Further information requested under Clause 23, First Schedule of the Resource Management Act 1991

Private Plan Change Request

FDFH Silverdale West Industrial Area

AC Comments and further information request under clause 23(2)

Number	Category of Information	Specific Request	Reasons for Request	Draft response / approach	Auckland Council further information request under clause 23(2)	Unio comments 5 March 2024
Planning, strategic policy and general matters						
P1	Staging	a. Precinct description (a) and (b) on transport infrastructure upgrades and the standards. Please provide more explanation as to the approach and why there is differentiation between the wider area and the development within the precinct. b. Please provide clarification of A9, including the reference to "any piece of land" which is vague. Also consider whether the qualification should be a standard rather than in the activity table. c. Please explain why IX6.7(1) (c) is appropriate as part of a standard and in this circumstance not part of a resource consent process, "proposed to be constructed" seems a bit uncertain. d. Please explain why the situation cited below from IX6.7(1) (also in IX6.8) should not be part of a resource consent process so that the option can be appropriately assessed. *If traffic modelling demonstrates to Council's satisfaction that an alternative infrastructure upgrade will have the same or better outcomes, that will be deemed to satisfy the relevant requirement of Column 2 of the Table.* e. IX6.7(4) Table IX 6.7.1 (d) please provide an explanation of what upgrades are required as "interim upgrades to Silverdale Interchange" this needs to be clear. f. IX6.8 Table IX6.8.1 (a) please explain why the threshold is greater (53.9ha) than that in IX6.7(4) Table IX 6.7.1 (28.4ha)	To better understand the staging of infrastructure.	Unio response a. The overall approach is to recognise that there are different transport issues in the wider area and within the plan change area, and these appropriately involve different responses in the precinct provisions. The key difference relates to the relative level of certainty between the applicable local and wider network upgrades. Whereas the interventions needed to facilitate development of and access to the plan change area are well understood, the scope, nature and timing of the wider area upgrades are subject to less certainty in terms of their need as they are dependent on significant levels of other development within nor The proposed approach to differentiate the local and wider network upgrades is based on similar approaches already embedded within the Unitary Plan (including Drury) and within other proposed precincts (including Riverhead). b. The Precinct provisions have been amended to replace the reference to "any given piece of land" with "any site, sites or part of the site" [Precinct provisions updated] Regarding the comment around whether the qualification should be a standard, we consider it is appropriate as a rule. The intention is that this rule only applies once to a "site, sites, or part of a site", after which subdivision and development of that land relies on the Auckland-wide and zone rules. c. "Proposed to be constructed" is part of a full clause that also entails it as being part of the application, therefore providing certainty as to the information to be taken into account as part of a resource consent application / assessment. d. The IX6.7(1) and IX6.8(1) situations <u>are</u> part of the resource consent process, and therefore can be assessed for appropriateness. There is no other pathway. The clear intention is that, where an	a) Noted b) Noted c) Noted d) Noted	

		g. Please explain why (A11) "Subdivision and/or development that does not comply with Standard IX.6.7 Staging of Subdivision and Development with Transport Upgrades to support planned future development within the wider area" is RD but (A12) (infrastructure within Silverdale West) is D.		alternative approach is considered to be appropriate, it may be progressed via the resource consent process. e. IX6.7(4) is as detailed in Appendix 3 to the Precinct, [the upgrades to be further detailed in the cl23 version of the Precinct provisions] f. As detailed in (a) above, the two tables are addressing different issues and different infrastructure, related to the wider network and local / Silverdale West network. Accordingly, the infrastructure upgrades involve separate thresholds / triggers for action. g. As detailed in (a) above, the difference relates to the level of certainty about the need and nature of upgrades at the two different network levels. Paired with that is that where the local upgrades are 100% derived from Silverdale West, the wider network upgrades are required to support development across many other areas. The DA status for local network upgrades is to provide a clear steer as to the need for developers within the Precinct to undertake those upgrade, and the relative certainty over what they are for, when they are needed and what they look like. Those wider upgrades are less certain in all aspects and necessitate more flexibility and a less rigid approach.	e. It is assumed that the interim upgrades to Silverdale Interchange are Upgrades 5&6 in Appendix 3. Please confirm what the final/full upgrade for Silverdale Interchange given the reference to interim upgrades. NB. Mechanism to guarantee that the transport infrastructure required in Column 2 of Table IX.6.7.1 will be delivered. These are reliant on others to deliver. Column 2 of Table IX.6.7.1 "Pine Valley Road / Dairy Flat Highway signalisation" - amend to include reference to pedestrian and cycling crossing phases".	e. Terminology has been updated in Appendix 3, the ITA and s32 analysis to remove any reference to an interim state i.e. now reads 'upgrades to Silverdale Interchange'. Any future state of the interchange is the realm of others and is not related to the Plan Change Request. There is no obligation on landowners in Silverdale West to undertake the works. The requirement is that Silverdale West cannot be developed prior to those upgrades having been delivered by somebody. Notwithstanding the above, FDL and FHLD have committed to delivering the stated Stage 1 upgrades and FDL is working with them where directly related to Silverdale West. Table IX.6.7.1(a) was updated in December 2023 to include reference to the provision of a cycle lane and footpath infrastructure.
P2	Height	• Please explain why a greater height of 30m is needed compared to the Light Industrial zone.	To better understand the visual impacts of development.	To provide greater opportunities for a scale of development that is reflective of trends and technological developments in warehousing. This is acknowledged in a number of resource consents sourced within industrial and business areas recently for over height buildings. In this instance, that additional height entitlement is being proposed in the lower-lying areas and is effectively sleeved by 20m development to the periphery of the precinct.	As raised in a meeting with Ross Cooper and Karl Cook 2 November 2023 and set out in an email to Ross Cooper 6 November 2023, we have reservations about using the height variation control in this situation and have issues with it. All of the HVC's in the AUP apply to cadastral boundaries so unless your HVC areas are surveyed then it is not possible to accurately show them on the planning maps. There is only one HVC area applying to an industrial zone in Onehunga. The note to your HVC map says that the HVC boundary will be aligned to the Open Space zone boundary once the final open space zone is finalised. If we don't identify the Open Space zone on the planning maps and just identify indicative open space on the Precinct Plan, then we won't know the zone boundary until the scheme plan stage and the land is vested. Consideration needs to be given to alternative approaches, and one could be identifying the different height areas on the precinct plan (not using the term height variation control) and possibly specifying dimension from existing road boundaries, in that way the exact lots it applies to would be more easily identified if it is done at a later stage. Some other industrial precincts do have different maximum heights to the underlying zones, eg Pukewairiki Precinct and Drury South. In both cases the height variation is shown in the precinct plan not the Planning Maps.	The Plan Change request has been updated to incorporate the additional height within the Precinct. Plan Change / s32 analysis updated

					If the HVC approach is used, then there should be reference int the precinct that the HVC is 30m. At present the precinct is silent on what the height variation is.	
P3	Cultural values	• Ensure that for each objective there is policy and subsequent rules or assessment criteria and vice versa. • For example, Objective 2 refers to Māori cultural values but please explain why there is no policy or provisions on Māori Cultural values.	To better understand how the private plan change addresses cultural values.	Agreed that there is currently a gap in policies that stem from Objective 2 and relate to Māori cultural values. The following policy is proposed as a placeholder pending further input from mana whenua. *Policy 19: Recognise, protect and enhance the cultural values and relationships with Silverdale West by:* *a) Including tangata whenua in resource consenting, including through provision of cultural impact assessments or other engagement;* *b) Utilising at least 75% native planning in riparian enhancement areas and street plantings;* *c) Identifying opportunities early to incorporate traditional names or other names put forward by tangata whenua into open space areas, roads, or other community spaces;* *d) Taking an integrated approach to the management stormwater which protects and enhances the mauri of freshwater, in particular with regard to John Creek;* *e) Ensuring the mauri of the John Creek Awa is enhanced through development setbacks and native riparian planting; and* *f) Ensuring the design of streets and publicly accessible open spaces incorporates Te Aranga design principles.* There are proposed provisions that already give effect to elements of this policy including IX6.2 Streams and natural inland wetlands IX.9 Special Information Requirements – Riparian Planting Plan. It is proposed to also add new matters of discretion/assessment criteria for new buildings prior to subdivision and subdivision (A9) that will cover Te Aranga design principles: *Whether the design of streets and publicly accessible open spaces incorporate Te Aranga design principles.*	Noted	
P4	Policies	• Please explain what the difference is between Policy 5 and 7 on infrastructure provision.	To better understand how the precinct addresses the provision of infrastructure.	Duplication, Policy (5) has been deleted [Precinct provisions updated]	Noted. Why has Objective (3) been deleted?	Objective (3) hasn't been deleted, Objective (5) has.
P5	Activities	• Please explain why the size threshold for dairies and food and beverage premises are greater (200m2 and 300m2 respectively) than the underlying zone (100m2 and 125m2 respectively). The Objective (11) refers to meeting "daily convenience needs" which is the intent of the zone and the sizes allowed in the zone.	To better understand why larger premises are necessary in an industrial zone.	Property Economics has provided clear guidance on the limitation of retail / food and beverage across the Precinct to a total of 1,200m^2, but has not identified a need to limit individual tenancy sizes as the traffic effects are considered to be relative to floor area. One of the key assessment matters (traffic generation) has already been factored into the Plan Change, and so the overall cap of 1,200m2 is the relevant factor.	Where does Property Economics' assessment do this? Neither report seems to. Can't find any discussion of the cap in PE report or ITA. The response hasn't explained why the individual premises need to be larger. The issue is not just about traffic effects but also the efficient use of industrial and	The Plan Change has been updated to remove tenancy sizes from the Precinct – will rely on underlying Business – Mixed Use Zone provisions or seek resource consent for increases, as needed. Plan Change / s32 analysis updated

					avoiding reverse sensitivity effects from more sensitive activities. The policy in the zone is to: *(2) Avoid reverse sensitivity effects from activities that may constrain the establishment and operation of light industrial activities.* Enabling larger premises seems to be going beyond the precinct's own objectives of meeting "daily convenience needs". The larger premises could become destinations rather than serving local needs. Please explain why larger individual premises are necessary.	
P6	Activities	• Please explain why activities that are non-complying with the standards, are not referenced in the activity table.eg height, yards etc but have matters for discretion and assessment criteria.	To better ensure the workability of the precinct provisions.	As is the default Unitary Plan position, the infringement of standards are dealt with via Rule C1.9(2) and the assessment matters are C1.9(3). Through C1.9(3), there is a reference to 'any specific provisions' relevant to the matter, which is what the criteria within the Precinct are intended to speak to.	Noted	
P7	Standards Height	a. Please explain why the height standards referred to in IX.6(1)(b) do not apply to the precinct. The proposed additional height only applies to part of the precinct not all of it, so the underlying zone provisions still need to apply to the rest of the precinct. b. Please explain why the Height Report has recommendations about recessive colours variations of roof profiles and roof plant, but there don't seem to be any corresponding provisions?	To better ensure the workability of the precinct provisions.	a. The Light Industry Zone building height rule has been excluded under IX.6(1) and replaced by IX.6.1 Building Height. While the default 20m height provision is the same as the underlying zone, the purpose is slightly different and acknowledges the potential for increased height in lower lying areas. This avoids dual height rules applying, particularly given the proposed addition of a Height Variation Control across some of the Precinct. b. Recommendation acknowledged however from an RMA / planning perspective the variation occurs naturally through the development process and does not need to be prescribed or included as a rule, standard or assessment matter.	a) Noted b) Please provide a landscape expert assessment in support of this decision if it is to be pursued, including reference to the H17 provisions that will ensure an appropriate visual amenity outcome for elevated audiences to the east. (see also comment below on Appendix 18 Height)	We disagree. There is no difference between this Light Industry zone and many others ,where colours and materiality are not controlled and roof form and plant are not a design focus. The intention is for buildings within the precinct to be a permitted activity (following the first subdivision) as per the Light Industry Zone.
P8	Standards Yards	a. IX6.3 Yards – (1) please explain and clarify what is meant by "relevant boundary". b. IX6.3 Yards – (4) please explain why the landscape planting should be reduced just because the site adjoins a riparian yard.	To better understand how the rules apply.	a. The wording of this standard is taken directly from the Light Industry zone (H17.6.4(1)) and is also present in a number of residential zones under the Unitary Plan (H3.6.8(1), H4.6.7(1), H5.6.8(1) and H6. 6.9(1). b. Larger than usual riparian yards are provided for through the Precinct, and these are required to be planted. Where development immediately adjoins that scenario, it is considered unnecessary to require further 'mitigation' planting within the adjoining yard. This can be clarified through the following amendments to the purpose statement: *Purpose: Provide appropriate buffering and screening between industrial activities and open space, recognising the ~~precinct zoning of~~ open space zoning and the 20m riparian yard setback required by IX6.2(1)(d) which achieves an amenity and buffer function.*	a) Noted b) Noted	

P9	Standards Buffer	a. IX6.4 Landscape buffer (State Highway 1 interface) – (1) please provide a better plan or detail of the setbacks. Precinct Plan 1 is unclear in this regard. b. Please explain why the buffer should not apply if a new motorway boundary applies but a site has not been developed. c. Please provide further explanation of why the 10m landscape buffer along Dairy Flat Highway as identified in the structure plan is not required.	To better understand how the rules apply.	a. Refer to more detailed Landscape Buffer Plan which has been included as an Appendix 4 to the precinct [Precinct provisions to be provided next week, however Appendix 4 to the Precinct is included within the attachments to this response table]. b. The provision avoids double-dipping through land take and is on the expectation that the designation will address an appropriate buffer c. Refer to Landscape responses below (item L1). Appropriate buffers are proposed.	a) Noted b) Don't see how there can be double dipping. The proposed approach is using the motorway designation to mitigate effects rather than the development site which is the case for all other boundaries.	b) The reference to 'double-dipping' references a scenario whereby the NoRs take land along the SH1 boundary occurs, which includes extensive areas that are likely needed for construction only and could accommodate mitigation planting, but the requirement for land and mitigation planting still applies within the precinct.
P10	Zoning Plan	a. Please clarify what the Open space rectangle adjacent to Dairy Flat Highway opposite Pine Valley Road, is it for, if it is for walking and cycling access why is there a gap to the main proposed reserve to the east. b. Also how does it align with what is shown on Precinct Plan 1.	To better understand how the rules apply.	a. It is for pedestrian / cycle connectivity from the DFT / PVR intersection. The open space is intended to provide a small node / acknowledgement, a notional gateway into the precinct. b. The open space zoning is one element of the access, with the other part being a 'Key Pedestrian and Cycle Connection' as identified on the Precinct Plan. It will link up with the internal roading network and the pathways adjoining John Creek. Does not extend the full way to enable flexibility within the Precinct for its provision, while the extent shown provides certainty for its establishment Precinct Plan 1 is showing different elements, but to the extent there is overlap between them PP1 includes the pedestrian / cycle connection and is consistent	a) Noted b) Noted	
P11	Precinct Plan	• Please explain why the collector road network is not shown on the precinct plan but is on the concept plans prepared for the area set out in the ITA and Urban design statement. This is important to show the connectivity to the Stage 2 area.	To better understand the zoning	See above – different purposes / dealing with different issues. The collector road network is shown on the precinct plan; however, the local road network is excluded. This is because while there needs to be relative certainty about the location of the collector road connections to Dairy Flat Highway, the local road network is internal to the precinct and can accordingly be more flexible. The Precinct ensures appropriate Local Road connections through Stage 1 to the Stage 2 land are provided for (refer IX6.8(3)(b).	Noted. The Collector Road network is shown on IX.10.1 Silverdale West: Precinct plan 1 and reflects the Concept plan in the November 2023 ITA. Noted that Precinct Provision IX6.8(3)(b) allows for connections to Stage 2.	
P12	View Shaft	• (See Note Below re view shaft)	To better understand how access is to be proved to the Stage 2 area.	The advice from the Council the landscape expert is noted and IX.10.1 Precinct Plan has been updated to delete the Viewshaft from SH1 to Lloyds Hill and the Hinterlands. In light of the above, the 30m Height Variation Control area has been expanded into the land vacated by the viewshaft at the southern end of the Precinct (following the same approach as taken with the areas to the north).	See P2 re use of Height Variation Control.	Refer P2 response
P13	Open Space Zoning	• Query identifying Open Space on the Zoning Plan. Raised in meeting on 2 November 2023 with Ross Cooper			Raised in meeting on 2 November 2023 with Ross Cooper and Karl Cook, and in email to Ross Cooper on 18 January 2024.	The Plan Change request has been updated to incorporate the indicative open space within the Precinct

