydraulic model that has been described in the application is insufficient for providing a robust assessment of downstream effects and is missing the following considerations:	Responses to each item below.

	a) The Applicant has not assessed the development's potential impact on the frequency of predicted flood hazard for downstream properties (including back yard flooding, road flooding / overtopping and building footprints). To properly quantify potential increases in flood frequency, additional AEP scenarios should be analysed to assess more frequent flooding.	The Applicant acknowledges the importance of assessing the development's potential effects on the frequency and extent of downstream flood hazards, including back yard flooding, road overtopping, and potential inundation of building footprints. To support this, hydraulic modelling has been undertaken for key storm events at the 1%, 10%, and 50% Annual Exceedance Probability (AEP) levels, which together represent a wide range of flood scenario spanning both frequent and extreme rainfall events commonly used in flood risk analysis. The modelling confirms that peak flow rates downstream of the site will be maintained at or below pre-development levels through the use of attenuation ponds. These ponds temporarily store excess runoff and release it at controlled rates, ensuring downstream infrastructure is not subjected to increased peak discharges or velocities. This approach prevents sudden flow surges that can exacerbate flood frequency or severity and is consistent with the requirements of the Auckland Council Stormwater Code of Practice 2025 (Version 4) and NIWA Stormwater Management Devices Design Guidelines. It is acknowledged that, while peak flows are controlled, the total runoff volume from the site will increase as a result of urbanisation. This may lead to a marginal increase in the duration of flows downstream. However, this extended duration occurs at a lower, controlled rate, meaning that while water may remain in the system slightly longer, it does not result in greater flood depth or hazard to downstream properties. The longer, flatter hydrograph is a well-understood and accepted outcome of peak flow attenuation and does not typically cause adverse effects in open-channel or rural drainage environments, provided peak capacity is not exceeded. Should further refinement be required, the model can be readily extended to assess additional intermediate AEP events (e.g., 2%, 5%, or 20%) to provide a more detailed understanding of potential impacts during more frequent rainfall events. The modeling already incorporates current downstream conditions and drainage characteristics, and shows that the stormwater management system is functioning within accepted performance thresholds.

		Overall, the proposed attenuation strategy provides effective mitigation of downstream flood risks. The applicant remains open to undertaking supplementary modelling or analysis, if required, to confirm that the development will not increase the frequency, severity, or material duration of flooding to downstream properties. This ensures a robust, site-specific, and policy-aligned approach consistent with best practice engineering and regulatory expectations.
	b) The Applicant has used “reservoirs” in HEC-HMS (Hydrologic Engineering Center’s Hydrologic Modeling System) to model ponds 2 and 3. The Applicant does not clearly state how the discharges from these ponds are linked to the downstream water level, but these are typically represented in HEC-HMS as inlet-controlled structures (e.g. orifices). This is a concern for the validity of the modelling of these ponds in larger events, where backwater may be significant. Industry best practice would be to use alternative methods, such as modelling the ponds in HEC-RAS (Hydrologic Engineering Center - River Analysis System) to represent the complex relationship of storage, pond outflow and downstream conditions.	Tailwater effects have been accounted for in the modelling. Please refer to the Stormwater Modelling data that is supplied in response 1.1.10
	c) The Applicant has not assessed the potential impact on maximum / frequency of predicted flood hazard for storms which are not homogenous across the entire catchment, but which still present potential flood risk, especially where a storm event is located over the lower half of the catchment. This is considered important as storms which vary across catchment can result effects which would otherwise not be apparent if the analysis uses a homogenously distributed storm.	The stormwater system has been designed in accordance with the Auckland Council Stormwater Code of Practice 2025 (Version 4), which accepts the use of homogeneous storm distributions for flood hazard assessment. In this case, the system attenuates flows to match pre-development peak flow rates under fully homogeneous storm conditions. This modelling approach represents a conservative, worst-case scenario for the catchment, where rainfall occurs evenly across all contributing areas. While it is acknowledged that spatially varied storms may influence localised flood behavior, the post-development discharges are throttled through attenuation ponds and released at controlled rates. This means that any increase in downstream flooding due to storm spatial distribution would be less severe than the fully contributing homogeneous storm scenario already assessed.

	d) The Applicant has not assessed the potential impact on maximum / frequency of predicted flood hazard for shorter duration storms, i.e. which are not 24 hours in length, especially where the duration of the event is aligned with the time of concentration (**ToC**) of the development site. This is considered important as the storm related to the ToC of the development is expected to be most likely to have effects on downstream flooding.	The Applicant acknowledges the concern regarding shorter-duration storms aligned with the site's time of concentration (ToC). However, the stormwater modelling follows the Auckland Council Stormwater Code of Practice 2025 (Version 4), which uses a 24-hour design storm as the standard for flood hazard assessment. This duration is widely accepted because it captures the full runoff response, encompassing shorter, high-intensity events, thus providing a conservative, worst-case scenario. The development includes attenuation ponds that regulate peak flows to match pre-development conditions across key AEP events (1%, 10%, and 50%). This attenuation smooths flow peaks and controls discharge rates, effectively decoupling site runoff peaks from specific storm durations, including those aligned to the ToC. Shorter duration storms generally produce lower total runoff volumes than 24-hour storms of the same AEP, and the attenuation system manages these flows to prevent downstream flooding. Given this, and the conservative nature of the modelling, further assessment of shorter duration storms is not considered necessary. If required by the Panel, the model can be adapted to simulate shorter storm durations, but such analysis is unlikely to materially change downstream flood risk outcomes.
1.1.5	The proposed works include cut earthworks to below existing groundwater levels, however there is no information provided on how groundwater will be managed. There is also no assessment or information provided on the effect of groundwater management on the conveyance channel, ponds, roads and other buried infrastructure. *Note: also see Point 4 of this memo for further details in this regard*.	Please refer to the Earthtech Sunfield Groundwater and Settlement Monitoring Plan included in the substantive application. An Addendum from LDE to the Initial Geotechnical Assessment Report is being prepared to address this specific query.
1.1.6	Clarification is required of the vertical datum used in design: NZVD2016 or AUK46. The engineering drawings contain conflicting vertical datums - some sheets state levels are in NZVD2016, while others state AUK46. Given the flatness of the Site, even small differences between these datums could significantly affect hydraulic performance. Provision of the Digital Elevation Model (**DEM**) used in	All proposed levels are in accordance with NZVD2016. All sheets will be updated accordingly.

	the Applicant's analysis is required as we are getting significant discrepancies between our generated DEM and the culvert invert information provided.	
1.1.7	The flood modelling lacks sensitivity analysis of key design parameters, such as Curve Number (CN) and other catchment parameters. Given the existing extensive and significant flood risk, a sensitivity analysis is required to understand the appropriateness and range of likely outcomes based on realistic upper and lower bound design parameters. In particular, the underlying peat soils are known to have extremely high variability in infiltration rates.	A Curve Number (CN) value of 74 has been adopted in the flood modelling not only to maintain consistency with the design parameters used in the design of existing stormwater infrastructure, including the Awakeri Wetlands Stage 1, and the Papakura Integrated Catchment Management Plan (ICMP), but also because it appropriately reflects the hydrological response of the underlying peat soils. Geotechnical observations indicate that the top crust of the peat soil can harden when exposed to oxygen, reducing infiltration and causing surface runoff to increase. This behavior supports the use of a relatively high CN value of 74, which accounts for the tendency of these soils to shed water rather than absorb it. This CN value is based on calibrated modelling inputs previously accepted by Council and other regulatory authorities, developed from local land use, soil characteristics, and hydrologic conditions. The application of CN 74 in existing infrastructure such as the Awakeri Wetlands Stage 1 has demonstrated effective performance under a range of storm events. Maintaining this value ensures alignment with catchment-wide planning assumptions and provides a realistic, conservative basis for runoff estimation. Please see the response from Maven in Appendix A for further detail.
1.1.8	The lodged documents include the McKenzie & Co "Sunfield Fast Track Application – 3 Waters Review memorandum (Lodged document #14, dated 24/01/2025) and the CKL "Stormwater Management - Proof of Concept Review" memorandum (Lodged document #13, dated 10/02/2025). The McKenzie & Co memorandum states that their review is "subject to an independent flood model peer review". The CKL memorandum states that they	The Applicant confirms that CKL Consultants have been engaged and are underway with the direct review of the stormwater modelling, upon completion the Peer Review will be submitted for review.

