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22 July 2024

Project Number: 4345.01

Auckland Council Plans and Places – South
Private Bag 92300
Auckland 1142

By Email: jimmy.zhang@aucklandcouncil.govt.nz

Attention: Jimmy Zhang

Dear Mr Zhang,

RESPONSE TO CLAUSE 23 FURTHER INFORMATION REQUEST – PROPOSED PRIVATE PLAN CHANGE REQUEST

INTRODUCTION

Your letter dated 19 April 2024 requesting further information under Clause 23 to Schedule 1 of the Resource management a1991 (**RMA**) refers.

We have addressed all matters by topic and these are set out below.

We also attach separate specialist responses from individual specialists from the following:

- Ian Munro – Urban Design
- Birch Limited – Infrastructure and Three Waters
- Flow Transportation Specialists - Transportation
- Peers Brown Miller – Arboriculture
- Wildlands Limited – Ecology
- LDE – Geotechnical
- Landscape – LA4

Revised precinct provisions and plans are also attached.

Contents

Attachments

Attachment 1	Arboricultural Assessment
Attachment 2	Ecological Response
Attachment 3	Geotechnical Response
Attachment 4	Landscape Response
Attachment 5	Stormwater and Infrastructure Response
Attachment 6	Urban Design Response

PLANNING

P1 Please confirm whether consultation has been undertaken with the Supporting Growth Alliance regarding future connections with the Proposed North East Arterial road, particularly in regard to the indicative connection locations shown on the precinct plans.

Response

The Requestor has engaged extensively with SGA regarding the proposal route and is generally supportive of the route for NoR 4 of the Pukekohe East Arterial. The requestor lodged a submission on the NoR with the concept scheme plan (showing the proposed roundabout and access into the Plan Change Area (**PCA**)).

Our consultation has always been predicated on the basis that access would be obtained from the proposed arterial road and it has generally been agreed that a roundabout would be the most appropriate intersection method to access the PCA.

We note that SGA did not raise any concerns with the submission in their evidence at the NoR4 hearings.

We accept that the exact location and design of any access will be determined at the subdivision and development stage, but the concept scheme shows where the most practical access would be. As set out in the 7.3 of the Request the concept scheme has included earthworks that would enable access into the site.

P2 Please confirm if any consideration was given to the provision of a road connection between the south-eastern corner of the site and the adjoining FUZ site.

Response

There is potential for a link to be provided in this location, but it is considered that one is not needed in order for the land to be developed for residential subdivision and development. It may better for this question to be answered when the adjoining land to the south east is considered for further plan changes. Given that the FDS has signalled that this land should be held back for rezoning and the corresponding lack of connectivity and infrastructure associated with this land, the question of a road connection should be addressed at a later date. It should also be noted that any connection would need to address potential impacts on significant ecological values present and the potential need for a stream crossing. That said, the opportunity for such a connection is feasible.

The Requestor's transportation expert also provides the following response:

To provide context for this request, we have shown the following figures.

- The layout of the Pukekohe North-East Arterial, relative to the Site and the neighbouring site (109 Runciman Road, Pukekohe) is shown in Figure 1
- Figure 2 shows the roading connection to the Pukekohe North-East Arterial in the south-east corner of the Site, based on the roading concept plan.

While a roading connection from the south-east corner of the Site to the neighbouring site to the east is potentially possible, we consider that it could potentially be difficult to achieve with certainty. This is due to the existing stream and ecological features located within the neighbouring site, which could make a roading connection between both sites difficult to achieve.

We consider that if the neighbouring site is developed, then the most likely roading connection point onto the Pukekohe North-East Arterial would be in the north section of the neighbouring site, due to the flatter topography and the absence of the stream and ecological features.

Therefore, we consider that the Precinct provisions should provide flexibility about whether a roading connection between both sites should or should not be provided.

Figure 1: Layout of Pukekohe North-East Arterial relative to the Site and neighbouring site