		and Karl Cook, and in email to Ross Cooper on 18 January 2024. • (see also OS1)			We have reservations about identifying the open space on the planning maps. This generates difficulties with zoning when the actual boundaries of the land are finalised when it is vested as reserve and you can end up with land zoned open space that should be industrial and vice versa, this has occurred at Milldale. The more common approach, eg Drury, is to show indicative reserve on the precinct plan. the land can be appropriately rezoned in the regular council open space rezoning update once it is vested. The response to OS2 below seems to lend support to this approach.	Plan Change / s32 analysis updated
P14		• Raised in meeting on 2 November 2023 with R Cooper and Karl Cook and in email to Ross Cooper about removing the identity of individuals for privacy reasons.		Identities of individuals redacted.	Raised in meeting on 2 November 2023 with R Cooper and Karl Cook and in email to Ross Cooper about removing the identity of individuals for privacy reasons It needs to be clarified whether all of those parties listed in Figure 1 are party to the plan change or have provided their agreement to be identified. If not their details need to be redacted.	S32 landowner plan updated.
Traffic						
T1	Thresholds	a. The thresholds in ITA Appendix C differ to the transport infrastructure staging Table IX.6.7.1 in the plan change. This should be addressed. b. If signalised access is not proposed in the rules, the effect of un-signalised intersections on Dairy Flat Highway, and design of such, should be included in the ITA considering capacity and safety for all modes.	To understand the effects of the plan change on the adjoining road network.	a. As per P1(f) response, the Threshold Upgrades set out all of the transport upgrades (derived from traffic modelling undertaken by Stantec). Those Appendix C upgrades are reflected in full across the tables at IX.6.7.1 and IX6.8.1. b. The default upgrade is signalisation, and that is what has been assessed and justified by the ITA, and what is being progressed through the Plan Change. However, the provisions enable an alternative only where justified through a resource consent process. No further justification of alternatives is being progressed as part of this plan change request. In acknowledgement of the comment about considering 'capacity for all modes', IX.6.7.1(c) has been amended as follows: *If traffic modelling and analysis demonstrates to Council's satisfaction that an alternative infrastructure upgrade will have the same or better outcomes for all transport modes…*	a) Noted. These are reflected in IX.6.7.1 and IX6.8.1. Appendix C upgrades are referred to as Upgrades 1-8. b) Signalised access is now specified in the rules at Table IX.6.8.1(a) bullet point 1 "First signalised intersection connecting the precinct to Dairy Flat Highway" and Table IX.6.8.1(b) bullet point "Second signalised intersection connecting the precinct to Dairy Flat Highway" c) Accept amendment to IX.6.7.1(c) to reflect all modes.	Appendix B of the ITA has been updated to include the IX references, bullet point sentences to describe upgrades, and more informative diagrams. Appendix C to the Precinct Provisions has been updated accordingly.
T2	Walking and cycling	a. The ITA states, "a designation is currently in place along Pine Valley Road to include footpaths and cycle paths which connect through to John Fair Drive and to the wider Milldale area via separated cycle paths adjacent to Argent Lane. The construction of these footpaths and cycle paths will be included as part of the mitigation measures proposed for the redevelopment of the Silverdale PPC area". Elsewhere it states "These cycle lane and footpaths can be brought forward as part of the	To ensure appropriate walking and cycling access is provided.	a. An interim a two-way cycleway and footpath on Dairy Flat Highway between Pine Valley Road and the northern site access is proposed in order to provide connectivity between Pine Valley Road and Stage 1 of the Plan Change area. The associated upgrades have been included as Stage 1 threshold upgrades at IX.6.8.1(xxxx) and Appendix 3 to the Precinct. Cycling and pedestrian infrastructure will also be provided along Pine Valley Road to provide further connectivity to the southern end of Argent Lane and John Fair Drive which already has cycle lanes and footpaths which link to the Highgate Bridge.	a) Noted that interim bi-directional cycleway and footpath on Dairy Flat Highway is now included in IX6.8.1(a) table of the Precinct rules. The mitigation is not included in Appendix 3. It would be useful for all mitigation to have a corresponding diagram in Appendix 3 (as stated in Table IX6.8.1). It is unclear why this facility is described as "interim". It would be useful to clarify if there is a 'final' upgrade proposed.	Any references to 'interim upgrades' to the Silverdale Interchange have been amended throughout the Plan Change and supporting documents to state "upgrade to Silverdale interchange". There is no other upgrade required or proposed.

		measures required in support of the PPC area." b. This is not included in the proposed mitigation / rules in the ITA or Plan Change and should be included.		These pieces of infrastructure will be subject to more detailed design at a later date but in principle, the provision of such infrastructure will provide suitable connectivity for pedestrians and cyclists to/from the Silverdale West PPC area. Unio comment: b. The table at IX6.8.1 has been updated to incorporate the interim two-way cycleway and footpath on Dairy Flat Highway between Pine Valley Road and the northern Stage 1 site intersection. The Pine Valley Road cycle infrastructure is already factored into the "Pine Valley Road upgrade from Argent Lane to Dairy Flat Highway completed" line item in table IX.6.7.1.	b) Noted the Pine Valley Road upgrade is included in the rules Column 2 Table 1X6.7.1 and this now references the cycle lane and footpath. With regard to the response to item P1 above, "*the scope, nature and timing of the wider area upgrades are subject to less certainty in terms of their need*". Table 1X6.7.1 states this transport infrastructure is required to enable activities or subdivision within the Precinct Plan (header row). So the need is established and timing will align with the stated subdivision staging in the table.	
T3	Walking and cycling	▪ The ITA states the John Fair Drive / Highgate overbridge "will provide direct connectivity between the site and Silverdale Centre". More detail on the route envisaged (i.e. map / diagram) and the facilities provided along the full route for pedestrians and cyclists including the staging /timing of any necessary upgrades and necessary inclusion in Plan Change rules should be included in the ITA.	To ensure appropriate walking and cycling access is provided.	See T2 response above re: walking / cycling upgrades and inclusion within the Precinct provisions. A diagram which illustrates the proposed new route between the Plan Change area and the existing active mode networks within Milldale and to the east towards Silverdale Centre has been included as a new Figure 20 of the updated ITA.	Noted, a diagram (Figure 20) has been provided in the November 2023 ITA.	
T4	Upgrades	▪ It is unclear what upgrades, if any, are required on Dairy Flat Highway adjacent to the PPC site for pedestrians in particular. Bus routes will most likely stop on Dairy Flat Highway and facilities for pedestrians to safely access to/from the site from bus stops including crossing Dairy Flat Highway should be identified and included where necessary.	To ensure appropriate walking and cycling access is provided.	▪ See above ▪ The signalised intersections proposed for the site accesses off Dairy Flat Highway (two accesses proposed at full build-out) will include pedestrian crossing facilities. This will allow pedestrians to cross Dairy Flat Highway safely between existing public bus stops on Dairy Flat Highway.	Bus stops on Dairy Flat Highway and facilities for pedestrians to safely access bus stops has not been shown. In addition to the signalised intersections, footpaths to bus stops on both sides of the road will be necessary. For both the north and south access intersections. This mitigation should be specified in the rules. At least the rules should state that footpaths will be provided between bus stops on each side of Dairy Flat Highway and both of the signalised access intersections.	Arrows and lines indicating crossing points and footpaths have been included within the diagrams in Appendix B to the ITA (and duplicated at Appendix C of the Precinct Provisions), along with bullet point sentences to Table IX.6.7.1 Threshold for development: Transport upgrades outside of the Silverdale West Industrial Precinct to support planned future development in the wider area, which broadly describe the required infrastructure. Precinct Table IX.6.7.1 and Appendix C and ITA Appendix B updated Note that we are suggesting that bus stops are to be located as close as possible to the Precinct accesses and provide footpaths which connect the footpaths on the accesses to the bus stops. Other than to link the bus stop with the crossing location, we do not think footpaths to connect the bus stops on the western side of Dairy Flat Highway are needed as Silverdale West Industrial Precinct development is only on the eastern side – that should be the responsibility of future developers of the land opposite.
T5	Upgrades	▪ The ITA should provide concept diagrams demonstrating the required upgrades are feasible. In particular we	To ensure that the proposed upgrades are feasible.	Unio comment:	We do not consider the Aimsun outputs in Appendix 3 of the provisions to be concept diagrams. Notably these	The Precinct Appendix 3 diagrams have been updated to show some more detail, including road names, etc. As noted above, bullet point sentences have broadly

		consider the feasibility of providing a Tidy up graphics and add words as required slip lane on the western approach to the Silverdale interchange which connects to the northbound on-ramp is questionable within the existing road reserve. The ITA needs to demonstrate that the recommended improvements can be delivered. Such plans are mentioned in the Plan Change to be provided within Appendix 3, but Appendix 3 is not included.		Concept diagrams of the proposed mitigation measures are provided in Appendix B of the ITA and have been included within Appendix 3 to the Silverdale West Industrial Precinct provisions. In response to the request relating to the Silverdale Interchange northbound on-ramp, Civix has prepared a small plan set (refer that confirms this is able to be constructed within existing public land.	images show only traffic lanes and no facilities for other modes or associated facilities such as footpaths. As such we do not agree with the note under both table IX.6.7.1 and IX.6.8.1: "*The plans shown indicatively in IX 11 Appendix 3 Transport Infrastructure Upgrades shall be deemed to satisfy the Transport infrastructure required in Column 2"*. For the plans to satisfy the infrastructure required these would need to include facilities for all modes i.e. concept designs. The concept provided for the Silverdale Interchange is accepted.	defined other associated infrastructure that will need to be provided as part of the roading upgrades. Plan Change and Appendix C and ITA and Appendix B updated Noted.
T6	Upgrades	▪ The mitigation in the ITA (page 20) includes "Provision of a second signalised intersection of Pine Valley Road to service the PPC area". This is repeated in the Appendix but the location is unclear. The ITA should clarify the location of the proposed intersection on Pine Valley Road.	To better understand the traffic effects of the plan change.	<u>Stantec response</u> There is a typographical error (Section 5.3, bullet point 7) of the ITA. Bullet point 7 has been corrected to read: "7. Provision of a second signalised intersection off **Dairy Flat Highway** to service the PPC area".	The typographical error has not been corrected in Appendix B of the ITA ref Upgrade 7. This error also needs to be corrected in Appendix C of the Precinct Rules Upgrade 7. Naming of the existing roads in the drawings provided in Appendix C Upgrades 1-7 would help understanding and accuracy.	ITA Appendix B and Plan Change Appendix C updated to correct typo. Appendix C diagrams updated to include existing road names
T7	Infrastructure upgrade costs	▪ There is no cost information for external infrastructure improvements provided in the ITA and no cost allocation for necessary infrastructure identified. The ITA should address where costs lie and the responsibility for delivering the necessary upgrades.	To understand how the costs of the necessary transport infrastructure and how it will be provided.	The applicants are engaging directly with Auckland Council's Development Programme Office on infrastructure funding matters. A separate letter will be provided following engagement with DPO. Notwithstanding the above, a costing table will be prepared (to be provided following discussions with the DPO) which provides indicative project costs for each of the upgrades noted within the provisions.	See comments below under F1. Costing information needs to be provided as part of the further information.	We do not agree that Council needs costing information. Implementation of the required upgrades is not about cost, it is the commitment that is needed. FDL and FHLD have provided that commitment in a letter to Auckland Council DPO dated 12/12/2023, a copy of which is appended to this response at **Appendix 22** to the updated request. Infrastructure Funding Agreement discussions are being progressed with the DPO at present.
T8	Transport modelling	▪ More detailed information on the transport modelling undertaken and findings should be provided in the ITA to provide certainty in the conclusions. For example o Section 5.3 in the ITA should clearly state which upgrades are assumed in each model scenario. o Delay, volume and queue length information / plots should be included for each scenario. o The land use assumptions should clearly state the level of development assumed within other areas including Silverdale West structure plan i.e. north of	To better understand the traffic effects of the plan change.	<u>Stantec initial response</u> Section 5.3 of the ITA has been updated to separate out the upgrades required for each model scenario. Appendix B provides the detailed modelling outputs for the modelled scenarios. The Tables in Appendix B include delay (in seconds per vehicle), traffic volume (in vehicles per hour) and maximum 95 percentile queues (in vehicles). As noted in Section 4.2, the Milldale Precinct is assumed to be fully complete by 2028 (4,500 dwellings plus 40,000sqm GFA retail/commercial activities within the Local Centre) and this has been included in the modelling for the Silverdale West PPC. Table 3 of the ITA also provides the assumed future buildout of the Milldale North development (subject to a separate PPC	Noted the updates to Section 5.3 states the upgrades and staging. This section explains why some upgrades are proposed e.g. 'to manage queues delay and improve safety'. Outputs for the without mitigation scenario for all intersections would show more clearly why mitigation is necessary. An explanation as to why signalised intersections are proposed (for the Wilks Road intersections), rather than roundabouts, if the objective is to improve safety is required. See also response to T13. Noted re the road connections to the south.	Stantec has prepared a separate memo that discusses the "Derivation of Triggers for the Plan Change" (refer to **Appendix 9A**).

		Pine Valley Road, in each of the scenarios. o The modelling should clarify whether the two road connections to the south of the PPC area are assumed to connect through to Wilks Road in any of the future scenarios or not.		application) for each of the years between 2028 and 2034. The modelling which has been undertaken does not include direct connectivity to Wilks Road from the PPC area. This does not however, preclude any potential connectivity in the future; any such connectivity would be governed by separate Plan Change and resource consent assessments.		
T9	Modelling	▪ The ITA assumes a high proportion of 'warehouse, distribution' activities within the PPC area. This is based on advice that assumes "less expensive land prices". Given the forecast year of 2034 and uncertainty around land prices over time, we consider a sensitivity test should be provided that considers more general industrial activities across the zone that would be permitted as light industrial. This should demonstrate the proposed infrastructure upgrades can accommodate this potential outcome.	To better understand the traffic effects of the plan change.	<u>Unio comment (with input from Property Economics and Stantec):</u> The ITA has been prepared on the basis of modelling undertaken utilising the inputs from Auckland Transport's regional model. An element of conservatism exists in the modelling in that Milldale North development is not factored into the regional model, meaning that more 'local trips' may in fact result than anticipated in the modelling. Property Economics has provided a memo (refer **Appendix 7A**) that specifically responds to this point. That memo should be read in full, however the following are noted in particular: *"Importantly, Page 48 of the draft FDS explicitly states that:…* *"Structure planning for these areas will ensure that a range of business uses is provided for and that land extensive businesses, such as manufacturing, logistics and construction, are accommodated where appropriate.* *"Considering the above, it is evident that allocating a higher portion of land to accommodate warehousing, logistics, and distribution activities at the PPC site aligns with the expected demand in the region and the Silverale local industrial market. The Plan Change area is also strategically located for these large industrial activities with some critical characteristics (eg., proximity / easy access to SH1 and proximity to a large (and fast growing) employment base in the Hibiscus Coast).* *"…* *"The relativity between the land values across the different areas will likely remain fairly constant, so Silverdale will still have lower industrial land values on a relative basis and therefore remain attractive to land extensive industrial activities. Land value movements in Silverdale will be reflected in similar land value movements across the North Shore area so the relativity between industrial areas remains similar. This means*	Noted	

				Silverdale will still have lower land values on a relative basis and therefore attractive to the larger scale, land extensive industrial activities who have struggled to find suitable sites to service this market. *"…* *"In light of the additional analysis provided in this Memo, Property Economics considers there is no practical economic basis for conducting sensitivity testing on the economic assumptions that have informed the ITA."* On the basis of the above, it is considered that sufficient conservatism is built into the economic assumptions that have informed the modelling, no sensitivity testing has been undertaken.		
T10	Precinct provisions	▪ The draft plan change states "If traffic modelling demonstrates to Council's satisfaction that an alternative infrastructure upgrade will have the same or better outcomes, that will be deemed to satisfy the relevant requirement…" we note some upgrades are required to support movement by other modes not just traffic, so it may require more than traffic modelling to demonstrate an alternative upgrade is acceptable. Rewording is recommended.	To better understand the traffic effects of the plan change.	While this comment is noted, we consider it necessary to clarify that the threshold / triggers for upgrades set out within the Plan Change have been derived specifically from traffic modelling. Notwithstanding that, we have re-worded IX.6.7(1)(c) as follows: *"…If traffic modelling <u>and analysis</u> demonstrates to Council's satisfaction that an alternative infrastructure upgrade will have the same or better outcomes <u>for all transport modes</u>, that will be deemed to satisfy the relevant requirement of Column 2 in the Table."*	Noted	
T11	ITA content	▪ The quality of many of the figures are unclear and difficult to read, please provide better quality figures.	To better understand the content of the ITA.	Following clarification with the Council, it was confirmed that this request relates specifically to 5, 6 and 7 in the ITA. Those figures were taken from Auckland Transport's "Future Connect" webpage, which has subsequently been updated. Stantec has subsequently updated Section 2.3 to 2.5 of the ITA which includes a suite of new Figures to replace those previous Figures 5 to 7.	Noted	
T12	Internal Roading	▪ Please provide information on why no road connection is proposed from the Stage 2 area to Dairy Flat Highway opposite the Pine Valley Road intersection as shown in the structure plan.		<u>Stantec comment:</u> The Pine Valley Road / Dairy Flat Highway intersection is a critical and sensitive intersection in the transportation network and handles a high proportion of traffic entering/exiting the Milldale area. Adding a fourth leg to the intersection, with the addition of additional signal phases/timing to accommodate traffic entering or exiting the PPC area, will adversely affect the level of queuing on the eastern approach and increase the likelihood of queues extending back to the Silverdale interchange at peak times. This has a flow-on effects for the interchange, such as the westbound traffic flows across the Silverdale overbridge and the traffic flows exiting the motorway via the northbound off-ramp, which could result in safety issues for traffic exiting the motorway.	Noted	