	reviewed inputs into the model based on the Stormwater Modelling Report, but they did not review the models directly.	
1.1.9	CKL's memorandum recommends that a formal peer review of the hydraulic models be undertaken. The Applicant has not provided any evidence of an independent peer review of the hydraulic models. Therefore, it is critical that Auckland Council (Healthy Waters department) receives the additional information requested in order to assess the impacts of the proposed development.	The Applicant confirms that CKL Consultants have been engaged to carry out a full and independent review of the Sunfield Hydraulic Models, upon completion the Peer Review will be submitted for review.
1.1.10	Given the insufficient hydraulic analysis presented in the application, Healthy Waters department of Auckland Council is currently updating the catchment-wide flood models to assess the effects of the development. However, as described above, there is missing information which prevents the Healthy Waters department from understanding the details of the Applicant's proposal, which limits their ability to prepare the model. We therefore request that the Applicant either provides: a) their hydraulic model files and Digital Elevation Model; or b) provide all of the hydraulic model input information and assumptions in a suitable format that can be used to prepare an independent hydraulic model of the Applicant's development.	The hydraulic model files and Digital Elevation Model (request (a)) are attached to this summary table within the following OneDrive Link for requested data: https://ipccnz-my.sharepoint.com/:f:/g/personal/yotsakw_maven_co_nz/EuDLdd-iZE1JsG_r1OoRj0MBDUnx99oSqSkbTi1uqdoFyQ?e=4TkLq0
1.2.1	The proposed earthworks include the redistribution of large volumes of cut and fill materials across the Site. Much of the proposed development will be supported on peat soils that are highly susceptible to consolidation settlements. There is no assessment of settlement caused by the proposed earthworks – the Applicant has only presented information on possible settlement effects from building loads. There is brief mention of this risk in Section 8.4.1 of the geotechnical report which recommends that an assessment is undertaken at the EPA application stage, however this assessment has not yet occurred and is fundamental to understanding the effects	Land and Development Engineering (LDE) are providing an addendum to their initial reporting that specifically addresses the settlement effects from placement of fill material. It should be noted that pre-loading of lots and /or undercutting of soft compressible materials is standard practice for addressing settlement concerns. Pre-load trials have been designed and commissioned to accurately inform the level of settlement anticipated which will subsequently inform the method of remediation required. The Applicant would be happy to discuss amendments or updates to the proposed conditions which address ground settlement, if required.

	of the proposed development and the impact on the long-term performance of stormwater assets, infrastructure and properties.	
1.2.2	There are discrepancies between the visuals shown in the Masterplan compared to the Engineering drawings which are misleading. The masterplan shows a meandering stream-like feature running through the centre of the development, whereas the engineering drawings show this as a long, flat, wide, bare area utilised for stormwater attenuation. It may be envisaged that during the implementation stage the engineering design would be developed to create something resembling the masterplan, however this would require adding some gradient to the green corridor, which will reduce the storage volume, significantly change the earthworks levels and therefore could compromise flood management or require the green corridor to be much wider than shown which could affect the feasibility of the development. The engineering drawings should be updated to reflect a feasible waterway design to demonstrate that there is available space and capacity in the corridor provided.	The proposed low-flow channel is intended to be located below the invert level of the main channel and therefore is expected to retain permanent water, except where infiltration occurs prior to discharge. As it sits below the main channel's invert, the presence of the low-flow channel will not affect the overall conveyance capacity or hydraulic performance of the main channel.
1.2.3	There is no assessment of potential acid sulphate soils which are common in peat areas. Significant earthworks within acid sulphate soil areas can cause changes in groundwater and soil acidity which can have detrimental effects on underground infrastructure (such as stormwater pipes and manholes) and on the environment (such as changes in surface water pH).	This has been addressed under section 6 of the Groundwater Assessment, section 10 of the Groundwater and Settlement Monitoring and Contingency Plan and Section 8.5 of the Geotechnical Assessment Report. The typical response to constructing in acid rich soils is to specify the appropriate construction materials or dose soils with an alkaline additive.
1.3.1	An assessment of effects on downstream water quality treatment devices such as the McLennan Wetland is required. No such assessment has been undertaken as yet. The McLennan Wetland provides water quality treatment for a large portion of the Pahurehure Inlet catchment. The Applicant proposes to increase the catchment draining to the McLennan Wetland significantly (by approximately 55 hectares). Although the Applicant proposes to treat stormwater on-site, increasing flows to downstream treatment	The Existing McLennan Upper Wetland has been constructed to provide water quality treatment to 326ha of catchment. 57.3ha of this includes the portion of the proposed Sunfield development site that is situated in the existing FUZ zone. The development proposes adding an additional 54.9ha (Catchment A3) to the McLennan Upper Wetland. Water quality treatment to GD01 standard for this additional catchment will be provided by Stormwater Pond 4 within the proposed development, therefore the additional catchment discharging to the McLennan Upper Wetland is considered to be clean water

	devices can reduce their efficiency, therefore having adverse effects on the water quality of downstream receiving environments.	and therefore doesn't need to be treated for water quality by the McLennan Upper Wetland. The existing McLennan Upper Wetland can continue to provide its intended level of water quality treatment when an additional volume of clean water is added upstream, as long as the flow rate into the wetland remains unchanged. This arrangement maintains pollutant load, improves dilution, preserves retention time, and enhances the physical and biological treatment capacity of the wetland system. Refer to the Maven Memo in Appendix A for additional information.
1.3.2	An options assessment must be provided, detailing the options explored to determine the Best Practicable Option (BPO) for stormwater quality for each catchment area. This should include: a) An evaluation of the various stormwater management devices and strategies. b) An assessment of the lifecycle costs of each option, including capital, maintenance, and rehabilitation costs over a 100-year period.	Please refer to the Maven Memo in Appendix A for the evaluation and options assessment.
1.3.3	The stormwater treatment proposal proposes a primary, secondary, and tertiary treatment train approach. It is noted that Awakeri Wetlands and the Existing McLennan Wetland is proposed for providing tertiary treatment for the catchment draining to the Pahurehure Inlet. However, Stage 1 of the Awakeri Wetlands is not designed for water quality treatment and the McLennan Wetland was not designed for treating the additional catchment area proposed. An assessment is needed to demonstrate how the primary, secondary, and tertiary water quality treatment options will be GD01 compliant to meet water quality objectives.	The existing McLennan Upper Wetland is not proposed to undertake any water quality treatment function in relation to discharge flows from the Sunfield development. The proposed Stormwater Pond 4 provides water quality treatment for catchment A2 in accordance with GD01 prior to discharging via the Awakeri Wetlands through to the McLennan Upper Wetland.