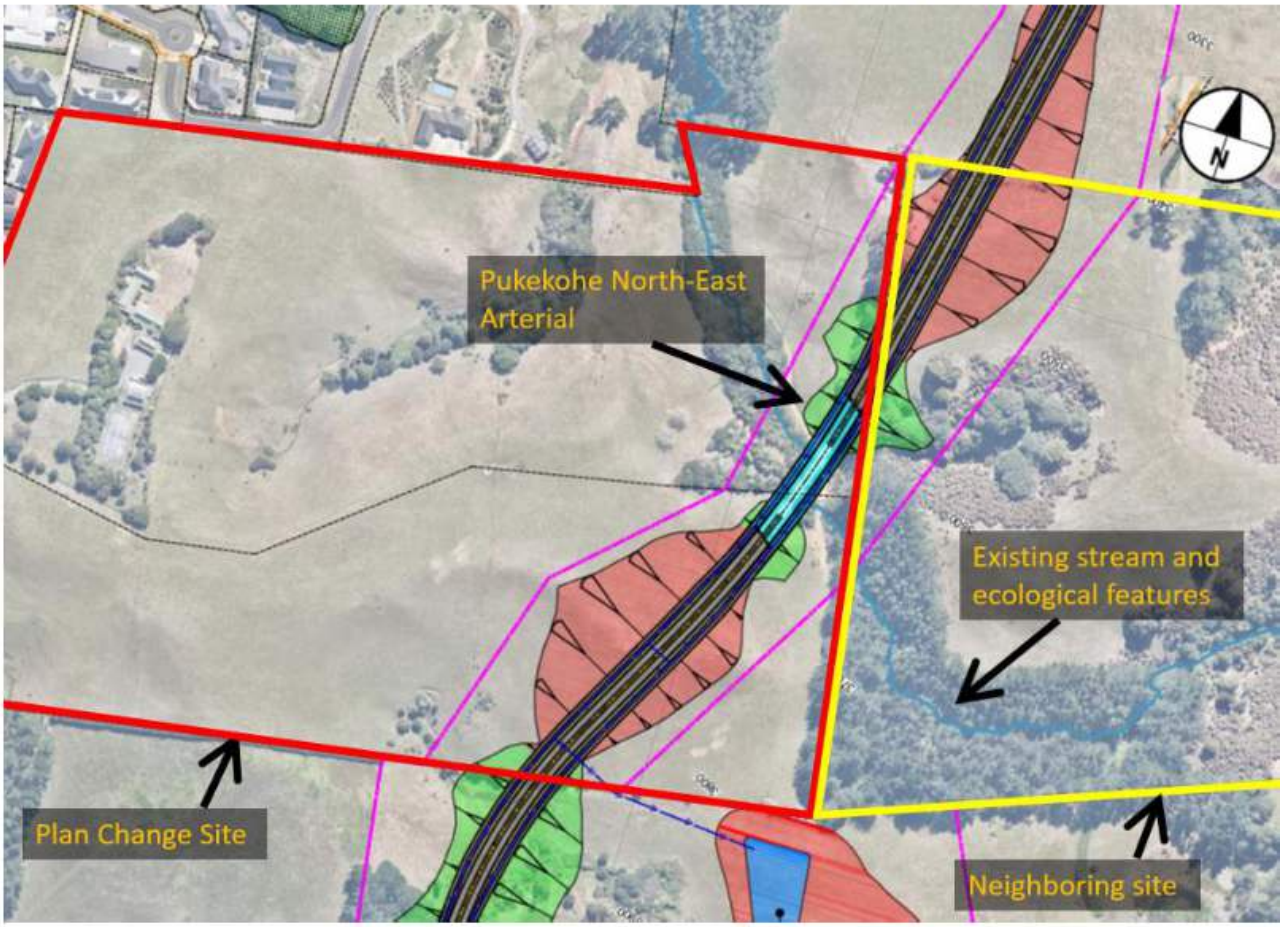
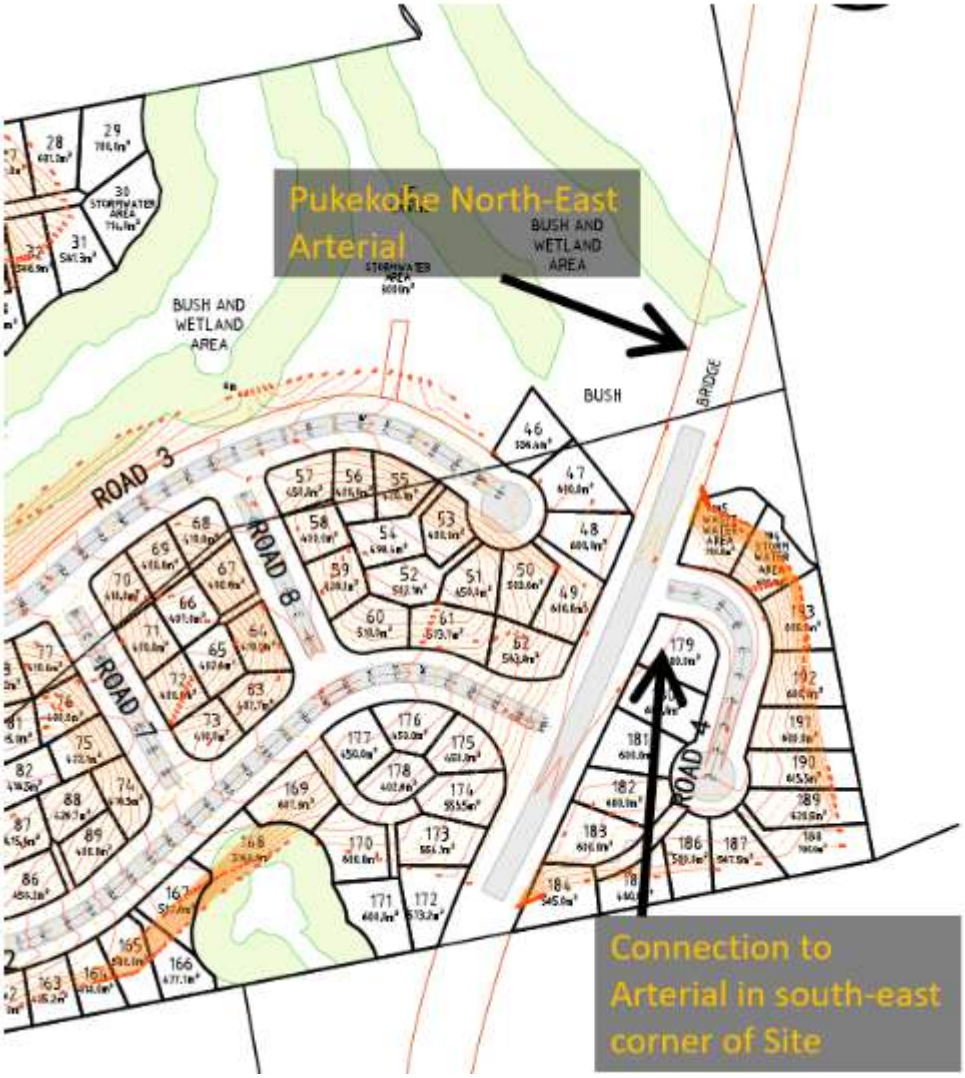