				Whilst no road connection for cars and trucks is proposed for the intersection, provisions for active modes will be provided through pedestrian crossing facilities and connectivity to the shared path through the middle of the PPC area.		
T13	Transport upgrades	▪ Please provide more explanation of why the particular transport upgrades are necessary and how they address the traffic generated from the plan change area, including signals at Wilks Road/Dairy Flat Highway and Wilks Road/East Coast Road.	To better understand the effects of the transport upgrades.	Stantec comment: The activities within the Plan Change area and the Milldale North Plan Change area will draw traffic to and from the south. The additional traffic generated on Dairy Flat Highway and East Coast Road (northbound and southbound movements) and on Wilks Road (eastbound and westbound movements) places pressure on the priority intersections at both ends of Wilks Road. Signalisation of both intersections is considered necessary to help moderate the anticipated queuing and delays and improve safety for vehicles using the intersections. Further commentary regarding the other identified upgrades will be provided in Section 5.3 of the ITA.	Noted and this is also considered in T8. A fuller description of why proposed mitigation was determined necessary (outputs of the no mitigation scenario) and why the form of this mitigation (signals v roundabouts) was selected is necessary.	
Ecology						
E1	Wetland delineation	▪ Please update the wetland delineation assessment, throughout the site, without the use of the pasture exclusion method.	Section 3 of the Pasture exclusion assessment methodology states, "*The purpose of the NPS-FM pasture exclusion clause is to support the continuing use of pasture for grazing purposes, not for land being converted for development*. [emphasis added] *The exclusion is not targeted at pasture being converted for urban development or for other land uses. It does not apply to wetlands in other areas of grassland that are not grazed, (such as in parklands, golf courses, landscaped areas and areas of farmland not used for grazing purposes).*"	Unio comment: We disagree and consider the pasture exclusion method to be appropriate in this situation. The role of the definition in the NPS-FM is to determine what is and is not a wetland, whereas it is the role of the NES-FW to determine the activity status of activities once that identification has been undertaken. The relevant definition here is that of an "inland natural wetland", which is set out within the NPS-FM and prescribes that a natural inland wetland means a wetland that is not in a coastal marine area, not deliberately constructed, not induced, not a geothermal wetland, and not within an area of pasture with certain specific characteristics. It is this last exception that is relevant to the Plan Change request. In order to be excluded from the definition of natural inland wetland by virtue of the pasture exception, a wetland must: a. Be within an area of pasture used for grazing; and b. Have vegetation cover comprising more than 50% exotic pasture species (as identified in the National List of Exotic Pasture Species) using the Pasture Exclusion Assessment Method; and c. Not be a habitat of a threatened species.	Disagree with the assessment using the pasture exclusion method. Reassess the wetlands accordingly. Of note, hydric soils were present across the site in areas that have not been delineated as wetland – with ground conditions exhibiting high water table, and evidence of perch-gley melanic and mottled soils. The 2022 Wetland Delineation Protocol indicates that, where recent disturbance (including specific reference to grazing) has occurred, all three aspects of wetland assessments need to be undertaken, namely vegetation, soils and hydrology with due consideration for seasonal wetland systems (see below). It is recommended that the hydric soils and hydrology protocols be undertaken across the site. Page 9 of the protocol (MfE, 2022) states the following '*The purpose of the NPS-FM pasture exclusion clause is to support the continuing use of pasture for grazing purposes. The exclusion is not targeted at pasture being converted for urban development or for other land uses*'. Therefore, our team's interpretation, and advice from the Natural Environment Strategy Team, is that areas that exhibit wetland characteristics, where land use will not remain grazed pasture, should be assessed following the method set out in the 2022 Wetland Delineation Protocol, without exclusion from the definition as a Natural Inland Wetland, unless other exclusions apply.	Professional disagreement between specialists. We are happy that the specialists attempt to find agreement on methodology, but at this point assuming the matter is going to hearing. We do not see this matter as being relevant to Council's cl5 decision. Zoning does not compromise wetlands.

				There appears to be no question that the wetlands identified are within an area of pasture used for grazing, and that they do not comprise habitat for a threatened species. The assessment of pasture species is undertaken with reference to both the National List of Exotic Pasture Species, and the PEAM. The PEAM notes that a simple methodology for best practice assessment of pasture sites is required to assess if an area is excluded from the natural inland wetland definition, stating: *This pasture exclusion tool addresses these areas of ambiguity, includes the National list of exotic pasture species and outlines the key steps to assessing and delineating areas of wet grazing land excluded from the definition of 'inland natural wetland' under the NPS-FM.* The Plan Change area is currently zoned and used for grazing and no resource consents are being made at this time. Accordingly, the correct approach is to follow the direction of the NPS-FM and evaluate whether wetlands within the Plan Change area have vegetation coverage comprising more than 50% exotic pasture species with reference to the National List of Exotic Pasture Species and using the PEAM to determine whether the 50% threshold have been met.	**3. Background** **Pasture exclusion** The purpose of the NPS-FM pasture exclusion clause is to support the continuing use of pasture for grazing purposes. The exclusion is not targeted at pasture being converted for urban development or for other land uses. It does not apply to wetlands in other areas of grassland that are not grazed, (such as in parklands, golf courses, landscaped areas and areas of farmland not used for grazing purposes). **Grazed areas** should be assessed as disturbed wetlands where it is not appropriate to look only at the vegetation. Page 8 of the MfE Wetland Delineation Protocol (2022) provides a recommended procedure to follow when undertaking an assessment. Here is a snip with the text highlighted that specified that recent disturbance does not constitute 'normal' conditions. If a recent disturbance has been identified, the assessor is referred to step 10 of the protocol which is the hydrology assessment. It is thus my interpretation that hydrology and hydric soils should be assessed at the same level of enquiry. **Recommended procedure** 1. Determine the project area (the putative wetland). 2. Identify the growing season for the area of interest. 3. Assess weather conditions. Establish a suitable time to visit the site within the growing season and during normal weather conditions, that is, not immediately after heavy rainfall or during or immediately after drought conditions (we suggest a minimum of two weeks after extreme weather events). 4. Decide if 'normal circumstances' are present, ie, typical climatic/hydrologic conditions, and no recent disturbances or modifications to the project area. If yes, proceed to step 5. If no, proceed to step 10. 5. Identify and map the major vegetation types using aerial photographs, maps, contours, inventory reports, other data, and, if necessary, on-site field verification. 6. ***Use off-site methods*** to identify wetland presence and sketch approximate boundaries. Wetlands may be confirmed without an on-site inspection depending on: i) the amount and quality of existing data (vegetation, soils, hydrology, topography) ii) wetland ecological expertise to interpret the data. 7. ***Use on-site methods*** to delineate wetland presence and accurate boundaries as follows: i) for small areas (≤2 ha), establish a representative plot in each major vegetation type and record the plot vegetation in three strata: tree, sapling/shrub and herb 8 Wetland delineation protocols 11. ***Recent disturbance or abnormal environmental conditions***. The above procedure will be used in the vast majority of wetland delineations. However, recent disturbance or abnormal environmental conditions may result in atypical or problematic wetland situations in which one or more of the three criteria (vegetation, hydrology and soils) is/are absent. In these cases, you will need more information and quantitative data and the US procedures for these situations are recommended (see Comprehensive Method [sections 1–6] in Environment Laboratory 1987, and subsequent updates). More examples on how to assess areas of problematic hydrophytic vegetation including those affected by grazing, managed plant communities, aggressive invasive weeds, sparse and patchy vegetation, and temporal shifts in vegetation, are provided in the Wetland Delineation Regional Supplement for the Western Mountains, Valleys, and Coast Region, US (US Army Corps of Engineers, 2010). Wetland delineation protocols 11 Page 11, point 11 refers to '*Recent disturbance or abnormal environmental conditions'* and clarifies what is meant by recent disturbance, also refers to grazing.	
E2	Freshwater	▪ Please update the ecology report to show on figures all ecological features, including the entire extent of all overland flow paths, potential bat habitat, all wetlands etc. ▪ Please provide a clear, detailed and labelled precinct plan that includes all natural features, and please provide a complete assessment for all of these.	For avoidance of doubt, all ecological features as described in the ecology report should be assessed and shown clearly on figures provided in the ecology report, irrespective of determined value. A watercourse assessment was completed in 2020 by	<u>RMA Ecology comment:</u> The Ecology Report includes detailed Figures that include all streams, wetlands and indigenous vegetation. We have not mapped pasture, weedland, shelterbelts, gardens, overland flow paths or other areas of potential (or with no potential) habitat for wildlife, as these no values in terms of indigenous vegetation (whether significant or not) or as significant habitats of native fauna. We also understand that such areas have no protection under the ecology policies of	See comment above. The question still stands. The Ecology Report is required to show all features, and as part of this, all wetlands need to be delineated accurately. Noting the structure plan for the area did not provide an exhaustive list of streams and wetlands.	Professional disagreement between specialists. We are happy that the specialists attempt to find agreement on the matter, but at this point assuming the matter is going to hearing. We do not see this matter as being relevant to Council's cl5 decision.

			Morphum Consultants as part of the Silverdale West Structure Plan; the current report fails to show and assess these features. However, the Morphum report stopped at providing full wetland delineation assessment due to, at the time, continued pasture grazing.	the Unitary Plan, and that these areas have not been required to be protected as part of any other approved Plan Change that we aware of in Auckland. As per our reply to query E3 below, we do not consider the site to support bats or habitat that is used by bats. The watercourse assessment by Morphum in 2020 was relevant to that survey and that time. If that survey has failed to pick up wetlands or streams, that simply reinforces the value of not relying on generic watercourse assessments to inform Plan Change applications, but rather to undertake a comprehensive ecological assessment to provide up-to-date information, as we have done.		
E3	Terrestrial habitat	▪ Please provide a bat survey and further comprehensive assessment the long-tailed bat.	Whilst it is noted that the ecology assessment has provided comment on the presence of habitat suitable to bats on site and within the wider area no formal survey was carried out. For the Plan Change, it is important to understand the presence of fauna particularly as all vegetation is to be proposed to be removed. There are multiple records of bats near the site. There is habitat on since that could potentially be used for commuting, foraging and possibly roosting. As noted in the assessment, bats have been recorded at approximately 7km – this is a short distance from the site for a species that can fly up to 50 km in a night. Noting, NPS-IB highly mobile species considerations should also be considered.	<u>RMA Ecology comment:</u> Bats are protected under the Wildlife Act 1953, which is managed by the Department of Conservation (**DOC**). DOC has issued guidance on minimising harm to bats where known roost trees are proposed to be felled. At this site the habitat quality is poor and the likelihood of bats being present is very low. The Council has noted that bats have been recorded within 7km of the site (6.5km to the north-west of the site within the Rodeny hinterland). We note that there have been 22 other surveys for bats undertaken with 7km of the (north, east, west, south) which turned up no sign of bats. That includes a series of 7 surveys located only 1 km north of the site within excellent old growth forest habitat along margins of the Weiti River – none were found. If this Plan Change is approved, and if the Applicant lodges a resource consent application to clear vegetation, at that stage the ecological values of the site will be assessed in detail and the effects management hierarchy applied. I appreciate that by the time a resource consent application may be lodged, the shelterbelts and stands of large trees on the site may have been harvested and cleared – as a permitted activity. Information collected on bat use of the site would be relevant for that collection time but may not be accurate at the time of tree clearance. That is because bat use of areas can be transitory, especially if only used for commuting and feeding – which is a fair assumption given the age of the vegetation, lack of trees supporting maternity-type features, and based on the results of bat use of the surrounding area (within 7 km – of which bats have not been detected despite repeated surveys). An assessment now of bat use of the site may have little utility when an application for resource consents is lodged.	Notwithstanding the Wildlife Act. The NPS-IB states that "Policy 15: Areas outside SNAs that support specified highly mobile fauna are identified and managed to maintain their populations across their natural range and information and awareness of highly mobile fauna is improved." Please also see section 3.20 0 Specified highly mobile fauna. We can't rule out bats are not utilising the site without formal surveys, relying on acoustic surveys from a number of years ago is not conclusive evidence that the species is not utilising the site. It is noted that recent acoustics surveys have identified bats in the vicinity of the project area. Please provide further commentary and site-specific assessment pertaining to the above	Professional disagreement between specialists. We are happy that the specialists attempt to find agreement on the matter, but at this point assuming the matter is going to hearing. We do not see this matter as being relevant to Council's cl5 decision.

				We reiterate that bats are unlikely to use this site, and therefore there is no need for a formal survey or to add a layer relating to bat habitat within the Precinct Plan.		
E4	Terrestrial habitat	▪ No formal herpetofauna surveys have been undertaken on site. ▪ Please undertake formal surveys to identify if there are any areas on site that have value. Subsequently, please provide habitat restoration and/or protection, ▪ If lizards are found, please also provide appropriate precinct standards to address adverse effects on indigenous herpetofauna.	Whilst it is noted that the ecology assessment has provided comment on the possible presence of herpetofauna habitat, no formal survey was carried out. For the Plan Change, it is important to understand the presence of fauna particularly as all vegetation is to be proposed to be removed. The ecology report mentions "native copper skink in places where farming debris and rank grass provides habitat". Copper skinks are nationally and regionally threatened and have a conservation status of 'Nationally At-Risk'. Species that are 'At Risk' are of high ecological value in accordance with the New Zealand Ecological Impact Assessment guidelines and are considered significant indigenous biodiversity in line with B7.2.1 (1).	<u>RMA Ecology comment:</u> As per our reply to E3, our opinion is that there is no need at this Plan Change application stage to undertake extensive surveys for lizards. The site is completely modified and while it may support copper skinks, the available habitat is small, isolated fragments of secondary growth, which would have been subject to the impacts of introduced predators for decades; native skinks may not even exist at this site. The Unitary Plan provides rules for the protection of fauna habitat at the time of resource consent applications. We appreciate that the Unitary Plan does not protect weedlands, gardens, scrub areas, firewood stacks, garden refuse dumps, pest plants that lizard love to live in, and other marginal or exotic areas on this site that may support copper skinks, and indeed preserves the right of landowners to decide whether or how these are managed. The Applicant's position in this regard is that the Unitary Plan and the Wildlife Act provide the necessary controls, protection and effects management for native lizards at the time of resource consent applications.	S32 refers to an area meeting SEA criteria, this should be identified in the plan change to add to the SEA overlay despite being in the Open Space area. Please provide appropriate precinct standards for indigenous herpetofauna.	Professional disagreement between specialists. We are happy that the specialists attempt to find agreement on the matter, but at this point assuming the matter is going to hearing. We do not see this matter as being relevant to Council's cl5 decision.
E5	Terrestrial Fauna	▪ Please provide appropriate precinct standards to address adverse effects of artificial light at night (ALAN) on sensitive to wildlife, such as the long-tailed bat, seabirds, and longfin eel. Examples include the use of PIR sensor lights, low lux, hooded lighting options etc.	As noted in the ecology report, long-tailed bats have been recorded in recent times 7km from the plan change area. Open vegetated areas including the area directly adjacent to the plan change area could be important foraging and commuting habitat for bats. At Risk bird species have also been recorded within 7km of the plan change area with habitat suitable for At Risk species such as pied stilt, possibly the threatened shag species including black shag, little black shag, and the red-billed gull identified within the plan change area.	<u>RMA Ecology comment:</u> All of the matters raised with regard to eels and birds can be addressed at resource consent stage. RMA Ecology undertook surveys across the full Plan Change area and included noting roosting or feeding birds such as gulls, shags, and waders – of which we saw none. More detailed surveys at the resource consent stage may detect some of these species. At that time, a response to protect habitat or manage potential effects will be considered. It should be noted that the Plan Change volunteers large areas of riparian planting and management of John's creek (the most likely areas of shag use) and of wetlands (the likely areas for pied stilt and wetland bird use). Red billed gulls are an interesting species – they have been commonly seen within 7km of the site in Millwater Town Centre and beaches scavenging waste	Please provide precinct standards, special information requirements ensuring that use, subdivision and development does not adverse effect indigenous fauna e.g. artificial lightening standards for bats, or other special requirements relating to lizards. It is acknowledged that reclamation of limited stream reaches may occur, and these will require off-setting. Planting the riparian margins of retained streams is a requirement of the structure plan change (notably Appendix 1, section 1.4.2 (1) & (2), and is not considered voluntary. The Precinct standards (see below) attempt to insert activities that are contrary to the outcomes sought by Appendix 1 Noting that restoration of streams and wetland are necessary to achieve the outcomes of Appendix 1, and Objectives and Policies of NPS-FM, NPS-IB, AUP Chps	Professional disagreement between specialists. We are happy that the specialists attempt to find agreement on the matter, but at this point assuming the matter is going to hearing. We do not see this matter as being relevant to Council's cl5 decision.