1.4.1	A large conveyance channel and secondary swales are being proposed to contain flood flows within the site. Containing 100-year flows into a single channel can create a massive amount of energy for erosion potential both within the channel and at the downstream receiving environment. The proposed development layout is based on the current size, location, and capacity of the constructed stream network. However, stream networks are dynamic and will respond to changes in hydraulics over time, by deepening, widening, and meandering. There is no consideration of these effects in the application. A Geomorphic Risk Assessment is required to: a) **Evaluate the Current State of the Network:** Assess the present condition and sensitivity of the present stream networks, including its response to flow modifications and increased impervious surfaces, as well as assess the strength and resistance parameters of the soils to be used for the constructed networks. b) **Identify Development Impacts and Mitigation Strategies:** Determine whether the proposed development will affect the health and stability of the stream network over the design life of the development and provide a detailed mitigation plan to address any adverse impacts. c) **Assess Natural Hazards and Public Safety Risks:** Evaluate whether the stream network's sensitivity poses risks to the development or public safety. Develop strategies to mitigate these risks, with a preference towards nature-based solutions and green infrastructure. Proposed strategies should:	It is unclear if the request is for the proposed internal SW network or the existing receiving environment SW network, or both. It is also unclear what is being requested and how this fits into accepted best practice assessment criteria. The basis for mitigating stream and channel erosion for the Sunfield project has been meeting the requirements for SMAF 1. This is sufficient to address the potential issue of instream/channel erosion. The risk of erosion in stream channels is predominantly linked to velocity of flow, both the internal and external stormwater networks are very low velocity environments and therefore should not be at risk of accelerated erosion. The development proposes to maintain the flow rate, water level, and flow cross-sectional area at the discharge points at levels equal to or lower than existing conditions. As such, no additional erosion risk is anticipated at the downstream receiving environment. We note that a Geomorphic Risk Assessment was not carried out for Stage 1 of the Awakeri Conveyance Channel nor was this requested as part of the Resource Consent assessment for Stages 2 and 3. Within the site, given it is predominantly flat, accordingly the proposed channel gradients are also relatively flat, resulting in low flow velocities that are unlikely to cause significant internal erosion. Nevertheless, to address any potential erosion risks, the detail design could incorporate energy dissipation measures such as grade control structures, check dams, and appropriately sized riprap at strategic locations. In addition, the channels will be stabilized using engineered linings or vegetation, as appropriate, to reduce shear stress along the channel surfaces. The Applicant confirms it is happy to meet with Council to understand and discuss the request ahead of submitting a Stormwater Management Plan for the development.

	a) Specify the type and scale of instream and stream margin work required to manage ecological and geomorphological impacts and ensure resilience to future flow changes. b) Ensure that instream and stream margin work improve degraded channels over time or maintains high-value stream conditions where they exist. c) Prioritise nature-based solutions and green infrastructure that are resilient and adaptable to climate and flow changes, rather than relying on permanent hard engineering solutions.	
1.4.2	The Applicant proposes to divert a 350 hectare upstream catchment around the proposed development site using a large open swale. The swale has a proposed width of 20-40m, 2.2km long, a 10m wide base, depth of between 2.18m - 7.36m, and an average longitudinal gradient of 0.4%. The swale has a flat base and 1:3 side slopes. The channel is proposed to be grassed, with subsoil drains under the base. It is unlikely that such a channel would be feasible given that the 350 hectare upstream catchment is expected to have a permanent baseflow which has not been allowed for. There is mention that a low flow channel will be added during detailed design to form a natural stream. This is not something that can be left to detailed design because designing this corridor as a naturalised stream is likely to significantly change the dimensions, scale and form of the corridor, which will impact on the layout of the development. A design of the diversion stream is required which should include the considerations highlighted above in the Geomorphic Risk Assessment.	The primary function of the diversion channel is to serve as an engineered conveyance for stormwater. It is not intended to function as a stream with ecological value; therefore, we do not consider a baseflow channel to be necessary. The current channel cross-section is designed to accommodate any storm event up to the 100-year. If a low-flow channel is proposed during the detailed design phase, it would be situated below the invert level of the main channel and would retain water continuously, unless infiltration occurs prior to discharge.

1.5.1	Supporting information that demonstrates how the proposed extents of the Local Purpose Reserves (Drainage) is delivering both an essential stormwater function and additional public benefit or function (e.g. passive or active recreation, amenity, etc.) which cannot otherwise be achieved if these areas remained in private ownership.	When reviewing the scheme plan and masterplan concurrently, it can be seen that the Local Purpose Reserves (Drainage) are providing an essential stormwater function through the conveyance of stormwater, whilst providing public areas of benefit with areas of amenity, connectivity and passive recreation. The Local Purpose Reserves (Drainage) are seen as multiple use spaces, identical in nature to the adjacent recently completed Awakeri Wetlands. The Open Space Strategy Design Report details the design and utilization principles for the proposed open space. There are several conditions of consent proposed to ensure detailed design drawings are provided prior to the commencement of works for these areas, and prior to issuing the 224c certificate.
1.6.1	An assessment of the proposal against AUP Chapter 8 Stormwater - Diversion and Discharge and E9 High Contaminant Generating Areas is required.	<u>Chapter 8 Stormwater – Diversion and Discharge</u> The objectives and policies of the AUP Chapter 8 Stormwater – Discharge and Diversion revert to Chapters E1 Water quality and integrated management and E2 Water quantity, allocation and use. These have been assessed within the Planning Report at section 9.4 (pages 270 to 275). Recognising the overall activity status is a non-complying activity, given this infringement is a discretionary activity, there are no assessment criteria relating to this reason for consent (noting the general commentary within the planning report on assessment criteria at section 9.6). It is therefore considered that an assessment of AUP Chapter 8 Stormwater - Diversion and Discharge has occurred. <u>Chapter 9 High Contaminant Generating Car-Parks and High Use Roads</u> It is acknowledged that the reasons for consent under the AUP Chapter E9 High Contaminant Generating Car-Parks and High Use Roads have not been addressed. The proposal involves high contaminant generating car-parks which are exposed to rainfall and designed for more than 30 vehicles. The proposed roads within Sunfield will not carry more than 5,000 vehicles per day (approximately 3,000 is anticipated), meaning they are not classified as high use roads. Therefore, the proposal infringes the following clauses of the AUP:

		• (A6) Development of a new or redevelopment of an existing high contaminant generating car park greater than 5,000m^2 is a controlled activity. The proposal involves 21,000m2 of high contaminant generating carparks in three separate car parks. It is proposed to comply with the controlled activity standards contained in E9.6.2.1. As a non-complying activity overall, the impacts and effects associated with stormwater run-off, including stormwater quality have been addressed in the technical reports accompanying the application which has considered the overall development proposal. Likewise, the objectives and policies of the AUP Chapter E9 High Contaminant Generating Car-Parks and High Use Roads revert to Chapters E1 Water quality and integrated management and E2 Water quantity, allocation and use. These have been assessed within the Planning Report at section 9.4 (pages 270 to 275), recognising the consideration of the overall development proposal.
Section 2.0	**Transport**	
2.1.1	The Sunfield proposal does not account for the proposed Mill Road 'road of national significance' project, and this proposed road alignment would have a significant impact on the proposal and hence it would also significantly impact the potential delivery of the project. Consequently, the proposal's roading network does not reflect or integrate with the anticipated Mill Road corridor. The following information gaps are identified:	There has been no account for the Mill Road NoR within the Sunfield substantive application as SDL had no knowledge of NZTA's proposed intention as it related to Mill Road when the Sunfield substantive application was lodged. Notwithstanding this SDL and NZTA have been working constructively and collaboratively together since the NoR to ensure that the section of Mill Road Stage 2 can integrated into the Sunfield development.
2.1.1a	a) An assessment is required against the Mill Road Notice of Requirement (**NOR**) that was lodged by NZTA on Friday 13 June 2025 and for which the designation has interim immediate effect and now forms part of the receiving environment. This should include an assessment of traffic conditions around the site.	The Applicant notes that the Mill Road NOR does not form part of the "receiving environment". For a comprehensive response to Item 2.1.1a please refer to the Commute memo in Appendix C.

2.1.1b	b) The existing transport assessment should be updated to consider the Mill Road NOR in the design of the proposed internal roads and in terms of the assessment's underlying assumptions. For instance: • Whether an arterial road through the development has any impact on the transport assessment's intention of a 'car-less' development, particularly on active mode and connections to the employment areas; and • Whether the road would affect the envisaged employment district and the trip generation and network assignment assumptions; and • Whether Mill Road could impact the proposed idea of the Sunfield 'loop' road and connections to adjoining AT road networks; and • Any other implications for proposed network and land use activities and travel demand measures; and • Any changes to offered conditions of consent including those relating the staging of development and networks.	For a comprehensive response to Item 2.1.1b please refer to the Commute memo in Appendix C.
2.1.2	The consultation summary should be updated to include any consultation between the applicant and NZTA with regards to the Mill Road project.	Prior to lodging the Sunfield Fast-track application, SDL endeavoured to engage with NZTA but with limited success. Lodgement of the NOR – Mill Road Stage 2 was made on the 13th June 2025. Engagement between SDL and NZTA has occurred at meetings on four occasions since the 28th of May 2025, subsequent meetings took place on the 18th June, 23rd June, 2nd July and the 16th July 2025. SDL and NZTA continue to work constructively and collaboratively together since the NoR to ensure that the section of Mill Road Stage 2 can integrated into the Sunfield development.