Figure 2: Proposed roading connection of Site to Pukekohe North-East Arterial



P3 Please provide an explanation as to why there are no infrastructure triggers in the precinct to address wastewater and water infrastructure.

We have included triggers for transport in I4XX.6.1 (Table I4XX.6.1.1) with the Request as lodged. We have included specific wastewater and water supply triggers in a new standard as follows:

I4XX.6.6 Water Supply and Wastewater

Purpose: To ensure subdivision and development in the precinct is adequately serviced with water supply and wastewater infrastructure.

(1) Prior to the issue of a certificate pursuant to s224(c) for subdivision, all lots must be connected to a functioning public wastewater network capable of servicing the development enabled on the lots.

(2) Prior to occupation, all buildings must be connected to a functioning public wastewater network capable of servicing the development enabled on the lots.

P4 Please confirm whether there are any proposed transport, wastewater, stormwater management or any other infrastructure proposed for servicing the land to be 'live' zoned, which would be located within land not owned by the requestor.

P5 Please provide a table indicating the "what", "how", "when" and "by whom" for the funding and delivery of infrastructure required to support the plan change area, including consideration of funding strategies such as infrastructure funding agreements to ensure funding is available for necessary infrastructure.

Response

What	How	When	By Whom
Local roading • Major Local Road (20m) • Minor Local Roads (16m) • Link to Future Arterial (24m) • Possible shared path and cycleway	Provided and vested as part of the subdivision assessment and approval and any subsequent stages (if applicable) and confirmed in condition of consents.	At the Subdivision consent stage.	The land developer
Water Supply			
• Watermain Extension into the PCA	Provided and vested as part of the subdivision assessment and approval and any subsequent stages (if applicable) and confirmed in condition of consents[1].	At the Subdivision consent stage.	The land developer
• Local water supply reticulation	Provided and vested as part of the subdivision assessment and approval and any subsequent stages (if applicable) and confirmed in condition of consents.	At the Subdivision consent stage.	The land developer
Wastewater			
• Extension of existing 150° wastewater pipes from Lisle Farm Dr and William Andrew Road	Provided and vested as part of the subdivision assessment and approval and any subsequent stages (if applicable) and confirmed in condition of consents.	At the Subdivision consent stage.	The land developer
• Local wastewater pump station upgrade (Colin Lawrie Fields)	To be provided prior to subdivision and development proceeding can be required as a condition of consent at subdivision stage.	At the Subdivision consent stage. A funding agreement with Watercare could be secured by the	The land developer in conjunction with Watercare.

[1] Watercare was approached for comment regarding water supply capability of the existing water supply network to service the proposed plan change development, using the subdivision concept plan as an example. Watercare confirmed that the existing watermain network has available capacity to service at least the proposed 192 residential lots.