			It is widely recognised that seabird groundings and behaviours of eel and bat species are adversely affected by artificial light.	and food scraps – it is very unlikely that this site would meet the test in the NPS-IB as being 'habitat'.	B7, E3 and E15, please provide an explanation for the inclusion of IX6.2.1(e) and IX6.2.2. Table IX6.3.1 Yards, does not have a corresponding wetland buffer 'minimum depth', please update the table. IX6.3 (Yards) and IX6.2(d) do not have a corresponding Activity Status in TableIX4.1 for non-compliance with the standards– please update the table and provide appropriate assessment criteria as they relate to infringements with these standards. This is appropriate so that specific assessment criteria can be included. Please update the IX9 (1) to refer to Te Haumanu Taiao - the most up to date planting standards. Please explain and / or replace the use of the word 'should' as this is inappropriate and ambiguous. It is recommended that the word be replaced with 'must' as it relates to native species. This is in line with the current standard conditions. IX9(1)(b). please explain why streams are omitted from monitoring and maintenance matters.	
E6	Terrestrial habitat	▪ Please provide a notable tree evaluation with the application.	There are several large and historic trees on site which provide visual and ecological contributions to the site and may potentially be evaluated as notable.	<u>Unio comment:</u> There are few protections currently in place for trees within the Plan Change area, and the majority of trees can be removed as a permitted activity at present. Vegetation within riparian margins is already subject to a degree of protection under Chapter E3 – Lakes, rivers, streams and wetlands, while the provisions of the NES-FW applies to natural inland wetlands. Notwithstanding the above, a Notable Tree Evaluation has been undertaken by Arbor Connect (refer **Appendix 21**). Arbor Connect has identified four trees as potentially meeting the Unitary Plan criteria for 'Notable Trees' (i.e., they were scored at least 20 out of a possible 40 points). As is the approach adopted for a number of other precincts, we propose that these four trees be specifically identified within the Silverdale West Industrial Precinct, with a bespoke standard and identification on the precinct plan(s).	Council's arborist and notable trees experts have assessed the trees and agree with the Requestor Arborist that the trees meet the criteria to be added to Schedule 10 (Notable Trees Schedule) as part of the plan change. Please add to the proposed private plan change a change to add the trees to the Schedule 10 (Notable Trees Schedule) including: Botanical name Common name Number of trees Location/street address Locality Legal description. Detailed map of the location of the site eg 	The Plan Change has been updated to remove the Notable trees provisions from the Precinct and instead rely on the Notable Trees Overlay. Plan Change / s32 analysis updated.
Landscape						

L1	Landscape buffers	▪ Appendix 17 makes a number of detailed and location specific recommendations with respect to the appropriate width of the SH 1 landscape buffer in Table 1. Please provide further analysis explaining why the proposed SH 1 landscape buffer widths are appropriate in the context of the rezoning proposal (particularly in light of the proposed building heights). This may take the form of detailed mapping with contours and existing vegetation annotated, photographs and the like.	To better understand the effects of the buffers.	Boffa Miskell comment: A series of detailed sections have been prepared that illustrate the various boundary conditions along the eastern (SH1 interface). These sections identify the existing vegetation, topography and include information about the proposed landscape buffer specifying its width and indicative planting height. The purpose of the buffer along SH1 is partial screening or visual mitigation from the adjacent road, as well as achieving an 'attractive entrance to the Hibiscus Coast'. The buffer is not proposed to screen visual effects from the elevated properties to the east of the site, as these properties are elevated some 50m higher than the proposed industrial area site and have elevated views over the site to the landscape beyond. The proposed industrial development will be an obvious land use change; however, it is not considered that the introduction of a landscape buffer strip along the eastern boundary of the site will substantially mitigate the effects of this change. This is predominately due to the elevated nature of views over the subject site, no matter the scale of the vegetation in a buffer zone on the SH1 boundary views to the wider industrial area will remain. A more effective form of mitigation for these properties is through visually 'breaking up' the proposed industrial buildings. This will be achieved, through the proposed landscape interventions included as part of the masterplan such as the planted stream corridors (20m width), large scale tree planting to internal streetscape and amenity planting throughout.	Noted	
L2	Landscape buffers	▪ Please explain how the proposed landscape buffer widths will accommodate the scale of planting recommended (20m height at maturity and noting that some of the proposed buffers are 5m width).	To better understand the effects of the buffers.	Boffa Miskell comment: A 5-metre buffer width to the more northern sections of the site due to the presence of existing vegetation in this area, which is intended to be preserved. This aligns with the approach taken on several sites along this boundary, with supplementary planting proposed in locations where a greater buffer is considered appropriate. The aim of the planting within the buffer strip is to create multi-layered native plantings, various plant species will be utilised, including low edge planting, mid-height shrubs and trees, as well as taller tree species. As depicted in the indicative cross sections, there is ample space to accommodate larger-grade tree species, together with this lower planting, if the appropriate, more vertically inclined species are chosen. The aim of the planting should be to achieve bold statement and utilise different form, texture, and colour, to ensure it successfully reads as a gateway feature in the high-speed environment (100km/h).	Please advise how the provisions deliver on the expectation that existing vegetation will be retained.	There is no expectation that existing vegetation along the buffer areas will be retained. There is of course an opportunity to rely on that existing vegetation and to supplement that as needed.

				When analysing vegetative buffers adjacent to motorways and existing industrial areas such as Ruakura, AIAL, and Highbrook, varying buffer widths have been observed, ranging from 5 to 15 metres. As long as the buffer design aims to achieve a positive outcome, it has been considered an effective and aesthetically pleasing approach.		
L3	Design Principles	▪ Appendices 6, 17 and 18 discuss a number of key landscape principles culminating in a series of design recommendations (Appendices 17 and 18) and Design Principles/[Indicative]Development Concept Plan (Appendix 6). Please advise which aspect(s) of the Plan Change provisions address each design recommendation in Appendices 17 and 18, and how the plan change provisions deliver the Design Principles/[Indicative]Development Concept Plan set out in Appendix 6. (NB A simple table format is adequate.)	To better understand how the design principles identified are reflected in the precinct provisions.	Please refer to **Attachment 2** for separate response table.	See comments in Attachment 2.	
	View Shaft	▪ (See Note Below re view shaft)		Noted, thank you. Precinct Plan has been updated remove viewshaft, and any provisions referencing viewshaft to be amended.	Noted	
Stormwater/Health Waters (See Separate Table Below)						
Cultural Heritage						
A1	Archaeology	One significant historic heritage (archaeological) place has been identified within the plan change area. However, it is not clear how the values of this place are recognised, protected or managed through the proposed provisions. *1636 Dairy Flat Highway – Maurice Kelly Inn, homestead and associated buildings (CHI 10787, R10/737) (Kelly Complex)* • That the following sections of the archaeological assessment (Appendix 15) are updated with the final results and recommendations of the exploratory investigations report (Appendix 16) ○ **Archaeological Value and Significance** ▪ has the results of the exploratory works provided additional information to reassess the historic heritage significance of the Kelly	To better understand how the archaeological values of the site are to be recognised and protected	<u>Unio comment:</u> Refer to the updated Archaeological Assessment at **Appendix 15**, which confirms: a. The feature is not suitable for heritage scheduling within the Unitary Plan b. That through future resource consent processes, interpretive elements such as surface demarcations of the house and an information panel should be considered. No protection of the site is proposed through the Precinct, with any interpretation or protection to be left to future consenting processes.	Do not support. We acknowledge scheduling of the Maurice Kelly Complex (R10/737) is not the most appropriate tool to manage the heritage values of this place. However, this place still has at least considerable heritage value to the locality and under the RPS (B5) requires active stewardship to protect it from inappropriate subdivision, use and development. Under the plan change the place is proposed to be rezoned – Business – Light Industry, with a lack of consenting triggers within the proposed precinct or current AUP provisions, to give effect to the recommendations set out in the archaeological assessment (page 100) to provide for site identification, protection and mitigation. These are summarised below: • In situ protection of the subsurface remains of the Maurice Kelly complex	Professional disagreement between specialists. We are happy that the specialists attempt to find agreement on the matter, but at this point assuming the matter is going to hearing. We do not see this matter as being relevant to Council's cl5 decision.

		complex, in particularly under criteria D – knowledge? ○ **Effects of the Proposal and Resource Management Act 1991 Requirements** ▪ any updates to effects section in relation to changes recommendation in above point ▪ any effects associated to the proposed precinct provisions: • IX 6.6 – Road widening setback along Dairy Flat Highway • IX6.5 Landscape buffer (Dairy Flat Highway Interface) ○ **Recommendations** ▪ Updated to reflect recommendations provided in the exploratory investigation report (Appendix 16)			• Installation of interpretative elements e.g. surface demarcations the house site and interpretative panels. • Reflect the history of the place in street naming. We recommend the precinct provisions are updated to include provisions for the protection and interpretation of the Maurice Kelly Complex. Recommended wording is included in Appendix 3 Silverdale West Industrial Precinct.	
A2	Section 32 Analysis	• Include an assessment against RPS - B5 Ngā rawa tuku iho me te āhua - Historic heritage and special character • The precinct provides an opportunity to recognise values of the Kelly complex to guide future development in an appropriate way, which gives effect to the recommendations provided in the archaeological assessment. Specifically how archaeological evidence is to be avoided, preserved in situ and interpretated within the plan change area, following the recommendations provided in Appendix 15 and 16. • Surviving archaeology in good condition which is representative of the site is avoided and preserved in situ.		S32 has been updated	See above comment	
Urban Design						
UD1	Visual Amenity	• S32 10.1 Urban Form, Landscape and Visual Amenity states: "This forms one of the key design principles articulated within the Urban Design Assessment, which seeks to minimise the extent of retaining required along the public	To better understand the visual effects of development.	It is acknowledged that this is a gap within the precinct provisions and it is proposed to add assessment criteria for new buildings prior to subdivision, and subdivision, including subdivision establishing private roads to address this matter. See L3 response table also (refer **Attachment 2** below).	See comments in Attachment 2	

		realm interface through the utilisation of batters and low level retaining to achieve level building platforms and compliant road gradients" Please explain why there are no standards or assessment criteria relating to retaining structures.				
Funding and Finance						
F1	Infrastructure funding and financing.	• The applicant has not submitted any information that covers the funding and financing of infrastructure for the required infrastructure projects nor have any conversations been entered into with Council or infrastructure providers regarding Infrastructure Funding Agreements. • A Funding Plan is requested to be submitted which outlines indicative cost, intended funding party, whether the project has any allocated funding or a funding agreement in place.	To better understand how infrastructure will be funded.	<u>Unio comment:</u> Discussions with the DPO are ongoing at this time. We will provide an update to Council as a formal position on funding of infrastructure once those discussions have progressed further.	• Please provide a list of projects, including cost estimates, to further this Funding and Financing process. • Clarify how the alignment of timing of the proposal with timing identified in the Future Development Strategy as asset owners plan their infrastructure delivery to align with the FDS. The FDS states that the indicative timeframe of infrastructure being development ready is 2030+ and the Infrastructure Report and s32 assumes that asset owners will implement the infrastructure from that date as identified in documents such as the Supporting Growth Strategy and FDS. • Please address the cumulative impact of the proposal on existing and planned infrastructure. This is particularly important for wastewater and water treatment plants. Currently these impacts are not acknowledged in the Silverdale West proposal and is generally ignored in plan change proposals. Infrastructure Report and s32 analysis refer to the network (pipes and pumping stations) required to convey water and wastewater to or from treatment plants but the unstated assumption is that the treatment plants have capacity. This needs to be fact checked with the asset owners and considered in the context of other potential plan changes and the total capacity anticipated in Structure Plans and other higher level planning documents. • The anticipated funding mechanisms for the infrastructure. The s32 infers the council will begin construction of the infrastructure identified in the FDS in 2031. The Infrastructure Report identifies interim work that will be done by the applicant until the full infrastructure is in place. The use of infrastructure triggers in the proposed precinct suggests that the applicant will deliver the interim transport improvements however it is less clear on the situation for water and wastewater, particularly where the interim solution may contribute to the full build out solution. Usually the developer seeks recognition of the partial infrastructure they are	We do not agree that Council needs costing information. Implementation of the required upgrades is not about cost, it is the commitment that is needed. FDL and FHLD have provided that commitment in a letter to Auckland Council DPO dated 12/12/2023, a copy of which is appended to this response at **Appendix 22**. Specifically, FDL and FHLD commit to 'forward fund and implement the physical works package for roading, water and wastewater' needed to support the Plan Change. Infrastructure Funding Agreement discussions are being progressed with the DPO at present. This is viewed as a means of FDL and FHLD being reimbursed over time for the broader public benefit of the infrastructure being provided. Development is contingent on capacity of service networks at the time and this can be documented through the plan change.

					putting in place but we do not have an agreement in place for Silverdale West nor a standard process we follow for these situations. Please suggest how this issue may be addressed.	
F2	Triggers	• We would like to understand the justification of the activity status related to the infrastructure staging activities (A9, A11 & A12). Why is there a differing activity status for infrastructure required to support planned future development within the Silverdale West area vs the wider area? Further definition is required on what constitutes the wider area.	To better understand how the necessary infrastructure will be provided.	<u>Unio comment:</u> Given the wider Wainui East and Silverdale West area is included within the FUZ, there is the potential for substantial development in the future. Therefore, the transport modelling undertaken by Stantec to inform the development of the infrastructure staging includes assumptions regarding the rate of development in the wider development area. These assumptions are outlined in the ITA. The modelling has determined which upgrades are triggered by development within and outside the precinct, and which upgrades are only required to support development within the precinct itself. Given the development outside the precinct may occur at a different rate or scale to the assumptions that underpin the ITA a restricted discretionary activity status has been proposed for infringements to Standard IX.6.7. This will enable a targeted assessment of the effects of the infringement that considers whether the actual rate of development in the wider area is slower than anticipated and the timing and development of other transport upgrades or transport innovations not anticipated by the ITA. The proposed discretionary activity status for infringements to Standard IX.6.8. is reflective of the greater degree of certainty of the rate and scale of development within the Silverdale West precinct, and therefore the timing of the identified upgrades. Standard IX.6.7 sets out infrastructure requirements to support development within and outside the Silverdale West Precinct (wider area). Standard IX.6.8 sets out infrastructure requirements to support development only within Silverdale West Precinct itself.	Noted	
Geotechnical						
G1	Slope stability	• We note that the Northern corner of the site is underlain by Mangakahia complex. Following CMW report this unit is prone to deep-seated creep even on gentle (<10°) slopes, with relatively deep extent of weathering, transitional zone between soil and rock rarely observed and seldom significant improvement in rock strength. It is noted that proposed mitigation measures for global slope instability are "*undercutting of transition zone deposits and/ or keying fills into the less weathered rock mass, the installation of extensive networks of*	To better understand the developability and mitigation for this area.	<u>CMW response:</u> Mitigation measures for Mangakahia Complex materials are variable and largely dependent on the unit which is encountered. Three distinct units of the Mangakahia Complex have been observed during the previous works undertaken by CMW on adjacent sites. The three units have been identified as Undifferentiated Mangakahia Complex, Hukerenui Mudstone and Whangai Formation. Without further site-specific investigation, the unit of Mangakahia Complex is underlying the northern section of the site is unknown. The units can be highly variable over a limited spatial area. On adjacent sites, mitigation of stability issues	Please update your report with this information accordingly. Considering the highly challenging character of Mangakahia Complex, we would still suggest for your consideration to divide Zone 1 to Zone 1a and 1b, and specifically highlight that the unit can be highly variable over a limited spatial area and that the unit is considered to be the most challenging to mitigate.	Please refer to **Appendix 12 – Geotechnical Assessment - Updated**

		subsoil drainage, including underfill drains in mucked-out gully alignments, and placement of engineered fills". This seems to be appropriate for Mahurangi Limestone (with typically shallow transitional sliding and recognisable transitional zone) founded on the eastern side of the Dairy Flat Highway Ridge and Zone 3, however, may not work for Mangakahia complex. Considering different behaviour of these two units, can you please confirm that the same mitigation measures are appropriate for Mahurangi Limestone and Mangakahia complex, or divide Zone 1 to Zone 1a and 1b, and provide separate mitigation measures for these two geological units?		within the Whangai Formation and Undifferentiated Mangakahia Complex have incorporated undercuts and the construction of Shear Keys where clear/observable transition zones and parent rock are encountered. The Mangakahia Complex as described within our report reflects the Hukerenui Mudstone, which is typically considered to be the most challenging to mitigate. CMW have found the palisade walls and/or deep counterfort drainage are required to mitigate stability issues due to the considerable depth of transitional materials.		
Open Space Added 19 October 2023						
OS1	Ownership	Please clarify if the land proposed to be open space land is anticipated to be vested with the council or remain in private ownership.	To better understand the open space ownership and ongoing management.	<u>Unio comment:</u> All Open Space Land is intended to be vested as a means of ensuring and enabling the active mode connections through the Precinct.	As raised in the meeting on 2 November 2023 with Ross and Karl we have reservations about identifying the open space on the planning maps. This generates difficulties with zoning when the actual boundaries of the land are finalised when it is vested as reserve and you can end up with land zoned open space that should be industrial and vice versa, this has occurred at Milldale. The more common approach, eg Drury, is to show indicative reserve on the precinct plan. the land can be appropriately rezoned in the regular council open space rezoning update once it is vested. The response to OS2 below seems to lend support to this approach. <u>Parks Planning comment:</u> Noted. This response contradicts the response to OS2. OS1 says open space is intended to be vested. OS2 says it will be determined at subdivision stage. Parks Planning does not support the zoning of land as open space zone until it has been acquired by the council. Locking in zoning before the resource consenting stage and political approval to acquire land is problematic because it can set unsupportable expectations by land owners and developers of land acquisition by the council and unduly contain alternative development configurations and open space functions, which may require further plan changes. This is only reinforced by requestor's statement that this land is to be vested. Besides, subject to the stream (John Creek) being a qualifying stream, esplanade reserves would be required to be provided as per RMA requirements	The Plan Change has be update plan change to remove open space zoned land, and incorporate indicative open space zone notation within the precinct. Plan Change / s32 analysis updated It is intended that open space be vested, however final decisions on exact extent and location of that to be left to subdivision stage. Council will be responsible for progressing the re-zoning of open space land as part of its regular updates to the AUP. Plan Change / s32 analysis updated

					when it comes to subdivision of less than 4ha lots (Section 230 of RMA).	
OS2	Ownership	If it is indented to be vested with the council, what consultation has been undertaken to date?	To better understand the open space ownership and ongoing management.	Unio comment: No specific consultation has been undertaken to date and we have relied upon the Structure Plan which provides relatively clear guidance on the intended green spine through the Precinct and the need for public walking and cycle access along that spine. Council can determine at subdivision stage whether or not land is to be vested, however this is a few years away and accordingly we do not see much benefit in seeking to lock this down now.	Parks Planning comment Noted. Although the Structure Plan establishes general expectations for the provision of movement networks and riparian corridors, it sets no expectation around vesting or land ownership. We agree subdivision stage is a better time for determining land ownership matters, but this comment contradicts the responses to OS1 and OS3 that say land is to be vested/public?	It is intended that open space be vested, however final decisions on exact extent and location of that to be left to subdivision stage. Council will be responsible for progressing the re-zoning of open space land as part of its regular updates to the AUP. Plan Change / s32 analysis updated
OS3	Ownership	For those parts that remain in private ownership, how will the plan change ensure public access is retained going forward and how is it envisaged to be maintained and individually owned lots remain integrated with the wider open space network?	To better understand the open space ownership and ongoing management.	Unio comment: All open space land to be public, supplemented by roading network through Silverdale West.	Parks Planning comment Not answered. If “open space land to be public” but ownership not to be determined until subdivision stage, how does the plan change ensure these open spaces will be publicly accessible and that the structure plan/greenways connections are not severed by private ownership?	The only way to ensure these active mode facilities are public is to accept vesting of them. It is intended that open space be vested, however final decisions on exact extent and location of that to be left to subdivision stage. Council will be responsible for progressing the re-zoning of open space land as part of its regular updates to the AUP. Plan Change / s32 analysis updated
OS4	Greenway connections	Both the Rodney West Local Paths (Greenways) Plan, June 2019 and the Silverdale West Structure Plan, April 2020 indicate a greenway route through the centre of PPC area running north/south, with the structure plan showing greenway connections closer to future active travel modes along and through Stage Highway 1. Neither the concept plan Development Concept Plan nor the proposed precinct plan provisions show or provide for this greenway. How has this been provided for within the development of the PPC?	To better understand connectivity with adjoining areas.	Unio comment: There needs to be acknowledgement that the Plan Change area only incorporates a relatively small portion of the overall land area between DFH and SH1, and therefore has limited ability to deliver the outcomes of the above plans. Notwithstanding that, the proposal is much more closely aligned with the intent of both those documents than is being acknowledged. The Rodney West Local Paths (Greenways) Plan seeks the following outcomes through the Plan Change area: ▪ Local Path – Open Space identified through Silverdale West, which is defined as being local paths on and off-street, safe and pleasant neighbourhoods that encourage walking and cycling for local trips ▪ Continuous canopy with grass and assorted low level planting The Silverdale West Structure Plan seeks the following outcomes through the Plan Change area: ▪ Green Ways (Cycle / Walk Ways) identified along John Creek riparian / esplanade including linkage to SH1 Landscape Buffer ▪ Supplemented by on-street active mode infrastructure connections to DFH and wider (future) cycle network	Parks Planning comment Accepted.	