2.2.1	The Applicant should provide assessment for various sensitivity test scenarios to provide more confidence that the network can respond to a range of possible future scenarios and still function. Auckland Transport (**AT**) recommends that the Applicant undertake transport modelling for at least two scenarios where the proposed methods to reduce trip generation are less effective. This should include scenarios where lower internal employment rates are assumed. The following is requested with regard to transport modelling: a) AT notes the 0.65 trip generation figure used in the transport assessment for 'standard' residential developments might be higher. An updated modelling assessment should relate this figure back to relevant trip generation standards or other development. In this regard AT notes other Commute transport assessments have noted up to 0.85 residential trip generation rates. b) The transport assessment notes that the underlying assumptions need to be in place to achieve the mode share proposed and that "planning provisions" are important in delivering this mode share. The updated transport assessment needs to clarify what these planning provisions are and how they will be effective. c) Clarify if and how the proposed internalisation (50%) of trips affects their assumed vehicle trip distribution assessment. d) Clarify why 10 years was used for transport modelling when the proposed development is intended to take 15 years. e) Confirm if the provision of car share parking spaces (ratio of 1:11.5) has been accounted for in the trip generation rates assumed. f) The Cosgrave Rd/ Walters Rd/ Hamlin Rd intersection appears incorrect in terms of the land configuration.	Due to the imposition of the proposed Mill Road Stage 2 (MR2) the project traffic modelling will require to be reviewed and updated. Commute Traffic Consultants are currently liaising with NZTA over the traffic modelling data. MR2 will have a positive effect on the Sunfield proposal and the adjoining transport network, these effects will need to be carefully considered and understood. The Applicant is happy to work through any external impacts (intersection, cycle, micromobility, pedestrian and road upgrades) identified through the subsequent update of the Sunfield ITA. A more detailed response is contained in the Commute memo in Appendix C.

	Confirm if the layout of this intersection as used in the transport model is correct.	
2.2.2	The ITA states that continuous monitoring is recommended to ensure the desired modal share is achieved. It is recommended that a robust set of monitoring conditions are provided by the Applicant to ensure that caps are in place when the number of trips exceed the trip generation anticipated in the ITA. The monitoring conditions may be similar to other locations where the number of vehicle trips are restricted such as Auckland's Wynyard Quarter or the Beachlands South Precinct Plan (Precinct I458 in the Auckland Unitary Plan).	The Applicant is open to collaboratively drafting a monitoring condition to ensure the desired modal share is achieved.
2.3.1	The measures to avoid car ownership include preventing homeowners from owning a car(s) through covenants or similar (see 12.3 of the ITA) as well as significant physical parking restrictions are questioned. Aside from the fact that the Applicant's draft conditions do not appear to implement this proposal, the Applicant should in any event provide further evidence as to the legality, enforceability and effectiveness of the mechanisms they have proposed, and other potential mechanisms should the proposed solutions be determined to be unable to be implemented.	There will be no measures to prevent car ownership imposed on homeowners in Sunfield. The measures proposed to support a car-less outcome for the Sunfield development include: 1. Design led restrictive pavements – Pavement surfaces will be designed to avoid facilitating car parking spaces within the residential areas. 2. Road marking and signage – no stopping marking and signage will be implemented in areas of no parking. 3. Residents Society – there will be an over aching resident's society that will have the power to enforce parking restriction and remove parked vehicles from restricted areas. 4. Incorporated Societies – each COAL will have an Incorporated Society attached that will have the power to enforce parking restriction and remove parked vehicles from restricted areas. 5. Alternative mode support – alternative modes of transport will be provided or supported. There is a loop road within the centre of the development that supports a dedicated bus lane and provides links to the local transport hubs in Papakura and Takanini. There are local hubs that provide ride share pick up and

		drop off locations along with charging and storage stations for micro mobility and cycling modes.
2.3.2	No assessment of the proposal with regards to the Plan Change 79 accessible parking requirements has been provided.	Plan Change 79 is not currently operative, recognising it is under appeal with 13 appeals and numerous section 274 parties seeking a wide range of relief, with the Council decision being made in October 2023. Equal weight can therefore be afforded to the objectives and policies of the operative plan and plan change, noting that Plan Change 79 does not represent a significant policy shift and the changes are quite narrow in intent and are essentially refining transport related matters. Overall, the application is a non-complying activity meaning all transport related matters can be considered, and have therefore been assessed within the planning report and transportation assessment. The objectives and policies of Chapter E27 regarding transportation have been assessed within the planning report (pages 277-283), with Plan Change 79 looking to amend these with particular regard to safe and efficient access, and accessible car-parking spaces and bicycle parking. These matters have been reflected in the subject proposal and technical assessments, recognising that conditions have been proposed regarding public and private lighting (100 and 101), EV stations (113), the staging of transportation upgrades and transportation design requirements (122 to 130) to ensure the effects of the proposal are mitigated. With regard to accessible parking spaces, it is intended that the proposal complies with the requirements of Plan Change 79 regarding accessible parking numbers and dimensions. A new condition is currently being prepared to ensure this eventuates.
Other	AT does not consider that implementing parking management in neighbouring suburbs as a result of the high level of spillover parking is viable. It is also not an easily supported solution for AT. The following is also noted by AT: a) Parking restrictions within the Site and adjacent neighbourhoods would require significant resources for AT	Acknowledging these statements which are addressed below, and point (e) and Plan Change 79 has been addressed under 2.3.2 above. a) As per the response in 2.3.1, the Applicant is not proposing AT enforce the parking restrictions within the proposed Sunfield development.

	to continually enforce (and physically maintain). Essentially the Applicant will require AT to ensure the feasibility of the Applicant's proposal with regard to the proposed lower car ownership. This approach is generally not supported by AT. b) AT can also note that the proliferation of parking restrictions can lose its adherence value over time as resident becomes overwhelmed and frustrated by significant number of parking rules. c) The legality and enforceability of banning car ownership is also questioned. This also does not seem to be a condition of the proposal due to sheer number of infringements. d) Limited consideration is given to factors such as rain, wind or people requiring medical visits that make it difficult to walk or access amenities/bus stops if car ownership is only at 10%. e) Plan Change 79 is now operative and the applicant should include an assessment against its provisions.	b) There are not a significant number of parking rules proposed. Parking restrictions will be made clear from the outset. SDL has a significant vested interest in ensuring adherence to the parking restrictions and will therefore be focused on monitoring the success of these. c) There is no proposal to ban car ownership. What is being proposed is to provide credible alternative forms of transport so that car ownership is not required. d) The bus stops, local hubs and neighbourhood service hubs will provide adequate shelter from the elements to accommodate alternative forms of transport other than private motor vehicle. e) As per response in 2.3.1, Plan Change 79 is not yet operative
2.4.1	The draft conditions state that the Sunbus service be provided with the completion of 890 *dwellings* on site. However, the transport assessment notes that with the completion of 890 *lots* a frequent transit service is required between the site and the Papakura Town Centre and that it is recommended as a joint venture between AT and the Applicant. Clarification of this discrepancy between these two documents should be provided.	The transport assessment should read '890 dwellings'.
2.4.2	Information on how the development will be serviced with public transport and internal employment in early stages of the proposal (including prior to 890 dwellings constructed) should be provided. There should also be an assessment as to whether this could cause	The development will be serviced by existing public transport options prior to the construction of the initial 890 dwellings. These services are outlined within section 4.5.2 of the Integrated Transportation Assessment Report. • The first stages of development are to be in the southern portion of Sunfield, which will be within walking distance of Bus Route 372, a connection service to