OS5	Flooding	The flood model results in Appendix 10 of the PPC request (Infrastructure Report) indicates that the entirety of area that is proposed open space would be within the 1% AEP floodplain and be inundated in during a 1% ARI storm. What consideration has been given to delivering aspects of the green network outside the floodplain to provide for resilience?	To better understand the use of the open space in relation to flooding.	Unio comment: Silverdale West Structure Plan identifies the green areas / riparian and esplanade margins as being fully within the floodplain. Notwithstanding the desire to enable public walking and cycling access along the north-south green spine, that access through the Precinct will be supplemented via the vested road network which provides a number of other movement options during a flood event. While not explicitly provided for, it is likely that the collector and local road network through the Precinct will include a 'road buffer' along the western side of John Creek, as indicated on Precinct Plan 1.	Parks Planning comment: Accepted.	
OS6	Zoning	What consideration was given to the use of the Open Space – Conservation Zone instead of the Open Space – Informal Recreation Zone?	To better understand the future use and management of the Open Space	Unio comment: Consideration was given to the range of open space zones however, the Informal Recreation Zone was chosen as seems to best relate to intended use of the proposed open spaces for walking, cycling and some amenity along streams / flooding areas.	Parks Planning comment: Accepted. But note that applying an open space zoning is not supported in general, as explained in OS1 above.	It is intended that open space be vested, however final decisions on exact extent and location of that to be left to subdivision stage. Council will be responsible for progressing the re-zoning of open space land as part of its regular updates to the AUP. Plan Change / s32 analysis updated
OS7	Precinct	Section IX.1 of the PPC describes the purpose of the precinct and the expected outcomes. The proposed does not describe the purpose of the open space zoning, the intended outcomes or its function	To better understand the future use and management of the Open Space	Unio comment: H7 Open Space zones provides the description of the outcomes for the Informal Recreation Zone. For completeness it is proposed to amend IX.1 Precinct Description to include the following text: *The application of the Open Space - Informal Recreation zone will provide for high amenity walking and cycling connections through the precinct along the network of existing streams. The precinct seeks to maintain and enhance these waterways and integrate them with the open space network as a key feature and as part of a broader green network through the wider area.*	Parks Planning comment: Accepted. But note that applying an open space zoning is not supported as explained in OS1 above. Recommend wording is changed to remove reference to open space zone. Suggested wording: The precinct *will provide for high amenity walking and cycling connections through the precinct along the network of existing streams. The precinct seeks to maintain and enhance these waterways and integrate them with the* public *open space network as a key feature and as part of a broader green network through the wider area.*	It is intended that open space be vested, however final decisions on exact extent and location of that to be left to subdivision stage. Council will be responsible for progressing the re-zoning of open space land as part of its regular updates to the AUP. Wording accepted, although the following additional paragraph proposed also: *Open spaces in the Silverdale West Industrial Precinct other than esplanade reserves may be privately owned, although it is anticipated that open spaces that forms part of the active mode transport network through the precinct will be vested in Council. Indicative open space areas are identified within the precinct; however, the exact extent and location will be determined at subdivision stage.* Plan Change / s32 analysis updated
OS8	Precinct	Proposed objective IX.2(10) seeks development subdivision to demonstrate integration of green networks focused on (inter alia) open space and pedestrian networks. This is the only use of the term "green network" in the PPC. There are no illustrations or descriptions. How are green networks described, defined, identified and provided for in the PPC?	To better understand the future use and management of the Open Space	Unio comment: The primary vehicle for delivering the green network is clearly the Open Space zoning proposed along the network of existing streams. The Precinct description has been updated as per OS7 above. The requirements for riparian planting, additional esplanade width along John Creek, and the ability to incorporate pedestrian and cycle facilities within the outer 10m of the esplanade reserves establish the mechanisms by which the green network will be delivered over time.	Parks Planning comment Noted. Additional esplanade width cannot be determined at plan change stage.	Thank you, acknowledged. It is additional riparian margin rather than additional esplanade width that is proposed within the Plan Change.

				These outcomes are detailed indicatively on Precinct Plan 1.		
OS9	Precinct	Proposed policy IX.3.11 would appear to be an appropriate place to reference the delivery of green ways shown in the Structure Plan and Local Paths Plan. Please provide information to better understand the effectiveness of the PPC with regard to these green ways being delivered (i.e. a green network?) and any alternatives that were considered.	To better understand the future use and management of the Open Space	Unio comment: The delivery of green ways shown in the Structure Plan and Local Paths Plan is largely proposed to be implemented through the open space zoning. Policy 11 is currently focused on open space delivered through the subdivision process. The following amendments are proposed for clarification: *Ensure that the location and design of publicly accessible open spaces, in addition to zoned open space land, contribute to a network of green pathways and cycle paths, a sense of place and a quality network of open spaces for Silverdale West, including by incorporating:* *(a) Distinctive site features; and* *(b) Wetlands and streams.*	Parks Planning comment: Noted. To align with comments re removal of open space zoning from the plan change, recommend wording is changed: *Ensure that the location and design of publicly accessible open spaces*, **including but not limited to riparian margins and esplanade reserves**, *contribute to a network of green pathways and cycle paths, a sense of place and a quality network of open spaces for Silverdale West, including by incorporating:*	It is intended that open space be vested, however final decisions on exact extent and location of that to be left to subdivision stage. Council will be responsible for progressing the re-zoning of open space land as part of its regular updates to the AUP. Plan Change / s32 analysis updated Can accept the proposed wording however this sets the expectation that the land will be vested, which is not something Parks / Council have committed to at this stage.
OS10	Precinct	Proposed policy IX.3(15) seeks open space to function as an "appropriate" buffer to adjacent industrial activity. What is this intended to achieve? Is this meant to apply to the extent of open space zone or other areas as well? What is the open space buffering the adjacent industrial activity from?	To better understand the future use and management of the Open Space	Unio comment: The intention of Policy 15 and associated provisions is to use open spaces to achieve a buffer between streams and wetlands and industrial activity. The following amendments are proposed to Policy IX.3(15) for clarification: *Create open space that functions, among other things, as an appropriate buffer between streams and wetlands and ~~to~~ adjacent industrial activity.*	Parks Planning comment: Please note that applying an open space zoning is not supported in general, as explained in OS1 above. This policy does not require or direct an open space zoning for the buffer. Additionally, are the 'open space's stated here publicly accessible open spaces? Or can they be any open/green space? Buffers do not necessarily need to be owned/accessed publicly. In general, Parks Planning is not convinced that the heading of policies 8-15 is really clear being 'street network, open space and built form'. It is not clear what sort of open space it refers to? Does it refer to open space vs. built environment? If so, is it then both private and public owned open space? It needs to be clarified on the heading.	It is intended that open space be vested, however final decisions on exact extent and location of that to be left to subdivision stage. Council will be responsible for progressing the re-zoning of open space land as part of its regular updates to the AUP. Plan Change / s32 analysis updated Policy IX.3(15) amended as follows: *Create open space that functions, among other things, as an appropriate buffer between streams and wetlands and adjacent industrial activity* ***and supports active transport modes through the precinct, primarily in the form of esplanade reserves and riparian margins.***

Attachment 2 - L3 Design Principles

Recommendation	Plan Change Response		
Appendix 6 Urban Design Statement			
Design Principle – Integrated and Connected Create interconnected transportation, ecological, and hydrological networks within the site. Integrate the new industrial development spatially, within the immediate surrounding area.	The existing waterways, natural wetlands and patches of indigenous vegetation are largely to be incorporated into the proposed open space zoning where possible. As John Creek forms a north-south spine this enables pedestrian and cycle paths to be integrated with ecological, and hydrological networks. This approach is reinforced through Objective IX.2 (10) and Policy IX.3(10) which have been updated in response to this RFI. Additionally, the criteria for subdivision requires assessment of whether roads are aligned to provide visual and physical connections to open spaces, including along the stream network, where the site conditions allow (IX8.2(1)(c).	Noted	
Design Principle – Responding to existing topography/slope Minimising the extent of retaining required along the public realm interface. Utilise a combination of battering and low level retaining where possible to achieve level building platforms and compliant road gradients.	It is acknowledged that this is a gap within the precinct provisions. To address this matter, assessment criteria have been added for new buildings prior to subdivision, and subdivision, including subdivision establishing private roads.	It is recommended that changes are made to the retaining wall provisions to better explain the intended outcome. IX.8.2 Assessment criterion (h) The extent to which any retaining along the public realm interface is minimised, mitigated and responds to the landscape, any watercourses or other ecological features.	Wording adopted.
Design Principle – Quality Public Realm Ensure a high standard of development, public open space, design amenity and public access. Design the structuring elements of the site that result in positive building frontages which could contribute to passive surveillance and an active public realm	Additional matters of discretion and assessment criteria are proposed for new buildings prior to subdivision, and subdivision, including subdivision establishing private roads to ensure that the key structuring elements of the Development Concept Plan which will contribute to a quality public realm are given effect to. In particular the proposed assessment criteria require development and subdivision to be generally consistent with Precinct Plan 1 which incorporates these key structuring elements.	NB Appendix 1 integrates street tree planting requirements but it is unclear how passive surveillance/active frontage objectives are delivered? (NB Not mentioned in H17.) Please explain how the provisions deliver on these outcomes (not mentioned in H17 or Precinct provisions).	This is achieved through the structural elements set out in the Precinct Plans which detail the general location of collector roads and active mode infrastructure (road cross sections and through / adjoining indicative open space areas). There is a limit to which industrial buildings and activity can deliver passive surveillance, however we consider the basic layout of the transport modes through the precinct can deliver an active public realm that contributes to passive surveillance of the various public areas.
Design Principle – Community Build a strong sense of community through shared amenities, public trails, quality and safe open spaces, access to nature, and places for the public to meet and interact.	The existing waterways, natural wetlands and patches of indigenous vegetation are largely to be incorporated into the proposed open space zoning where possible. This will create a social amenity within the precinct which can be used to foster a sense of community.	Noted	
Design Principle – Native Landscapes Conserve and expand riparian areas and native vegetation where possible. Be sensitive to the landscape features of the site and beyond the site including the experience of State Highway 1 travellers, and existing and future planned communities.	Standard IX6.2 Streams and natural inland wetlands requires that riparian margins of permanent and intermittent streams be planted either wide to a minimum width of 10m. Further it is noted that the existing waterways, natural wetlands and patches of indigenous vegetation are largely to be incorporated into the proposed open space zoning where possible. IX6.4 Landscape buffer (State Highway 1 Interface) requires a planted building setback from State Highway 1.	Noted	
Development Concept Plan	The elements of the development concept plan have informed the proposed zoning layout and precinct plan 1. The proposed	Noted	

	assessment criteria for new buildings prior to subdivision, and subdivision, including subdivision establishing private roads requires consistency with Precinct Plan 1 which incorporates the key structuring elements of the development concept plan.		
Appendix 17 – Landscape Memo			
Landscape Framework Buffer –along SH1 In order to achieve the varying objectives of the structure plan (appropriate visual mitigation, views and amenity / gateway) the following is recommended for the eastern boundary landscape buffer. • Formation of a gateway experience that announces the arrival into Hibiscus Coast. This can be achieved through the creation of a quality travelling environment that reflects the location and sense of place. Landscape is an important component of the overall gateway design and can be designed to be an effective gateway for moving travellers, in a high-speed environment. • Landscape planting to achieve a quality 'Gateway' outcome can be achieved through the following: - A varying 10m - 15m width of continuous planting buffer along the eastern extent of the site/ SH1 corridor. This 10m –15m corridor should accommodate a range of plant species and scales of vegetation to create an effective gateway feature. - Plant species will be utilised to create multi-layered native plantings. Consisting of low edge planting, mid-height shrubs/trees as well as taller tree species along the full extent. This planting is to be arranged to achieve a regular structure and rhythm reinforcing a gateway feature. - Planting should be a bold statement and utilise different form, texture, and colour, to ensure it successfully reads as a gateway feature in the high speed (100km/h) environment. - Placement and establishment of trees will achieve this gateway effect, rhythm and scale along the SH1 corridor. Larger tree species (with the ability to grow to a minimum of 20m height at maturity) will provide for scale and containment of the road corridor as well as providing a vertical scale and a level of visual mitigation of the built environment. - Tree species to be planted at a minimum size of 1.8 – 2.2m height / grade to ensure appropriate and timely establishment. - Low native species planting should be introduced within the key viewshaft corridors from SH1 through / over the industrial area to the surrounding hills	The "Gateway experience" is proposed to be provided for through IX6.4 Landscape buffer (State Highway 1 Interface) which requires planted landscape setbacks to provide a visual buffer between industrial activities within the Precinct and State Highway 1. The landscape planting recommendations are given effect to through IX.9 Special Information Requirements Landscape Buffer Plan which outline the planting requirements for IX6.4 Landscape buffer (State Highway 1 Interface).	It is recommended that the varying landscape buffer widths are dimensioned or keyed in, on the Precinct Plan 1 to avoid confusion. It is also noted that the landscape recommendations under the second bullet point are quite detailed and provide helpful guidance on how a gateway outcome can be achieved. Might this be included as an Advice Note	Noted. Refer Appendix 4 to the Silverdale West Industrial Precinct.

(Lloyd Hill environs). It is also recommended that these viewshaft corridors are reinforced through the careful placement of clusters of larger scale trees to frame and emphasise these longer distance views. • All planting should be designed and planned to meet safety, sightline and long-term maintenance costs and requirements. • Ensure best practice implementation and long-term maintenance to achieve good plant establishment and longevity. • It is recommended at detailed design stage a conscious design approach is adopted that tests the proposed recommendations in both 3D and 2D format to ensure the desired, quality of 'gateway' response is achieved.			
Western Landscape Buffer – Adjacent Dairy Flat Highway In order to achieve the objectives of the structure plan and create gateway to Hibiscus Coast the following is recommended for the western landscape buffer adjacent Dairy Flat Highway. • Formation of a gateway experience that announces the arrival into Hibiscus Coast. This can be achieved through the creation of a quality travelling environment that reflects the location and sense of place. Landscape is an important component of the overall gateway design and can be designed to be an effective gateway for moving travellers, in a high-speed environment. • Landscape planting to achieve a quality 'Gateway' outcome should be achieved through the following: - A 5m continuous planting buffer along the interface with Diary Flat Highway. This 5m corridor must be planted with a mixture of trees, shrubs or ground cover plants along the full extent to achieve multi-layered plantings and be arranged to achieve a regular structure and rhythm reinforcing a gateway feature. - Planting should be a bold statement and utilise different form, texture, and colour, to ensure it successfully reads as a gateway feature in the high-speed environment. - Larger tree species should be planted (that have the ability to grow to a minimum of 20m height at maturity) to provide for scale and containment of the road corridor. Tree species to be planted at a minimum size of 1.8 – 2.2m height / grade to ensure appropriate and timely establishment. - All planting must be appropriately maintained thereafter.	The "Gateway experience" is proposed to be provided for through IX6.5 Landscape buffer (Dairy Flat Highway Interface) which requires planted landscape setbacks to provide a visual buffer between industrial activities within the Precinct and Dairy Flat Highway. The landscape planting recommendations are given effect to through IX.9 Special Information Requirements – Landscape Buffer Plan which outline the planting requirements for IX6.5 Landscape buffer (Dairy Flat Highway Interface).	Comments as above re dimensioning on Precinct Plan and potential Advice Note.	Standard IX.5 Landscape Buffer (Dairy Flat Highway) specifies a minimum 5m depth from the edge of the road widening boundary under Standard I6.6, or from the legal road boundary once the road widening designation is in place.
Appendix 18 – Height Memo			
The following methods / recommendations are made to assist with reducing the visual mass of the larger buildings within the industrial zone: - Utilising subdued, recessive colours, providing variation in materials and finish of facades (roof colours that have a maximum LRV of 40%);	These recommendations have been considered and on balance it was decided that specific precinct provisions are not required as the design of buildings can be appropriately managed by the underlying Light Industrial zone and variation will naturally occur as the precinct is developed.	Please provide a landscape expert assessment in support of this decision if it is to be pursued, including reference to the H17 provisions that will ensure an appropriate visual amenity outcome for elevated audiences to the east.	We disagree. There is no difference between this Light Industry zone and many others ,where colours and materiality are not controlled and roof form and plant are not a design focus. The intention is for buildings within the precinct to be a permitted activity (following the first subdivision) as per the Light Industry Zone.

- creating variation in roof profiles with consideration given to the overall roofscape when viewed from the elevated position around the site; - all rooftop servicing and planting should be designed as an integral part of the roofscape with particular consideration given to the view from the elevated context.			

STORMWATER

Black text – responses provided in table and SMP updated accordingly
Red text – This information is not being provided now. It is considered to be too detailed for the plan change process, or not able to be confirmed and provided until physical design work commences.

4 Stormwater/Health Waters					Healthy Waters Response	Civix Responses – 10/04/2024
SW1	Stormwater Management Plan	• The information provided in the Stormwater Management Plan is not sufficient to the scale and significance of the effects of the implementation of the proposed private plan change.	To enable a better understanding of the effects of the proposed private plan change on stormwater in the catchment.	Civix comment: Section 6 of the Stormwater Management plan has been updated to provide more detail on the options assessment undertaken for this project and how the proposed mitigation strategies address the effects of the development.	The applicant's response states that communal devices are to be used; however, the SMP does not state this clearly. Section 6.2 provides a range of potential stormwater management options. Each of the options has potential issues. Please amend the SMP to clearly identify what the suitable option(s) are and why. And does Table 2. also apply to roads, please clarify. Section 6.2.1 states that wetlands are proposed to treat all impervious areas, but it also states that catchpits with LittaTrap shall be used for waste storage areas, this promotes the use of proprietary devices, which is not supported in the Stormwater Code of Practice (SWCoP). Also, no guidance reference has been made to the SWCoP. Please clarify. Section 6.2.2 outlines the use of SMAF-1. Please provide further information as to whether SMAF-1 is sufficient to mitigate the effects on the stream in the catchment.	*SMP has been updated to clarify.* *Section 6.2 has been updated to clarify on the options to be implemented with discussion/clarification on the selected best practical option.* *LittaTraps are proposed only for the waste storage bin areas within the private development. It captures and retains plastic and litter before they enter the drainage system and therefore before they can reach the wetland and streams. The maintenance of this system will be within the private lot owner. Section 6.2.1 has been updated to further clarify.* *- Our proposal ensures no direct discharge to the stream from the development in the 10-year event. All runoffs from the development will be conveyed to the proposed communal wetlands where the treatment and detention are provided to mimic up to the 10-year pre-development flow into the stream.* *- SMAF-1 is proposed in addition to the 10-year detention that mimic the pre-development flows into the stream. In accordance with AUP E10, SMAF-1 are for those catchments which discharge to sensitive or high value streams that have relatively low levels of existing impervious area. While SMAF-2 areas typically discharge to streams with moderate to high values and sensitivity to stormwater, but generally with higher levels of existing impervious area within the catchment. Although this plan change area is not identified to be within the stormwater management area controls, we have taken a conservative approach to adopt SMAF-1 for the entire plan change area. SMAF-1 detention for the plan change area will be provided via communal wetlands which will also act as a detention for stream protection and will be in accordance with GD01. Furthermore, the area downstream of the plan change site has been already identified as the SMAF-1 control area. Additionally, it is also in*

						consistent with Silverdale West Industrial Plan Change SMP dated 25/11/2022 which identified that SMAF1 retention and detention are to be applied for hydrology mitigation. So, we believe use of SMAF-1 is appropriate to mitigate the effects on the stream in the catchment.
					Table 6.4 of the SMP sets out alternative mitigation devices; however, there is no guidance provided on how these devices could be implemented, or how devices could be selected. Furthermore, Table 6-4 sets out management options that do not align with Schedule 2 or 4 of the NDC and will be difficult to implement by future users of the SMP, what is the relevance of Table 6.4, please update the SMP accordingly.	*- Table 6.4 lists out the alternative options considered for Stream Hydrology mitigation. However, they have been considered as not appropriate like pointed out as they do not align with the Schedule 2 or 4 of the NDC. For clarity, we have removed Table 6.4. It was shown to illustrate the other devices considered to select the BPO which is the communal wetland for treatment and detention for stream protection and to attenuate up to 10-year event.*
					It is required that the SMP clearly set out, • the preferred stormwater management solution for the site, the location, design and concept sizing of the stormwater management solution to ensure that the device(s) can be incorporated into the proposed future urban layout and there is sufficient room and gradient to allow for operations and maintenance. This needs to be included in the precinct plan to ensure the land required will be available and used for this purpose.	*While we agree that the preferred stormwater management solution for the site to be clearly set out in the SMP, the location, design and sizing of the stormwater management solution can be conditioned such that the development needs to comply with the SMP. This gives flexibility for the development to consider the appropriate catchment and allocate adequate space to the communal devices within the development. Council/Healthy Waters can review and comment at the time of resource consent. However, please find the catchment plan showing the indicative sub-catchments and location of proposed communal wetland for each sub-catchments.*
					• Reasoning for the design/size of the device, is it consistent with requirements in the SWCoP and GD01.	*Wetlands have been sized at 3% of the impervious area they treat. Previous studies have found that wetlands are approximately 1.5% to 2.5% of the impervious area they serve, including area required for O&M access. Therefore, the 3% figure used is conservative and will likely reduce with detailed design of the wetlands for Resource Consent and EPA. This sizing strategy should be adequate for the plan change process.*
					• Provide guidance on how the stormwater infrastructure will be implemented. Section 6.2.3 outlines the removal of Willows, however following site visit it was noted that there were also existing culverts in poor condition along the stream, will these be removed? Was there an assessment on the effects of the existing culverts along the stream? Riparian planting is also outlined as a method to reinforce banks and provide buffer from development, however, it is not clear if the riparian planting is a minimum of 20 meters for all streams in the plan change area and whether this is sufficient to achieve the outcome of stream	*Section 6.2 has been updated to clarify on the BPO for SW infrastructure implementation.* *There is no public SW culvert identified within the site. The existing culverts are considered as ford culverts put in place to create access points over the stream. Where new stream crossings are required, culverts will be adequately sized and designed in accordance with SW COP and AT TDM.* *Riparian planting is proposed for a minimum of 10 meters on each side of the stream for widths less than 3 meters, and a minimum of 20 meters for widths greater than 3 meters. SMP has been updated accordingly.*

					protection. Please update the SMP and provide further assessment. It is recommended that riparian planting is based on the character of the stream, and that 20m or more may be required. In section 6.2.7 flooding – Results, please state where were the minimum floor levels taken from. How does the flood modelling result support the minimum floor level stated in the SMP? How is this consistent with the SWCoP guidance on floor levels. Please update the SMP. Section 6.2.6 talks about Development stages. Please also provide information in the SMP on the implementation of the stormwater infrastructure and stream works. Section 6.4 provides some information on asset ownership, please provide further information on what devices will be vested to Auckland Council, the number of devices and associated structures, whether these devices will meet Health & Safety, operations and maintenance or other design criteria, the SWCoP and the Stormwater Bylaw. The SMP indicates the possibility of 14 stormwater wetlands and associated drainage and outfall that may be public. Please provide further information on how the number of devices were decided and how this is BPO as if they are vested to Auckland Council there will be ongoing maintenance and operations cost. SMAF-1 will also be used, does this affect the number of stormwater wetlands proposed. Please clarify.	*The minimum floor levels are set based on the maximum flood level adjacent, plus the freeboard required as per SW CoP Guidance. To further clarify, the SMP has been updated accordingly.* *We understand RC will not be granted unless the stormwater management solutions are proposed in compliance with the SMP and the precinct provisions. This can be provided as the development gets developed. The SMP will set the principles/solutions to comply for the development.* *Any communal devices such as Communal Wetlands and Public SW pipe network will be vested to Council upon completion. The process as set in SW CoP guidance, particularly Section 4.3.6.2 shall be complied. Section 6.4 has been updated to clarify this.* *The site is divided into 14 sub-catchments, each requiring specific design and grading to accommodate the masterplan. Therefore, implementing a communal device (such as a wetland) in each sub-catchment is deemed essential. The minimum catchment for a wetland is 1.3Ha* *These communal devices serve multiple purposes, including hydrology and flood mitigation for all land uses within the sub-catchments. They are proposed downstream but before discharge into the high-value stream, thus functioning as the Best Practice Option (BPO). This approach efficiently provides attenuation and detention while avoiding challenges associated with implementing these measures within the road corridor. Additionally, Council's choice of control devices and their placement also strongly influence mitigation effectiveness.*
SW2	Stormwater Management Plan	• The level of detail in the proposed Stormwater Management Plan (SMP) overall is not sufficient for this scale of greenfield urbanisation. Please provide an in depth analysis which shows the stormwater effects of urbanising this catchment area and how any adverse effects will be mitigated.	To enable a better understanding of the effects of the proposed private plan change on stormwater in the catchment.	<u>Civix comment:</u> Section 2 & 5 of the Stormwater Management plan has been updated to provide additional context on the effects of the proposed development on downstream systems.	Section 2.3 and Section 2.6 outlines existing infrastructure. However there is no identification of existing stormwater ponds/wetlands and culverts in the stream. Please identify all the existing infrastructure so that an assessment of the effects of the proposed development on all existing infrastructure will be included in the report. A site walkover should be carried out to get accurate on ground information. Section 2.7 identifies flooding and flow paths, however there is minimal information on existing flooding risk downstream. Please identify any flooding risk in the catchment and the effects the proposed development will have. Such as the	*- Further information has been added to Section 2.3 & 2.4 including Watercourses and ponds within the site are shown in Figure 3, while Figure 4 displays a summary of the site's inflow and outflow through various culverts under the motorway. It is also in consistent with Silverdale West Industrial Plan Change SMP dated 25/11/2022.* *- As shown in Council Geomaps, the SH1 is predicted (under the existing scenario) to flood at the downstream end, i.e., ahead of Silverdale northbound off ramp. However, the proposed scenario (i.e., the plan change development) shows no increase to the predicted flooding*

					current flooding risk on State Highway 1, Small Road, associated road embankments, 2 and 4 Blue Gum Avenue, and any other relevant properties and infrastructure. Please include the information in the SMP. What flood risk mitigation within the plan change areas is recommended in the SMP to manage flood risk to these properties and infrastructure, please clarify further. Sections 2.12, 2.12.1, 2.12.2 provide information on erosion assessment and include the assessment by River Styles Framework, however not all the relevant information for the plan change area was included. Please update the SMP to include all the relevant information and include a plan for easier reference and to easily identify the hotspots. Please include the Silverdale River Styles Framework as an appendix in the SMP. Protecting permanent and intermittent streams should be one of the key features/purposes of the SMP in this plan change area. Please include information on how the proposed development will affect stream baseflows, ground water, and changes in water temperature, and associated mitigation, please include in the SMP. Section 4. Outlines Mana Whenua values, however there is no information about Mana Whenua engagement and other stakeholder engagement. Please clarify in the SMP if there has been any engagement with Mana Whenua and stakeholders. Please include all references used in the SMP in the SMP.	*outside of the site. The downstream culvert (which acts as the exit for the site flow) has been throttled in order to not increase flood water levels downstream. This throttled effect will allow water to back up behind the structures to alleviate pressure downstream. As such, there is no adverse effect to the downstream properties and infrastructure due to the proposed plan change development.* *- Silverdale River Styles Framework has been added to the appendix in the SMP.* *- Noted. As such, riparian yards will be proposed in consistent with Silverdale West Industrial Plan Change SMP dated 25/11/2022.* *- Plan change area is divided into sub-catchments such that the runoff from each sub-catchments will convey into the communal wetland which provides SMAF mitigation and 10-year detention to mimic the pre-development flow into the stream. Also, Riparian yards and plantings proposed will improve the water temperature and minimises erosion. SMP has been updated to include this information.* *- We have engaged with iwi at an early stage, and this is ongoing. Notwithstanding that engagement, Iwi will be able to make submissions on the plan change during the notification process if they choose to do so.*
SW3	Stormwater Management Plan	• The Best Practicable Options (BPO) are not discussed sufficiently. Stormwater management decisions need to be justified as BPO based on the specific catchment characteristics, please provide information that addresses why the proposed stormwater management is considered the BPO.	To enable a better understanding of the effects of the proposed private plan change on stormwater in the catchment.	<u>Civix comment:</u> Section 6 of the Stormwater Management plan has been updated to provide more detail on the options assessment undertaken for this project and how the proposed mitigation strategies address the effects of the development.	See comments in SW1 and SW2.	*- SW1 and SW2 have been addressed.*
SW4	Stormwater Management Plan	• No reference is made to the Silverdale West Dairy Flat Industrial Area Structure Plan and the associated SMP. The SMP includes important catchment context which would have been	To enable a better understanding of the effects of the proposed private plan change on	<u>Civix comment:</u> References to the other SMP's have been added into the executive summary and to section 6 of the SMP.	The level of detail in the proposed SMP does not reflect the information required for this plan change, see the above comments.	*- The flood risk management hierarchy, as identified in Silverdale West Dairy Flat Business Area Structure Plan SMP Table 3.2, has been*

		beneficial to the proposed SMP for the private plan change. Please address how the proposed SMP is consistent with the Silverdale West Dairy Flat Industrial Area Structure Plan and reference the associated SMP where appropriate.	stormwater in the catchment.		Please provide more detailed information to allow for a better understanding and assessment of the proposed development and stormwater management.	*adapted for flood modelling and proposed development.* *- Proposed hydrological mitigation and treatment devices are consistent with the options listed.* *SMP has been updated with a comparison table (Table 6-2-1) to show the consistency of the key elements.*
SW5	Flood Management	• Flood risk management has not been presented clearly in the proposed SMP. Please provide details on the proposed flood mitigation option and its feasibility.	To enable a better understanding of the effects of the proposed private plan change on flooding.	<u>Civix comment:</u> Additional discussion on flood risk management has been provided in section 6.2.5 of the SMP.	Section 6.2.5 states that the wetlands have been sized at 3% of the impervious area they treat, how was this determined, and is the design and sizing of the wetland consistent with requirements in the SWCoP and GDO1? Does the location and area allow for operations and maintenance? And how will the proposed location be identified and protected for stormwater wetland purposed in the plan change area? Are the stormwater wetlands located outside the 10% AEP flood plain? If not please provide information on how the stormwater wetlands will function in a flood event. Please provide further information on what green outfalls mean? It is important the outfall does not increase stream erosion, how will this be achieved? Please update the SMP.	*- Wetlands have been sized at 3% of the impervious area they treat. Previous studies have found that wetlands are approximately 1.5% to 2.5% of the impervious area they serve, including area required for O&M access. Therefore, the 3% figure used is conservative and will likely reduce with detailed design of the wetlands for Resource Consent and EPA. This sizing strategy should be adequate for the plan change process.* *- All communal wetlands are to be located such that they are able to access from the public road corridor for O&M. SMP updated to include this.* *- Yes, 10-year attenuation for the site is provided via the communal wetlands which will be located above the 10-year flood level at the stream.* *- Scruffy dome outlet with smaller orifice catering for detention for stream protection will be provided in the wetland. The downstream of the outlet will be a wingwall culvert with rip-rap protection to ensure the flow does not trigger any stream erosion. SMP updated to include this.*
SW6	Flood Management	• Please provide more details on the proposed throttling of stream (these will be dams) at stream crossings for flood mitigation. Please include information on the proposed locations, preliminary designs, and show how this can be done safely.	To enable a better understanding of the effects of the proposed private plan change on flooding.	<u>Civix comment:</u> It is proposed Box culvert under the stream crossings to allow the flood through in order to control its volume. The size of these structures is calculated associated to Tuflow modelling of different rainfall events results. The culverts are in accordance with fish passage requirements of the NES-F.	The SMP states that the throttled stream crossing will create backwater effects. Please provide information on the possibility of overtopping at the stream crossing and any flooding risk, firstly the culvert being blocked and secondly, to assess the risk of having an event larger than 1% AEP. Are there any measures to ensure any related flooding risk will be mitigated? There will be bridge crossings above the culverts, assuming vesting to AT, has AT been engaged regarding the possibility of overtopping? How will these structures in the stream affect the stream and stream erosion, is the proposed location of the structure the best option for the stream, and what measures will be in place to ensure stream health and erosion are not worsened? Please update the SMP.	*- No overtopping is intended at the throttled stream crossing locations. The road levels will be set higher to accommodate the required freeboard from the 100-year flood level.* *- mitigation is provided by meeting the freeboard requirements. The stream crossings and actual calculated cross-sectional areas will be addressed via detailed design of the development levels at RC stage. Prior AT engagements will happen in the next phase of this plan change application/process.* *- Inlet and outlet for the culverts will be proposed with rip-rap protection to prevent from stream erosion. The locations of stream crossing culverts are shown on the catchment plan Drawing 30001. SMP has been updated with the above information added.*