	earlier residents to remain reliant on private transport as they will have external jobs.	the wider network. Takanini will also have a dedicated local bus from April 2026, being Bus 364. • Several neighbourhood service hubs will be constructed and will provide storage and charging for micro mobility transport along with limited parking for private vehicles. • The local hub will initially provide an at grade car park for private vehicles until the point that the internal public transport network is available.
2.4.3	Clear information on how the development will be serviced with other transport (i.e. private) during different stages of development without relying on AT to mitigate the effects should be provided.	This is outlined in the application and the responses in 2.3.1 and 2.4.2, including the proposed conditions of consent regarding staging.
2.4.4	Additionally, the Applicant has not provided a funding mechanism to demonstrate that the proposed Sunbus service will continue to function. Confirm how it will be managed in perpetuity and indicate the consequences or measures to ensure that the service does continue.	The Applicant, SDL, is a 100% subsidiary of Winton Land Limited. Winton Land Limited is a NZX and ASX listed developer of significant financial capability. Winton will establish and fund an operating company to purchase, operate and maintain a fleet of Sunbuses as required to cater for demand at Sunfield and as specified in conditions 114 and 120. The Applicant is dedicated to the provision of the Sunbus as evidenced by the dedicated bus lane incorporated into the design for the development. The proposed automated bus fleet is to be provided by Ohmio Automation Limited and has NZTA level 4 approval and can be licensed to operate on New Zealand roads which allows for connection of the service outside of the Sunfield development. The infrastructure i.e. a bus lane will be in place in perpetuity and therefore this allows for contingency or supplementary measures to be implemented such as public transport/buses.
2.5.1	The ITA states that part of the vision includes linking the site with Papakura town centre and rail station, and Takanini town centre and rail station. However, the draft conditions only include cycle facilities (shared path) on Cosgrove Road between Walters Road and Clevedon Road, and there are no requirements or triggers for wider network	Acknowledging this statement. There are cycling upgrades proposed in the implementation plan of the ITA being "*Connect the development site to key local destinations by providing improved active*

	upgrades. This will not achieve the vision as the necessary connections are not made, and the proposed shared paths are not suitable for commuter cycling as these cyclists often prefer the road to shared paths. Thus, cycle uptake will not be effective in contributing to the necessary lower car trip rate. AT also highlights that shared path are generally only acceptable for short sections as they present a safety issue due to cyclist speeds.	*mode facilities on Cosgrave Road between Walters Road and Clevedon Road*" which are proposed to "*To be completed as part of the Stage 2 works*". It is noted that the development site will connect to the future cycling network with the upgrades proposed. Figure 7-2 of the ITA shows the intended upgrades proposed by the development on Auckland Transport's Cycling and Micromobility Programme Business Case (CAM-PBC) map in the wider Takanini area (noting that these are future proposed link).
2.5.2	AT also requests that the Applicant provide further justification for providing shared paths instead of separated walking and cycling facilities.	Shared paths are considered appropriate design treatment, especially along Cosgrave Road which will have limited driveways (arterial road).
2.5.3	The transport assessment only assesses the site and three limited cycling connections from the site on the network. Additional assessment and likely, additional walking and cycling upgrades must be provided by the Applicant on the roads adjacent to their site but also on the wider network.	It is considered that the appropriate cycle connections have been addressed as part of the transport assessment given the nature of the surrounding transportation network and destination points. There will likely be other private connections (e.g. the school on Cosgrave Road) in addition to those shown in Figure 7.2 of the ITA.
2.6.1	The application documents refer to a loop road which is a circular road within the development that allows vehicles and the proposed Sunbus to circle around the neighbourhood, the transport assessment indicates this on multiple plans. However other plans including the Engineering Plan – Proposed Roading External Intersection Overview Plan – M-C341 show that this loop has a gap and does not complete full circle. Confirm the roading layout and if the route is not continuous assess what implication this has for the proposed public transport route as well as walking and cycling.	The Applicant does not own all of the land subject to the Sunfield FTAA application, the Masterplan has shown the preferred outcome for the Sunfield Loop Road through neighbouring properties under different ownership. The Engineering Drawings have shown there will be the ability for turnaround at the terminus of any roads where the loop road cannot be connected.
2.6.2	It is also unclear from the scheme plans and transport assessment exactly what roads are proposed to be vested as public roads. It is requested that a specific scheme plan be provided that clearly indicates all roads and accessways to be vested.	The Sunfield Scheme Plan document lodged with the substantive application indicates which parcels of land are to vest as Public Roads and which are to remain in private ownership.

2.6.3	Indicate when the loop road will be built in relation to when the proposal will require this to be functional.	The Sunfield Loop Road will be constructed in stages as the development progresses. As detailed in the staging plans provided.
2.6.4	Provide detailed information on how exactly parking will be managed on internal roads, especially given wide berms and wide road reserves.	Please see the response in Item 2.3.1.
2.6.5	Clarify why a flush median is proposed on the internal roads if the trip generation rate assumed is very low.	Flush medians are proposed as a safety measure to allow refuge for turning vehicles especially in the industrial areas and to provide flexibility in detailed design.
2.6.6	Clarify why the proposed bus lane within the Sunfield 'loop' is required if the trip generation rate assumed is very low.	The trip generation is low due to the provision of the Sunbus, which is considered to require a bus lane for efficiency and safety.
2.6.7	The bus lane also includes 'car parking' – this should be clarified.	Parking is not proposed in the bus lane.
2.6.8	Comment on the future volume of the east-west links through the site with wider future growth and how this could affect the proposal.	The east-west links are largely to service the internal requirements of Sunfield given rural land predominates to the east of the development. With the subsequent inclusion of the Mill Road corridor on the eastern boundary of the proposed development this will preclude any further east west links being considered. This is being reviewed by Commute as part of the revised Mill Road modelling / design.
2.6.9	The ITA states that movements at several intersections are expected to operate at a Level of Service (LOS) F, which is not considered acceptable particularly when it affects the through movement on a busy arterial road. It is recommended that the performance of any intersections that are assessed to operate at a LOS F should be remodeled with appropriate mitigation to ensure the intersection can operate within capacity.	Having LOS levels at F for single movements at intersections in peak hours is very common throughout Auckland. It is noted however, that the modelling is being revised in response to the Mill Road NOR as noted previously.
2.7.1	A safe systems approach needs to be used by the Applicant in their internal road design, external upgrades, and effects on the wider road network. In this regard, AT considers that the Applicant needs to	The safety of users has been considered in the road design / type (e.g. separate bus lanes, separated cycling lanes, flush medians), and the provision of signalised intersections with priority crossings. This will be refined at the detailed design stage.

	fully investigate the effects of their development on the safety of the adjacent road network and further investigate what interventions are required on the network to ensure safety based on the increase in trips. For instance, traffic calming adjacent roads, pedestrian crossings on adjacent roads, separating walking and cycling facilities, etc.	
2.7.2	The Applicant also needs to assess the road safety elements of the internal loop road and how pedestrians can safely cross this wide road reserve including how they can safely cross the proposed bus lane.	The movement of pedestrians was considered ahead of submission, dedicated pedestrian (zebra) crossings and pedestrian thresholds and refuges have been included in Engineering Design drawings as part of the initial substantive application.
2.8.1	More reliance and information on travel demand management plans are recommended for each component of the employment component. This should include further conditions on travel demand management plans and also provide draft travel demand management plans for AT's review.	The Applicant is happy to provide a draft travel demand management plan for review if requested that will align with proposed condition 130.
2.8.2	The Applicant should also comment on who will be responsible for enforcing and travel demand management plan(s).	As per proposed condition 130, a travel plan for the Employment Precinct is required to be provided for each business prior to occupation of the building. This is to be submitted and approved by Council. It will therefore be the responsibility of the employer to uphold the travel plan and have their own internal policies and procedures for managing compliance. Given this is a proposed condition of consent, it will ultimately be enforceable by Council and/or the incorporated societies or any other person.
2.8.3	The proposed Travel Plan in draft Condition 128 promotes measures to reduce reliance on private vehicle use. This is not considered sufficient to ensure the significant reduction in car use anticipated by the development. It is recommended that all employment and industrial activities include comprehensive and robust measures to ensure the modal share and peak time truck bans are adhered too. This could be in the form of conditions imposed on the resource consents.	Proposed condition 130 relates to employment and industrial activities, which requires maximising other forms of transport and promoting vehicle movements for warehouse distribution to off-peak hours.