SW7	Flood Management	• Please provide information on any modifications to the floodplain and what effects there may be and associated management.	To enable a better understanding of the effects of the proposed private plan change on flooding.	Civix comment: As the development area is within some of the published flood plain extent and therefore reducing that area, additional storage areas are proposed in the open areas to accommodate flooding volumes. As detailed at section 6.2 of the SMP, flood modelling shows that stormwater flows can be effectively contained in the post-development scenario, with no effect on the up or downstream networks.	Please highlight what assessment has been done to compare the risk pre and post development. Was there an assessment around the overtopping for the culvert under SH1, with frequency, duration and hazard information included? Please update the SMP. Section 6.2.7 of the SMP contains very limited discussion around the modelled results on Flood risk assessment. The SMP only includes some discussion around Existing Development, and Maximum Probable Development including upstream with proposed mitigation, with culverts at stream crossings. However, there was no discussion around whether the proposed devices were intended to address maximum probable development effect with climate change as well. It is not clear what scenarios are used to assess the impacts of development, or why they are being used. For example, what scenario was used to establish the existing flood risks and what scenario looks at the potential impact of development that will be enabled by the plan change? Please clarify.	*- A flood assessment evaluation has been undertaken to assess the flows within the site and upstream/downstream of the site. Flood modelling has been undertaken using Tuflow. The model has been developed for the purpose of demonstrating that the mitigation measures included within the site mitigate the effects of the development. The existing model included the existing state of the site (as 8% impervious). The proposed model included the proposed development on site (as 85% impervious), with the proposed stream crossing culverts and flood storage areas providing attenuation for the 1 in 100 year event. The afflux (which is the difference between pre and post developments) shows no change to the downstream including the SH1. Refer drawing 55004 for details.*
SW8	Flood hazard assessment	• Please provide TP108 rainfall figures.	To enable a better understanding of the effects of the proposed private plan change on the flood hazard.	Civix comment: Rainfall 90th Percentile(mm) - 26.358923 Rainfall 95th Percentile(mm) - 37.437984 Rainfall 2 year, 24 hour(mm) - 85.506783 Rainfall 5 year, 24 hour(mm) - 119.370438 Rainfall 10 year, 24 hour(mm) - 142.016769 Rainfall 20 year, 24 hour(mm) - 161.983002 Rainfall 50 year, 24 hour(mm) - 180.000000 Rainfall 100 year, 24 hour(mm) - 212.317032	Were these rainfalls used in the assessment? If not please provide an explanation as the SMP should reference Auckland data.	*Yes, Table 6-2-3 has been added in the SMP to clarify on the Rainfall depths used for flood modelling.*
SW9	Flood hazard assessment	• Please provide information on the effects of climate change and clarify the temperature used, it is recommended a temperature of 3.8° is used.	To enable a better understanding of the effects of the proposed private plan change on the flood hazard.	Civix comment: Future rainfall depths allow for a projected average temperature increase of 2oC, per the Ministry for Environment's Guidance Manual for Local Government in New Zealand (2008). We have also run the flood model for RCP8.5 (3.8° climate change) rainfall depths and the flood results were good. Discussion on this has been added to section 6 of the report.	Please clarify what temperate increase was used, was it 2.0 degree or 2.1 degree? The SMP needs to include a climate change of 2.1 degree as per SWCoP. What was the difference between 2 degree and 3.8 degree, and if so what changes were made to account for 3.8 degree. Auckland's Climate Plan identifies a climate change factor of 3.8 degree and the SWCoP is currently in the process of being reviewed to include 3.8 degree. Assessments should be based on a 3.8 degree.	*- The modelling used 2.1 degree temperature increase for the flood assessment.* *- SMP has been updated to include both 2.1°C and 3.8°C Climate increase.* *- Results summary is provided in Table 6-2-5.*
SW10	Flood hazard assessment	• Please provide information on pre and post-development comparison. It is not clear if the comparison used was between pre-development vs. post-development or pre-development vs.	To enable a better understanding of the effects of the proposed private plan change on the flood hazard.	Civix comment: The comparison used was between pre-development vs. post-development with proposed mitigation.	See SW7 for details	*- SW7 has been addressed.*

		post-development with proposed mitigation/intervention.				
SW11	Flood hazard assessment	• Please provide further information on the details included in the flood modelling e.g. does it include proposed mitigation structures.	To enable a better understanding of the effects of the proposed private plan change on the flood hazard.	Civix comment: The flood modelling includes the proposed stormwater network (manhole and pipes). Retention/detention tanks and constructed wetlands are not included in the model. The modelling includes proposed culverts for mitigation.	See SW7 for details.	*- SW7 has been addressed.*
SW12	Flood hazard assessment	• Please provide further information on the downstream boundary condition as it is not clear where the boundary is and what assets have been included.	To enable a better understanding of the effects of the proposed private plan change on the flood hazard.	Civix comment: The afflux plan of the flood model shows the downstream properties or the State Highway 1 are not being affect by the proposed development. Culverts included in the model are shown on the flood plain drawings. Full model files of the TuFlow model can be given to council if needed.	Afflux does not provide the full assessment of frequency and duration/depth. The modelling result plans included in the Drawing section of the SMP do not provide adequate information to allow an assessment to be undertaken of the impacts of the proposed development on the State Highway 1 culvert. It is required that results should be tabulated and include the information requested for SW12 and SW13. Please update the SMP. This information is required at the plan change stage so that the effects of land use change can be quantified and assessed. It will also inform the preferred stormwater management that is required to mitigate the impacts of stormwater discharge. Please update the SMP.	*- SMP has been updated to include both 2.1°C and 3.8°C Climate increase scenarios.* *- Results summary is provided in Table 6-2-5 for comparison.* *- Refer Drawing 55000 series for details.* *- Furthermore, TuFlow models can be provided to HW for full review.*
SW13	Flood hazard assessment	• Please provide information on what the effects may be on the State Highway 1 crossing in the catchment, please include this information in the flood modelling used. (Healthy Waters previous analysis identified that the development of this catchment may result in flooding of the State Highway 1 offramp).	To enable a better understanding of the effects of the proposed private plan change on the flood hazard.	Civix comment: Same as SW12	See SW12 for details	*- SW12 has been addressed.*
SW14	Flood hazard assessment	• Please provide information on why 85% of the catchment area is used for future impervious areas, as industrial zones maximum impervious area can be developed up to 100%.	To enable a better understanding of the effects of the proposed private plan change on the flood hazard.	Civix and Unio comment: It is acknowledged that the Light Industry Zone does not limit impervious surface, and that conceivably 100% of the Plan Change area could be developed. In practice however, that is not considered to be a viable outcome. The Plan Change area is not considered to be fully developable given the combination of topography, existing stream and wetland areas and the need to retain appropriate land for flood management around those features. It should also be noted that those areas are proposed to be zoned Open Space, not Light Industry Zone.	The SMP needs to clearly state why the assumption that 100% impervious area is unlikely and provide justification. Please provide details of the calculations to support the 85% and how it can be certain that only 85% of the plan change area will be impervious.	*Table 6-2-3 has been added to the SMP which provides calculation for Site impervious Coverage for the proposed development.* *To summarize, the open space area where no development is proposed will have 0% impervious coverage. This open space constitutes approximately 27% of the total site area designated. Consequently, only 73% of the total site area is allocated for light industrial development, including roadways.* *While the estimated impervious percentage of the site stands at approximately 73%, a conservative approach has been adopted for flood modelling. Consequently, the proposed site imperviousness has been modelled at 85%.*

				Civix has included an indicative 'stream setback' plan within the SMP which details a potential subdivision structure through the Plan Change area and includes: - esplanade reserve requirements comprising a minimum 20m setback from the stream edge - most indicative lots are actually set back between 30m to 50m away from the stream edge to facilitate room for the existing wetland areas to the east, new wetland area to the west and formation of gentle earthworks batters and landscaping / greenway along the length of John Creek.		
SW15	Stream hydrology/ Stream erosion	• The streams in this catchment are highly erodible due to the modification to agriculture use and the excess flows. Stream bank erosion will be exacerbated by changes in hydrology as a result of the proposed change in land use in the area. Please provide further assessment of how the proposed development will affect stream bank erosion. It is important the stream will be able to cope with the new hydrology as a result of future development in the area and not degrade at a faster rate.	To enable a better understanding of the effects of the proposed private plan change on stream hydrology and erosion.	<u>Civix comment:</u> Discussion on stream erosion has been added to section 2 and section 6 of the SMP covering the discussion with Healthy Waters on this issue. We request that the SMP is considered for 'adoption in principle' while these discussions are ongoing with Healthy Waters. <u>Unio comment:</u> This item is considered to be eminently manageable via suite of engineering interventions. Specific interventions are not needed at this point in time, however the SMP is able to identify a toolbox of methods to appropriately mitigate these potential effects, with final details to be implemented through later consenting processes.	Section 2 highlights restoration initiatives however there are no details on the type of work required, guidance on how this will be implemented or details of the timeframe for the work. This needs to be clearly outlined in the SMP. Details such as methods for Willow tree removal need to be provided. It is recommended that the Willow tree removal include the removal of roots and follows best practice. The 'engineering interventions' need to be clearly outlined. What are the methods in the toolboxes for stream works? E.g. stream bank grading and planting, stream bed protection, riparian margin planting etc. Please clarify in the SMP. The standards allow for a 10m riparian yard. Unless site specific information outlines reasons why a 10m riparian yard is sufficient to protect the health of the stream, please provide a 20m riparian yard, given the condition of the stream in the plan change area and riparian planting is being relied on to manage the effects of the proposed development on the stream health. The SMP will need to set out details and the conditions, leaving it to the resource consent stage could lead to private interventions rather than communal interventions and may not provide a catchment wide approach.	*- Section 6.2.3 has been revised to include restoration initiatives matching to Ecological Values Assessment prepared by RMA Ecology Limited. Cross references are added for further clarity.* *- Further to discussion with the Ecologist, existing Willow tree(s) are identified as an ecological feature that provides shades and supports to the bank bed and banks. Therefore, it is not proposed to remove any willow trees in this plan change area. SMP has been updated with no willow tree removal.* *- See updated Section 6.2.3. Further details can be provided in consultation with the ecologist at the resource consent stage.* *Riparian planting is proposed for a minimum of 10 meters on each side of the stream for widths less than 3 meters, and a minimum of 20 meters for widths greater than 3 meters. The stream banks have predominantly deteriorated due to stock movements. The proposed development involves removing the stock and redirecting runoff through communal wetlands to facilitate a slow discharge into the stream, expected to improve its health. SMP has been updated accordingly.* *- Noted.*
SW16	Stream hydrology/ Stream erosion	• The streams in the area have been identified in the Ecology Assessment as 'highly degraded'. Healthy Waters assessment of the catchment identified headcut processes with significant changes in incisional trends/width to depth ratios over a relatively short longitudinal distance. Therefore SMAF 1 mitigation plus riparian planting cannot mitigate this process. Please provide	To enable a better understanding of the effects of the proposed private plan change on stream hydrology and erosion.	<u>Civix and Unio comments:</u> As above for SW15.	See SW1 and SW2 for details	*- SW1 and SW2 have been addressed.*

		further evaluation which demonstrates that the use of SMAF 1 is sufficient to mitigate the effect of urbanisation of the catchment, if not please provide other management options, such as in stream works. A stream assessment and stabilisation plan is recommended.				
SW17	Stream hydrology/ Stream erosion	• Please show that how retention through reuse is feasible for industrial land uses and how it will be ensured that retention will be provided at the time of development of individual lots. Commonly, the water demand for reuse for industrial or commercial sites is very low compared to the retention volume.	To enable a better understanding of the effects of the proposed private plan change on stream hydrology and erosion.	Civix comment: Retention will be provided as far as practicable as soakage is not sufficiently viable in this catchment. The Applicants are open to discussion on alternative forms of mitigation, including the potential to work with council on stream restoration.	To what extent will retention be provided, please provide further details. What are the other options, please clarify.	*- Retention will be provided via water reuse tanks on private lots, while GD01 recommended devices on public roadways wherever practicable.* *- where it is not practicable, retention will be taken up as additional detention in the communal wetland as follows: provide detention (temporary storage) and a drain down period of 24 hours for the difference between the predevelopment and post development runoff volumes from the 95th percentile (SMAF 1), 24 hour rainfall event minus any retention volume that is achieved, over all the impervious area.*
SW18	Stream hydrology/ Stream erosion	• Please provide further information on how riparian margins were determined. It is important to recognise the need for additional setbacks from streams due to vulnerability to erosion, please account for the condition of the streams and the effects of the proposed riparian margins.	To enable a better understanding of the effects of the proposed private plan change on stream hydrology and erosion.	Civix comment: Further discussion added to section 2 and additional plans showing riparian zones are included. Unio comment: The proposed Open Space zoning follows the existing stream and wetland areas along John Creek, and accounts for 10m / 20m riparian / esplanade areas and much broader flood management areas. The additional setbacks indicated by this request are being provided for through the above mechanisms.	The SMP states "A minimum of 20m each side of the permanent stream would be proposed to be planted with Riparian planting". See SW1 for details.	*Riparian planting is proposed for a minimum of 10 meters on each side of the stream for widths less than 3 meters, and a minimum of 20 meters for widths greater than 3 meters. The stream banks have predominantly deteriorated due to stock movements. The proposed development involves removing the stock and redirecting runoff through communal wetlands to facilitate a slow discharge into the stream, expected to improve its health. SMP has been updated accordingly.*
SW19	Stream hydrology/ Stream erosion	• The plans provided show stream reclamation, however this is not discussed. Please provide further information on how this was decided and the associated effects of the loss of the stream and proposed mitigation. Please include an assessment of the alternatives to not reclaiming the stream that was investigated.	To enable a better understanding of the effects of the proposed private plan change on stream hydrology and erosion.	Unio comment: To facilitate urban development of the land, some future stream reclamation may be necessary to construct roads and other infrastructure. The plans to support the Plan Change application are indicative only and the need for any stream reclamation will not be determined until detailed design at the resource consent stage. The effects of reclamation and the adequacy of the mitigation or compensation proposed would be considered as part of the resource consent process under the standard AUP provisions at that time. Where any stream reclamation is required which may result in loss of stream habitat, the effects can be offset through enhancement of other sections of streams within the precinct in the first instance, and then off-site to ensure no net loss is achieved.	Any change to overland flow paths and flood plains needs to be addressed in the SMP. It appears the precinct plan promotes reclamation of the stream south of the plan change area. The SMP needs to include justification and appropriate mitigation for the loss in any stream as a result of the reclamation, including flood mitigation and effects on stream health. The AUP seeks a high level of protection for permanent and intermittent streams in the region. The SMP needs to be consistent with this.	*- There has been no change to the OLFPs.* *- No intermittent and permanent streams are reclaimed within this plan change area.*
SW20	Water Quality	• Healthy Waters expectation is that ALL impervious areas will be treated to GD01 standard, as is set out in Schedule 4 of the Regional Wide Discharge Consent. This is not clear in the	To enable a better understanding of the effects of the proposed private plan	Civix comment: ▪ Wetlands are proposed to treat all the impervious roadways and COAL areas prior to slowly discharging the runoff into the natural	Please provide further details as outline in SW1.	*- SW1 has been addressed.*

		proposed SMP, under 6.2.1. Water quality only carparks are outlined. Please provide further information on how each type of impervious area will be managed, such as roads, yards, roofs, etc. and please include information about the proposed devices. • It is noted that Section 6.2.1 only discusses car parks	change on water quality.	stream, this meets the NDC objectives and is the BPO. ▪ Retention via tanks and reuse for non-potable purposes for roof areas. This solution has been chosen as it is the SMAF 1 specified outcome, which is the most restrictive outcome and will achieve equivalent hydrology (infiltration, runoff volume, peak flow) to pre-development (grassed state) levels for the industrial sites. ▪ No mitigation required for the landscape area. ▪ Discussion on this has been updated in section 6.2.1 of the SMP <u>Unio comment:</u> The treatment of all impervious areas is able to be appropriately managed by way of existing Auckland-wide Unitary Plan provisions and compliance with the Auckland Regional Stormwater Network Discharge Consent.		
SW21	Water Quality	• Please provide further information on the proposed stormwater wetlands. Please include information but not limited to the following, o How the number of stormwater management devices were decided, there is a large number of devices proposed o The Lifecycle cost analysis of the proposed stormwater management o Likely contributing catchments for each device o Whether the contributing catchments are sufficiently sized to maintain water levels in the stormwater wetlands o Please clarify the proposed treatment for road runoff o Please clarify the design sizing for the stormwater wetlands o Please clarify if the areas for the stormwater wetlands include space for operations and maintenance.	To enable a better understanding of the effects of the proposed private plan change on water quality.	<u>Civix comment:</u> ▪ 14 constructed wetlands (rather than the 10 shown in the catchment area within the Council's Draft SMP) are indicatively detailed on the basis of a more resolved Masterplan layout for the Precinct. Actual size, location and design will depend on actual subdivision / development design, timing, and the specifics of future resource consent processes. ▪ Additional comments on lifecycle costing are provided in section 6.2.4 of the report. The previously accepted SMP for this location from WSP does not contain or require a life cycle costing assessment for the proposed site. Further to this, the Woods SMP prepared also does not include this information and the Auckland Council SMP recommends this is provided with development applications but is not included within the plan change SMP itself. Our recommendation is that Life Cycle costings should be provided at the time of consent application for a development, this has been added to the conclusions of the report. ▪ The contributing catchments have been added to the SMP drawings, please refer to the Catchment Delineation drawing for details. The catchments are sufficient to maintain water levels in the wetland, (minimum size 1.3Ha) additional discussion on this has been added to section 6.2.5 of the SMP. ▪ The proposed treatment for roads is through the wetlands. ▪ The stormwater wetlands have conservatively sized at 3% of the catchment areas they serve. Typically wetland areas sized for treatment are 1.5% to 2.5% of the catchment area they serve so	Please provide further details as outline in SW1 and SW5.	- *SW1 and SW5 have been addressed.*