2.9.1	Provide more details on construction and earthwork traffic which include the proposed numbers of trucks and their routes.	Given the request to have flexibility around delivery staging it is difficult to provide the level of detail requested. It is considered that the draft management plans provided within the substantive application, and the respective proposed conditions regarding updated management plans being submitted, provides an appropriate level of detail for the proposal (which is in line with standard practice).
2.9.2	Identify whether the routes to be used by the heavy vehicles can withstand the proposed heavy vehicle trips and what mitigation is proposed to prevent damage to the roads.	As with the response to 2.9.1, given the request to have flexibility around delivery staging it is difficult to provide the level of detail requested. However, the Applicant would expect that the level of service of existing roads would be adequate to provide safe access to land in areas of growth. It is considered that the draft management plans provided with the submitted application, and the respective proposed conditions regarding updated management plans being submitted, provides and appropriate level of detail for the proposal (which is in line with standard practice).
2.9.3	A pavement impact assessment condition should be provided.	It is unclear which pavement is in question here. However, if there is an assessment required of any existing pavements then the Applicant would expect this is a function carried out by the applicable roading authority.
2.10.1	We are concerned that the low provision of car parking may lead to problems for accessing the site, including for emergency services. This issue has been encountered in the adjacent "Addison" subdivision and is discussed in Council's research report "Living in Addison: An investigation into the lived experience of a master planned housing development in Auckland", November 20191. It is recommended that the Applicant identify how the issues identified in Council's review of the Addison development will be avoided for the Sunfield development.	The design of all private and public access will allow for the unrestricted passage of emergency services. The minimum pavement formation is 6m in width. As per the response in 2.3.1, there are several mechanisms proposed that will ensure that adequate, safe access is available.

2.10.2	The ITA states that a house could be up to 135m from fire truck access. It is recommended that FENZ and other emergency responders such as Hato Hone St John provide input to confirm compliance and practicality.	FENZ regulations have been addressed as part of the initial submission. As with response to 2.10.1, adequate access will be ensured. The Applicant is happy to liaise with medical providers to confirm any access requirements.
2.10.3	No assessment against the Plan Change 79 standards has been provided with regards to the clear legal and physical width requirements for emergency access where pedestrian-only access is provided.	See query 2.3.2 regarding Plan Change 79.
2.10.4	More information is needed on the usage of the trafficable laneways. The Masterplan documents suggest that vehicles can access most laneways including emergency services and moving trucks. The ITA suggests that servicing and loading is limited to the service hubs. If the 6m trafficable lanes are open to vehicles, what measures will be in place to ensure households do not use the lanes to access and park closer to their house. If obstructions are proposed to limit vehicle access, for example bollards, how will access be enabled for emergency services and moving trucks?	With the car-less design proposed, the lanes around the residential dwellings will not be required to cater for typical residential traffic. Rather the residents that have a car will park in areas around “hubs” and walk to their dwelling. As a result, the laneways will only need to cater for weekly rubbish collection and emergency access (fire / ambulance). Figure 10-4 in the Commute response memo shows a typical residential hub arrangement. Please refer to the response in 2.3.1. and the Commute memo in Appendix C.
2.10.5	There is limited information on the proposed ‘neighbourhood service hubs’ that will cater for rubbish trucks and loading vehicles which are proposed to be located within 75m of each dwelling. No dimensions or vehicle tracking has been provided to show heavy vehicles can safely maneuver into and out of the hubs. In addition, the practicalities of moving furniture and other heavy items up to 75m from the service hub has not been addressed. Further, it is unclear how these hubs will be managed, particularly to ensure they are not used for parking for residents or visitors cars.	The Applicant will provide vehicle tracking curves with the detailed design EPA level drawings. The Applicant has liaised with Rubbish Direct and confirmed the proposed private accessway layouts are amenable to smaller private sector rubbish collection. Please refer to the response in 2.3.1 which addresses how parking restrictions will be managed.

Section 3	**Water / Wastewater**	
3.1.1	The Applicant must provide clear and detailed evidence of permanent private servicing solutions for both potable water and wastewater for the entire Sunfield FTAA.	The Applicant is not proposing a private servicing solution for water or wastewater for the Sunfield development. Please refer to the Maven Memo for a detailed response.
Section 4	**Groundwater**	
4.1.1	Engineering drawings for the proposed development (Proposed Overview, Cut / Fill Plan, prepared by Maven Associates, Rev: A, dated February 2025) were not available during preparation of the Geotechnical Report, prepared by LDE, Project Ref: J01627, dated 6 December 2024, and which referenced Cut to Fill Plans, prepared by Maven Associates, Rev: C, dated December 2023, which show different excavation levels. Therefore, a geotechnical review of the proposed works must be undertaken, with reference to the latest earthworks plans, which confirms if the assessment, recommendations, and conclusions in the Geotechnical Report remain relevant. If the review concludes that they do not, an updated Geotechnical Report must be provided.	LDE are preparing an addendum to the Initial Geotechnical Assessment that addresses the updates to the earthworks drawings.
4.2.1	No clear assessment of the proposed activity against AUP Standards E7.6.1.6 and E7.6.1.10 has been provided. An assessment of the proposed activity against each of the permitted standards E7.6.1.10 (1) to (6) and E7.6.1.6 (1) to (3) should be undertaken based on the proposed Cut/Fill plan (February 2025) noted above to confirm whether or not the application complies with each.	Diversion of groundwater not otherwise provided for has been applied for as a reason for consent (E7.4.1 (A28)) as a restricted discretionary activity, recognising that overall, the activity status of the consent is non-complying, meaning all effects and statutory matters can be considered. The application provides a groundwater assessment, groundwater and settlement monitoring plan, and a vast array of groundwater related conditions which ensure the effects have been understood and effects can be mitigated. An assessment of the proposed activity against the AUP standards will be provided as an Addendum to the initial geotechnical assessment.
4.2.2	The Applicant needs to confirm whether the proposal is a Restricted Discretionary Activity (RDA) under the NES-F (45C) or not, providing justification. If it is, then an assessment of effects is required.	Consent has been sought under regulation 39 and 42 of the NES-F, primarily out of caution given the natural inland wetland is to be protected and enhanced to form part of

		the Wai Mauri Stream Park. The respective reports therefore provide an appropriate assessment of effects in this regard. Whilst the proposed reserve provides benefit for the wider urban environment and creates a well-functioning urban environment, the work required is not required for the purpose of constructing urban development per se, as it is to create an enhanced open space area. It is therefore deemed that this is not a reason for consent. If the Panel have a differing view, then we are happy for this to be included as a reason for consent, recognising the intent of the proposal to protect and enhance the wetland and the assessments undertaken to date.
4.3.1	Critical geological cross-section(s) through the site that show the locations and depths of soil investigations that have been undertaken, estimated groundwater levels, existing and proposed ground levels, site boundaries, retaining walls, building platforms, driveways, buried services (including stormwater and wastewater) are required in order to determine groundwater drawdown effects. This information has not been provided as part of the application.	The Applicant has provided the information in Appendix 2 of the LDE Geotechnical Assessment Report, furthermore groundwater is discussed in Section 6 of the report. However, with the addition of the Mill Road project an update to the critical geological cross-sections will be provided in an addendum to the initial geotechnical assessment. The effects of groundwater drawdown can be assessed and included in the addendum to the initial geotechnical assessment as part of a review at detailed Engineering Design submission.
4.3.2	No assessment of mechanical settlement effects resulting from proposed retaining structures (that is, groundwater cut-off walls) proposed due to deep excavations, has been provided.	No ground water cut off walls are proposed at this point in time, should any mechanical settlement effects be assessed they are likely to be limited internally to the development and not be a risk to external parties. The geotechnical addendum to be provided will address this specific issue. There is a ground water settlement monitoring plan proposed to manage any groundwater drawdown or mechanical settlement effects.
4.3.3	Profiles at the critical cross-sections, showing the total (combined) settlement (i.e. the consolidation settlement due to groundwater drawdown plus mechanical settlement due to retaining wall	As per the response to 4.3.2, there is a ground water settlement monitoring plan proposed in proposed condition 46 to manage any groundwater drawdown or mechanical settlement effects.

	deflection), beneath the neighbouring buildings/structures (including driveways) and public services are required. The profiles should be annotated with maximum differential settlement under neighbouring buildings/structures (including driveways) and public and private services. The calculations of maximum differential settlement should be provided.	
4.3.4	On the basis of the settlement predictions required under No.4.3.3 above, confirmation whether a draft Groundwater Settlement Monitoring & Contingency Plan (GSMCP) is required or not should be provided. If it is considered that settlement monitoring or conditions surveys of a specific asset are not required, then this should be fully justified.	A GSMCP is proposed and proposed conditions 41 to 71 are provided to manage the issue of ground settlement and groundwater.
4.4.1	The proposed conditions from 41 to 71 are taken from another construction project for proposed stormwater channels (Awakeri Wetlands, Stages 2 and 3). These should be updated so that they are specific to this application. Note: In addition to LDE's geotechnical report noted above, the two reports below have been provided with the application. However, those reports were prepared for Stages 2 and 3 of the Awakeri Wetlands project. The AEE report states that the groundwater conditions across the entire Sunfield area are generally consistent and therefore the reports below are relevant to this proposal. Based on the updated Cut/Fill plan provided, this appears incorrect. • A report titled "Groundwater Dewatering and Ground Settlement Effects Assessment Review of Awakeri Wetlands Stage 1 Construction and Assessment for Stages 2 and 3" prepared by Earthtech Consulting Limited (Earthtech), dated 13 June 2024, ref. R10015-1, Draft, rev. B.	Proposed conditions 41 – 71 are entirely relevant and specifically drafted for the Sunfield project. The Earthtech reporting into the Awakeri Wetlands extension into Sunfield states: "It is anticipated that the management and monitoring of groundwater and settlement effects for the wider Sunfield Site development (i.e. future stormwater channels located to the east and north of the current Stage 2 and 3 channel) would be undertaken in a fashion similar to the process outlined in this GSMCP."

	• A report titled "Awakeri Wetlands Stages 2 and 3, Groundwater and Settlement Monitoring and Contingency Plan", prepared by Earthtech, dated 25 March 2025, ref. R10015-2, Draft, rev. D.	
5.1.1	Details regarding the excavation / construction of the stormwater channels and Awakeri Wetland infrastructure through the site. Stages 2 and 3 are proposed by others, but it appears that stage 4 is part is this application.	The excavation and construction of Awakeri Stages 2 and 3 are proposed by the Applicant, with the same consultant team working on that separate project. Stage 4 is part of this application. Engineering drawings M- C4612-14 provide details on the stormwater treatment and attenuation device proposed in Stage 4 of the Awakeri Wetland extension.
5.1.2	There are no staging details for the earthworks. The overall ESCP indicates six (6) stages, but the boundaries of these stages are not clear, nor is it clear whether how the cut-fill for each stage is determined. Further, the AEE states there will be approx. 25 stages with each stage taking approximately 12 months to complete, however, no earthworks specific details have been provided. Lastly, it is unlikely that an earthworks contractor will complete the cut to fill in either 6 or 25 stages.	It is likely that up to six stages of earthworks will be required to complete the bulk earthworks and land modification works. The Applicant has proposed a flexible delivery model that allows for staging boundaries to be modified to adapt to changing external factors through the life of the project. Specific details will be provided for each stage through the substantive application of a stage specific Erosion and Sediment Control Plan as proposed in Conditions 22 – 26.
5.1.3	There's insufficient detail on the ESCPs for approximately half of the project. i.e., 21 sediment retention ponds are proposed in stages 2, 4 and 5 but no ponds are proposed in stages 1, 3 and 6.	Specific details will be provided for each stage through the substantive application of a stage specific Erosion and Sediment Control Plan as proposed in Conditions 22 – 26.
5.1.4	There is no comment regarding adaptive management of the overall earthworks area which is considered significant.	The Applicant confirms acceptance of a condition to require this or the modification of an existing proposed condition to reflect the request.
5.1.5	There are significant differences in the earthworks presented within different documents. In particular, the earthworks plan in the LDE	LDE are preparing an addendum to the Initial Geotechnical Assessment that addresses the updates to the earthworks drawings.

	Geotechnical Report states 840,000m³ of cut and fill, with little to no earthworks adjacent to Old Wairoa Road, whereas the Infrastructure Report and Engineering drawings state 1,700,000m³ of cut and 1,490,000m³ of fill and includes cutting out the ridgeline adjacent to Old Wairoa Road using an excavation of up to 17m deep. The geotechnical report does not take into account this significant difference in earthworks volumes, nor the 17m deep cut, and therefore does not adequately assess the geotechnical effects of the proposal, including geotechnical effects on infrastructure that is proposed to be vested (i.e. stormwater, wastewater, roading). It is also unclear whether this significant level of earthworks has been considered by other specialists, stakeholders or mana whenua. Clarification of the correct scale of earthworks and associated cut and fill is therefore essential. **Note:** this should be read in conjunction with the Groundwater matters in Section 4.1 of this memo.	
5.2 General	The proposed chemical treatment management plan (ChTMP) must also include how "pumped" water will be managed as pumping to SRPs or other treatment devices has been highlighted as a requirement due to the flat topography of the overall site.	This can be considered within both the Chemical Treatment Management Plan and the Erosion and Sediment Control Plan which would be submitted as per conditions 25 and 26.
5.2 General	There are typically two Erosion and sediment Control stages to a residential earthworks project. The first stage is bulk earthworks which is cut and fill to prepare the land for the second stage which is civil earthworks (minor cut and fill road and footpath construction, install services such as lighting and telecommunications, and stormwater and wastewater etc.). On a site with 25 "civil" stages, I would expect at least 25 different erosion and sediment control plans (one for each civil stage), and at least one for each of the 6 bulk earthworks stages. The plans provided barely scratch the surface of	As per the response to 5.1.2, the Applicant has proposed a flexible delivery model that allows for staging boundaries to be modified to adapt to changing external factors through the life of the project. Specific details will be provided for each stage through the submission of a stage specific Erosion and Sediment Control Plan as proposed in Conditions 22 – 26. This has been factored into the proposed conditions, with condition 8 outlining that the management plans may be submitted in parts or stages.

	what is required. Will the Applicant agree to conditions that address the requirement for ESCPs for each area / stage of earthworks?	
5.2 General	The cut fill plans are for the entire 244 ha but the staging plans are for areas much smaller than that. How does the proposed staging of the project work in relation to the overall cut and fill? This relates to my query above about "earthworks staging".	Please refer to the above item response.
5.2 General	It would be ideal if the Applicant acknowledged that this is a significant project that will occur over 10-15 years, and that adaptive management is required. Conditions to this effect can be recommended. Alternatively, the Applicant could prepare an adaptive management plan (AMP) based on Auckland Council's Erosion and Sediment Control Adaptive Management Plan Guidance Document.	Please refer to the response to Item 5.1.4.
5.2 General	Overall, there is no clear methodology for the proposed earthworks, in particular with regard to the staging required. A significant portion of the site will require pre-loading and how this is to be done and how it relates to other areas of earthworks is also unclear. The application also states that stages of works may be undertaken concurrently, but again, no details are provided.	Please refer to the response in Item 5.1.2.
5.2 General	The erosion and sediment control methodology is extremely light on detail, is very generic and there is no supporting information to indicate that what is proposed from an erosion and sediment control point of view, can be done. The ESCP also shows dirty water diversions within stream channels. The plan is draft and very high level and therefore unlikely to ever be referred to, but it shows a lack of understanding of construction water management.	Please refer to previous response and notwithstanding the information contained within the substantive application, the proposed conditions, particularly condition 22 to 26, require an Erosion and Sediment Control Plan and a Chemical Treatment Management Plan require to outline the proposed works, requirements and monitoring regime. These plans will incorporate staging and methodologies.
Section 6	**Ecology**	
6.1.1	The Assessment of Environmental Effects does not identify any reasons for consent under chapter E3 of the Auckland Unitary Plan. The Ecological Impact Assessment does not identify any activities within the streams which would be relevant to chapter E3.	Additional reasons for consent have been identified, being:

	However, the engineering plans show: • Earthworks across the streams on-site, • Diversion of watercourses 1, 3 and 4, and; • Numerous culverts over natural watercourses (Road 5, culvert 1; Road 6, culvert 1; Road 1, culvert 2; Road 6, culvert 2). The proposed activities, reasons for consent and any associated environmental effects, as well as how any identified effects will be managed, should be clarified.	• E3.4.1 (A19) Diversion of a stream to a new course and associated disturbance is a discretionary activity, noting Watercourse 1, 3 and 4, and the upper stretch of 2 will be diverted as part of the proposal. • Road 1, Culvert 2 involves the modification of Watercourse 2, with the proposed culvert being 35.83m in length parallel to the water flow. This therefore infringes E3.4.1 (A33) and accordingly is a discretionary activity. Road 5, Culvert 1 is 41.83m, however this is parallel to Drain k, as per the Ecological Assessment, and is therefore considered to comply with Chapter E3. Road 6, Culvert 1 is 40.23m, however this is parallel to Drain j, as per the Ecological Assessment, and is therefore considered to comply with Chapter E3. Road 6, Culvert 2 is 40.23m, however this involves the redirection of Drains h and i, as per the Ecological Assessment, and is therefore considered to comply with Chapter E3. As outlined within the substantive application (in recognition that it is a non-complying activity overall), the ecological values of the freshwater ecology is low due to significant modifications (primarily for farming activities). The natural wetland and the retention of part of watercourse 2, the two features worthy of protection within Sunfield, along with the significant planting and landscaping associated with the proposal, will mitigate any adverse ecological effects. It is also noted that a number of conditions and management plans are also proposed to ensure effects are appropriate mitigated, particularly conditions 91 to 95.
Section 7	**Parks**	
7.1.1	A clear distinction is required between land proposed to vest as recreation reserve and land proposed as local purpose (drainage) reserve. Updated scheme plans should reflect this delineation to enable accurate assessment of recreational function, amenity provision, and acquisition suitability. Further clarification is also	The Sunfield Scheme Plans submitted in the substantive application are clear on the purpose of each subdivided parcel. It is agreed that Council needs to form a view on which proposed parcels it sees as suitable for providing recreational amenity etc.

	needed to distinguish the respective scopes of Healthy Waters and Parks, particularly where recreational assets are proposed on land primarily functioning as stormwater infrastructure. It must be confirmed whether such land is suitable for recreational purposes in accordance with Council standards.	The Applicant is open to working with Council to develop a Sunfield Parks and Recreation Strategy if desired.
7.1.2	Confirmation is required that the proposed open space areas, particularly those with secondary drainage functions, can support a primary recreational purpose, in line with neighborhood park provision standards. At present, there appears to be a conflict between the recreational function proposed and the underlying stormwater management needs of the land. All identified open spaces, including Sunfield Park, are located in flood-prone or potentially contaminated areas and are primarily designed to serve stormwater functions. As currently proposed, none of these areas meet Auckland Council's criteria for recreational open space provision.	The proposed local hubs and the 3.5ha sports fields adjacent the Town Centre will not be located in flood prone or potentially contaminated areas. As per the response to Item 7.1.1, the Applicant is open to working with Council to develop a Sunfield Parks and Recreation Strategy.
7.1.3	Scope of Engineering Plan Approval Landscape cross-sections and detailed engineering drawings are required to demonstrate recreational usability, compliance with slope requirements (particularly gradients not exceeding 1:12), and clear spatial separation from stormwater infrastructure. While the Engineering Plan Approval process currently addresses stormwater and transport assets, it should also encompass all open space, landscaping specifications and maintenance, asset and amenity infrastructure in accordance with Council's Code of Practice.	As per proposed condition 162, the engineering plans submitted for approval must detail all works associated with public reserves and public stormwater reticulation, with the subsequent proposed conditions dealing with implementation, maintenance and monitoring of vested assets.
7.1.4	Clarification is required as to whether any streams or watercourses within the site meet the thresholds for esplanade reserve requirements under sections 230–237 of the Resource Management Act (RMA). The Applicant has only noted that no existing esplanade reserves or strips are present within the proposed site. Further clarification is necessary to ensure that the classification of land as	No streams or watercourses within Sunfield meet the thresholds for esplanade reserve requirements under sections 230–237 of the Resource Management Act (RMA).

	drainage reserve is not being used to circumvent esplanade reserve obligations.	
7.2.1	The extent of open space proposed significantly exceeds what was originally anticipated. Further detail is required from the Applicant to confirm a commitment to fully fund, construct, and maintain all open space assets—including playgrounds, sports courts, greenways, and landscaping—prior to vesting, and in accordance with Council-approved standards. Current draft conditions only secure the delivery of stormwater and transport infrastructure, with no clear obligations relating to the development of recreational or amenity assets.	The Applicant confirms a commitment to fully fund, construct, and maintain all open space assets—including playgrounds, sports courts, greenways, and landscaping—prior to vesting, and in accordance with Council-approved standards. As per the response to Item 7.1.1, the Applicant is open to working with Council to develop a Sunfield Parks and Recreation Strategy.
7.2.2	An interim open space maintenance plan is requested, outlining the proposed approach to maintenance during the period between asset establishment, after asset establishment and formal handover. Given that the land is zoned Future Urban and Rural, its acquisition was not anticipated within the current Long-term Plan (LTP). Accordingly, no capital (CAPEX) or operational (OPEX) funding has been allocated for its acquisition, development, or maintenance within this period. Advancing acquisition and development ahead of the planned sequencing presents both funding and operational risks.	It is noted that maintenance plans, monitoring reports and maintenance bonds are required as part of the proposed conditions of consent (183 to 192), which is considered sufficient to address this matter.
7.2.3	Clarification is required regarding the ownership, intended function (e.g., ecological corridor versus active transport link), design specifications, and long-term maintenance responsibilities for the proposed greenways, pedestrian links, and laneways. It should be confirmed whether these assets are intended to be maintained by Auckland Council (Parks or Healthy Waters), Auckland Transport, or an alternative entity such as a Residents' Society.	The expectation around long term maintenance responsibilities of individual parcels of land should be aligned to asset ownership. For parcels proposed to vest to the local authority then maintenance obligations will fall to the local authority. The divestment of individual parcels is detailed on the Sunfield Scheme Plans that were submitted in the substantive application. As per the response to Item 7.1.1, the Applicant is open to working with Council to develop a Sunfield Parks and Recreation Strategy.

7.3.1	Lack of Descriptive Legends or Keys Many of the landscaping plans, concept plans, and open space strategies lack an adequate Legend.	Please refer to the Sunfield Open Space Strategy Design Report and Planting Palettes submitted as part of the substantive application.
7.3.2	There is a gap in the proposed planting schedules with respect to species selection that would support medium to large tree canopy closure within the street environment and thrive in streetscape conditions. The following matters should be addressed: a) Removal of Karaka (Corynocarpus laevigatus) due to toxicity concerns for dogs. b) Greater tree species diversity to enhance ecological resilience; the currently proposed species have demonstrated limited survival in similar environments and contribute minimally to long-term canopy outcomes (Excluding the Pohutukawa trees). c) Revision of footpath designs to avoid “rat-tail” or dead-end terminations, which hinder mowability and increase maintenance requirements.	The statement is acknowledged and noted. It is considered that these matters can be considered at the detailed design stage, recognising condition 31 requires detailed landscape design drawings, in line with the Open Space Strategy Design Report. It is also unclear which footpaths have a ‘rat-tail’ or dead-end termination, as this doesn’t appear the case when referring to the Sunfield Open Space Strategy Design Report.