				this sizing methodology is conservative. Wetland sizing will be refined with detailed design. ▪ The analysis above on wetland area includes required O&M areas. Additional detail on how this is achieved will be provided with detailed design. Discussion has been added to section 6.2.5 on this.		
SW22	Natural Wetland reclamation	• Fifteen wetlands are proposed to be reclaimed. Please provide further information on how this may affect water quality and flooding mitigation in the catchment.	To enable a better understanding of the effects of the proposed private plan change on wetlands.	<u>Civix comment:</u> There are 15 existing natural inland wetlands as defined by the NPS-FM, located within the proposed plan change area. The function of those is are proposed to be supplemented by stormwater outfalls to new communal artificially created wetlands prior to discharging to stream.	Please include information in the SMP.	*- Locations of existing natural inland wetlands are shown in Figure 3. For further details, refer to Ecological Values Assessment prepared by RMA Ecology Limited.*
SW23	Natural Wetland reclamation	• How is the proposed reclamation of wetlands consistent with the objectives (6) and (7) in the proposed 'Silverdale West Precinct' and the NPS-FM and NES-F.	To enable a better understanding of the effects of the proposed private plan change on wetlands.	<u>Unio comment:</u> There is no proposed reclamation of wetlands as part of the Plan Change request. Any future reclamation will be undertaken subject to obtaining all necessary resource consents prior.	Please include information in the SMP.	*- No reclamation of wetland is anticipated.*
SW24	Network	• Please discuss whether green outfalls have been considered and related reasoning.	To enable a better understanding of the effects of the proposed private plan change on water quality.	<u>Civix comment:</u> Green outfalls will be proposed as part of future development phases, with details will be provided as part of the necessary future approval stages.	See SW5 for details.	*- SW5 has been addressed.*
SW25	Open Space and Riparian Margins	• Please provide information on why the proposed open space extent is smaller than the published flood plain extent.	To enable a better understanding of the effects of the proposed private plan change on riparian margins and open space.	<u>Civix comment:</u> Same as SW7.	See SW7 for details.	*- SW7 has been addressed.*
SW26	Open Space and Riparian Margins	• Please provide further detailed maps of the proposed open space and riparian margin.	To enable a better understanding of the effects of the proposed private plan change on riparian margins and open space.	<u>Civix comment:</u> Please refer to the "Stream Setback" Plan appended to the SMP.	Noted. Please ensure all maps/plans/references used in the SMP are included in the SMP. Please ensure there are keys with all the plans, e.g. Catchment Areas plan by Civix does not have a key.	*- Noted. Key/Legend to be added.*
SW27	Open Space and Riparian Margins	• Please provide detailed information on the value of riparian vegetation across all water bodies identified.	To enable a better understanding of the effects of the proposed private plan change on riparian margins and open space.	<u>Civix comment:</u> ▪ Wetlands are proposed to treat all the impervious roadways and COAL areas prior to slowly discharging the runoff into the natural stream, this meets the NDC objectives and is the BPO. ▪ Retention via tanks and reuse for non-potable purposes for roof areas. This solution has been chosen as it is the SMAF 1 specified outcome, which is the most restrictive outcome and will achieve equivalent hydrology (infiltration, runoff	Please highlight the benefits riparian yards provide in a flood event in the standard for yard setback in the precinct provision to be consistent with the SMP.	*Key benefits include:* *- Erosion Control: Riparian vegetation, including trees, shrubs, and grasses, help stabilize soil along riverbanks, reducing erosion caused by water flow* *- Stormwater Management: Riparian vegetation helps slow down and absorb stormwater runoff, reducing the volume and velocity of water entering streams and rivers. This can help prevent streambank erosion and minimize the risk of flash floods.*

				volume, peak flow) to pre-development (grassed state) levels for the industrial sites. ▪ No mitigation required for the landscape area. ▪ Discussion on this has been updated in section 6.2.1 of the SMP <u>Unio comment:</u> As staged subdivision / development is undertaken across the Plan Change area, stream margins and wetlands will be progressively enhanced through the provision of appropriate planting to support native habitat and water quality outcomes.		*As such, riparian planting is proposed for a minimum of 10 meters on each side of the stream for widths less than 3 meters, and a minimum of 20 meters for widths greater than 3 meters. The stream banks have predominantly deteriorated due to stock movements. The proposed development involves removing the stock and redirecting runoff through communal wetlands to facilitate a slow discharge into the stream, expected to improve its health. SMP has been updated accordingly.* .
SW28	Planning	• The catchment area has permanent and intermitted streams that are degraded and are prone to erosion. The effects of development on stream erosion and associated effects on stream health need to be addressed. In the proposed 'Silverdale West Precinct' objectives and policies there are no references to the management of stream erosion and associated effects on stream health. Please include stream erosion management in the proposed precinct to ensure stream health is protected, and to achieve the 'strong ecological outcomes' sought by the objective in the precinct.	To enable a better understanding of the effects of the proposed private plan change on stream health and erosion.	<u>Unio comment:</u> The updated SMP prepared in support of the Plan Change request includes discussion on stream erosion at section 2 and 6. While it is not proposed that the SMP be adopted through this process, it is requested that it be reviewed with a view to confirming that it could be 'adopted in principle'. Proposed Policy (16) creates the linkage by requiring that development maintain or enhance water quality and protect stream and wetland environments including by being consistent with any SMP adopted for the precinct by the network utility operator.	See SW1 for details.	*- SW1 has been addressed.*
SW29	Planning	• The catchment area has significant overland flow paths and flood plains. In the proposed 'Silverdale West Precinct' objectives and policies there are no references to how natural hazards – flooding upstream and downstream are addressed and managed. Please include natural hazards – flooding in the proposed precinct to ensure the conveyance function of overland flow paths and flood plains are maintained and there is no increase in flooding risk to people and property upstream or downstream of the precinct area as well as within the precinct area.	To enable a better understanding of the effects of the proposed private plan change on the flood hazard.	<u>Unio comment:</u> The intention here is that flood effects be managed in reliance on the existing Auckland-wide provisions and the Auckland Regional Stormwater Network Discharge Consent. Through these mechanisms, any future subdivision or development is going to need to confirm that up and downstream flood effects are appropriately managed within the application site. Civix has advised that Tuflow modelling shows the effects of future development are able to be sufficiently mitigated through the proposed enhancement of flood storage on-site via the culverts proposed. Those culverts are included as requisite upgrades to enable development within Stage 1 and Stage 2 of the Precinct. We consider that an additional standard requiring compliance with an adopted SMP, and special information requirements setting out the broad content of an SMP could be appropriate here, however not strictly necessary.	It is important to maintain the riparian yard/esplanade reserve for flood mitigation, please include in the precinct provision.	*Noted.*

SW30	Planning	• It is unclear how the 'Silverdale West Precinct' provisions will implement the proposed SMP. Please reference the SMP in the proposed precinct and ensure any proposed development is in accordance with the proposed stormwater management plan, this should be referenced throughout the precinct provision.	To enable a better understanding of the implementation of the SMP.	Unio comment: Prior to any development across the Precinct, confirmation that the Auckland Regional Stormwater Network Discharge Consent is being relied upon will needed, which necessitates the preparation of an appropriate SMP to be adopted by Healthy Waters. The only alternative is that all necessary discharge consents are obtained separately. Policy 15 requires consistency with any adopted Stormwater Management Plan. As noted above, we consider that an additional standard requiring compliance with an adopted SMP, and special information requirements setting out the broad content of an SMP could be appropriate here, however not strictly necessary.	See SW1 for details. The precinct provision should include an activity status for not complying with the adopted SMP as a discretionary activity to ensure the stormwater management for the plan change area is in accordance with the adopted SMP.	*- SW1 has been addressed.*
SW31	Planning	• The standard for the Riparian yard is 10m, this should be a minimum of 20m given the existing condition of the streams and the information provided in the proposed SMP under 2.6. Flooding and Flow Paths.	To enable a better understanding of the effects of the proposed private plan change on riparian margins.	Unio comment: Standard IX6.2 Streams and natural inland wetlands proposes to apply a 10m planted riparian margin from the top of the bank of the stream and a 20m building setback from the bank of a river or stream measuring 3m or more in width, consistent with the requirements of E38.7.3.2 (Subdivision establishing an esplanade reserve). This is the preferred option for the following 41inimuns: • The 10m minimum required planted riparian margin ensures that indigenous biodiversity along streams is restored to enhance the ecological values of streams, while maintaining flexibility for appropriate development of cycle and pedestrian paths which must located outside of planted riparian margins and generally within the wider esplanade reserve • The 10m riparian / 20m esplanade requirements align with the Unitary Plan requirements across the region • The 10m minimum required planted riparian margin also aligns with the Auckland Design Manual which recommends a 10 m width planted on each stream bank with wider strips of 20m or more are encouraged for larger rivers • The proposed precinct provisions are consistent with those incorporated within other greenfield precincts within the AUP[1] which incorporate a 10m planted riparian margin; and • Where larger areas are needed to support flood management during 1% AEP flood events, those areas are not necessarily to be planted as they relate to flood storage. These may be grassed areas, including pedestrian and cycle connectivity, etc as they have a different function to the riparian planting areas.	The SMP states 41 minimum of 20m each side of the permanent stream would be proposed to be planted with Riparian planting". See SW1 for details. The riparian margin should be dependent on the specific character of the stream and the catchment. The stream in this catchment is in a state where a 20m planted riparian margin would provide the mitigation needed to ensure erosion is not exacerbated and the stream health can be improved over time.	*Riparian planting is proposed for a minimum of 10 meters on each side of the stream for widths less than 3 meters, and a minimum of 20 meters for widths greater than 3 meters. The stream banks have predominantly deteriorated due to stock movements. The proposed development involves removing the stock and redirecting runoff through communal wetlands to facilitate a slow discharge into the stream, expected to improve its health. SMP has been updated accordingly.*

[1] Birdwood 2, Clarks Beach, Drury 1, Drury South, Flat Bush, Franklin 2, Glenbrook 3, Hingaia 1,2 & 3, Long Bay, Redhills and Whenupai 3 (Proposed)

SW32	Planning	• The proposed SMP under 2.6. Flooding and Flow Paths outline that a minimum of 20m on each side of the permanent stream would be planted, standard IX6.2 outlines a minimum of 10m, this is inconsistent. Information should be provided in standard IX6.2 that references when 20m minimum or a higher minimum shall be considered based on the assessment of the water bodies and flood plain extent.	To enable a better understanding of the effects of the proposed private plan change on riparian margins.	Unio comment: There is no requirement that the outer 10m be planted. The purpose of proposed provision is that a 10m riparian planting area be provided, and that where a stream has an average width of 3m or more, land is provided as esplanade reserve with a 20m width. Note that where stream impacts are proposed within the precinct as part of future resource consents, the outer 10m of an esplanade reserve may be subject to enhancement planting as offset. That would be subject to the specific outcomes of future resource consent processes. Some of the confusion here appears to be the italicised heading within the standard. Accordingly, we propose to amend that to read: *"Riparian margins and esplanade reserves"*	The SMP states "A minimum of 20m each side of the permanent stream would be proposed to be planted with Riparian planting". See SW1 for details.	*Riparian planting is proposed for a minimum of 10 meters on each side of the stream for widths less than 3 meters, and a minimum of 20 meters for widths greater than 3 meters. The stream banks have predominantly deteriorated due to stock movements. The proposed development involves removing the stock and redirecting runoff through communal wetlands to facilitate a slow discharge into the stream, expected to improve its health. SMP has been updated accordingly.*
SW33	Planning	• The 'Silverdale West Precinct' does not include a planning map with all the water bodies that are to be protected. Please include a planning map with details on all the water bodies and associated riparian margin and any other natural features that are to be protected, this should be referenced in the precinct provision.	To enable a better understanding of the effects of the proposed private plan change on the stream network.	Unio comment: Precinct Plan 1 shows the intermittent and permanent streams with 20m riparian / esplanade areas, but not the wetland as wetlands are dynamic, changing environments and are therefore best reviewed at the time of development. Wetlands will be defined and delineated at the time of resource consent applications, along with an assessment of the potential adverse effects (and protection and restoration) that is proposed.	Need to include the proposed stormwater wetlands in the precinct as well as in the SMP to ensure the locations for the proposed stormwater wetlands are protected, see SW5 for details.	*- Indicative locations of proposed communal wetlands hare shown on the catchment plan Drawing 30001.* *The sub-catchments may be altered through the design phase, as such, locations and numbers of proposed wetlands may change. We can state in the precinct provisions as communal wetlands are to be proposed at downstream prior to discharge into the stream for treatment and detention purpose.*
SW34	Planning	• Table IX6.8.1 outlines Flood management work within Stage 1, however it is unclear what this is as it is not specified in the precinct provision. Please specify what this is and reference the proposed SMP. However, there are concerns about the flood management proposed in the SMP, see comments above under 'Flood management'.	To enable a better understanding of the effects of the proposed private plan change on flood management.	Unio comment: The flood modelling undertaken by Civix shows that it is possible to mitigate effects on upstream and downstream properties. The provision sets out the performance requirement (i.e., that there is no net increase in flood risk to upstream and downstream properties), and details timing of those works, but does articulate precisely how that outcome is to be achieved. That is because there should be flexibility to manage those effects. The SMP simply acknowledges that these effects can be managed, with one method proven effective.	There must be clear guidance that at the subdivision and development stage the developers demonstrate compliance with the adopted stormwater management plan. Any communal device and stream works is required to be constructed before subdivision and development occurs. The SMP needs to be clear on what stormwater management/flood management/stream work are in Stage 1 and Stage 2. Table IX.6.8.1 could reference the SMP to provide guidance and clarity.	SMP can change over time. Proof of concept needed, robust basis for proceeding with urbanisation in accordance with precinct plan and zoning, but detail is flexible (and ultimately a HW decision).
SW35	Planning	• Please include under IX.9 Special information, a requirement for stream and stabilisation plan assessment for any land modification, development and subdivision which adjoins a permanent or intermittent stream.	To enable management of the effects of the proposed private plan change on stream health and erosion.	Unio comment: Agreed that this can be provided.	Please include (a) "…stabilisation plan assessment to inform the type and scale of instream work required to ensure the effects from the development is managed and there is resilience to any effects of future flow. (b) Any stream work is of a standard that will allow the stream to progressively improve over time where it is degraded. This will provide clarification for the outcome sort from any stream works.	*Noted*

SW36	General	Note: The Section 32 report outlines that infrastructure can be provided privately by the applicant to ensure the development of the proposed private plan change area. Development should not occur until the stream is restored, as the stream will not be able to cope with the change in land use and will continue to degrade. Healthy Waters has conducted several investigations along John Creek and Weiti Stream. There are stream enhancement opportunities in the area that will have catchment wide benefit. Healthy Water would be keen to explore opportunities for collaboration with the applicant.		Unio comment: We disagree with this comment. The effects of development will be managed progressively through subdivision and development processes and in accordance with the adopted SMP.	The SMP states that works to manage stream erosion would be more cost effective prior to the implementation of subdivision and development. This needs to be clearly outlined in the SMP and precinct provision. See SW1. SW15 and SW34 for details.	- *See updated SMP*

Precinct Provisions

The underline text is what is recommended to be added to the precinct provisions Note Appendix 3 Silverdale west Industrial Precinct has been amended to include these suggestions)

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- IX.3 Policies

Stormwater management and ecology

Immediate remediation of the stream is required to ensure that the stream does not enter further degradation trends. Appropriate hydrology mitigation in response to development within the plan change area is required to ensure erosion is not exacerbated at a catchment wide scale. To ensure the health of the stream and not exacerbate stream erosion any stream works required need to occur before subdivision and development.

Utilise in stream works on streams, including bed and bank stabilisation, to provide habitat improvement, resilience to increase flows and capacity for stormwater runoff management within the stream channel, and will occur before subdivision and development.

The SMP outlines up to 14 stormwater wetlands and associated structures are to be public. A policy that recognises this will help to ensure the stormwater management infrastructure are in place.

The location, sizing, design, and construction of stormwater infrastructure to be vested to Auckland Council will occur before subdivision and development and will be in accordance with the requirements of the network utility operator.

- IX.4 Activity table

It is recommended to include an activity that relates to compliance with Standard IX6.10 Stormwater quality

Subdivision and/or development that does not comply with Standard IX6.10 Stormwater quality - Discretionary

- IX6.2 Streams and natural inland wetlands

It is recommended that the riparian margin as stated in IX6.2(1) are planted on either side to a minimum width of 20m, given the stream characteristics in the plan change area.

Any ecological off setting as stated in IX6.2(2) needs to occur prior to subdivision and development to ensure any stream works are in place to protect the stream from further degradation.

The ecological enhancement works must occur before subdivision and development.

- IX.6.3 Yards

The riparian yards also provide flood mitigation, please include this in the purpose for Yards, as riparian yards are also flood plains in this plan change area.

Riparian yard in Table IX6.3.1 Yard setback should be 20m from the edge of a permanent and intermitted stream, unless there is site specific information that a smaller setback is sufficient to protect the health of the stream.

- IX6.10 Stormwater quality

Please include 'John Creek' … *enhance the health and ecological values of John Creek and the receiving environment.*

Recommended to use in accordance rather than be consistent … *development and/or subdivision must be in accordance with the stormwater management plan …*

- IX8.1. Matters of discretion

IX8.1.(3) should also include *effects on stream bed and bank stabilisation and erosion*.

IX8.1.(9) all matters in the SMP should be assessed, including stream health. However, it is recommended IX6.10 Stormwater quality be a discretionary activity, this will allow all matters to be assessed and include all matters in the SMP.

- IX.9 Special information requirements

Riparian planting needs to ensure the plants are resistant to flooding and do not increase flooding and stream erosion.

Stream stabilisation plan needs to include quality work that will have long term benefit for the stream.

IX9.(5) (a)"…stabilisation plan *assessment* *to inform the type and scale of instream work required to ensure the effects form the development is managed and there is resilience to any effects of future flow*.

(b) Any stream work is of a standard that will allow the stream to progressively improve over time where it is degraded.