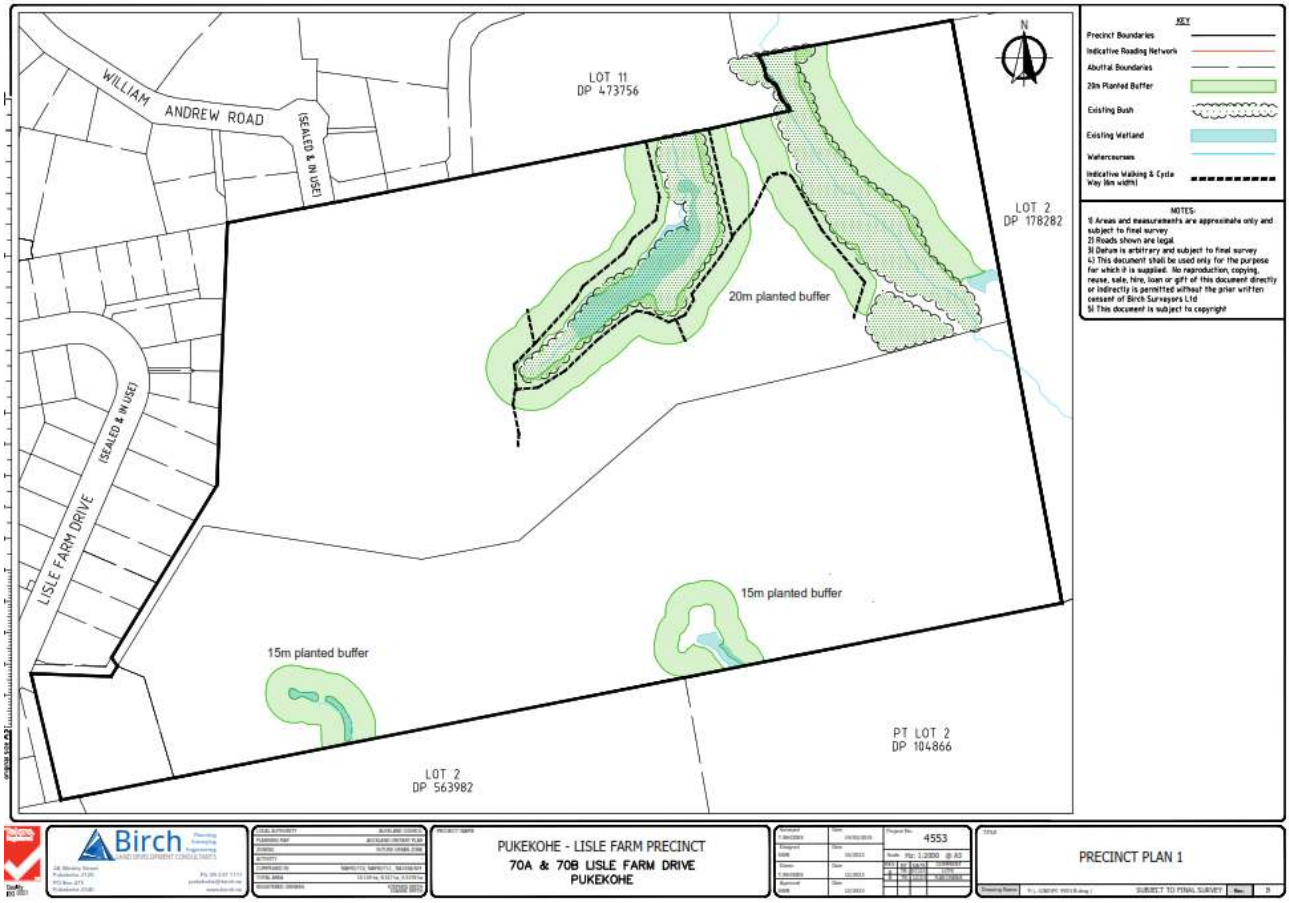
		developer at this time.	
• New receiving pump station (Isabella Rd pump station)	Currently funded by Watercare and under construction.	Mid 2025	Watercare
• Local wastewater reticulation (including both pressure and gravity systems and possibly one additional pump station).	Provided and vested as part of the subdivision assessment and approval and any subsequent stages (if applicable) and confirmed in condition of consents.	At the Subdivision consent stage.	The land developer
Stormwater			
• Dual purpose retention/detention tanks	Provided as part of the land use development assessment and approval and confirmed in condition of consents.	At the building consent stage for individual dwellings.	The developer
• Communal Stormwater devices (three)	Provided and vested as part of the subdivision assessment and approval and any subsequent stages (if applicable) and confirmed in condition of consents.	At the Subdivision consent stage.	The land developer
• Overland flow paths (road reserve)	Provided as part of the subdivision assessment and approval and any subsequent stages (if applicable) and confirmed in condition of consents.	At the Subdivision consent stage.	The land developer
Electric Power and Telecommunications	Provided as part of the subdivision assessment and approval and any subsequent stages (if applicable) and confirmed in condition of consents.	At the Subdivision consent stage.	The land developer

P6 Please confirm if any 'open spaces' were intended to be shown on the precinct plans.

Response

We understand that is Council policy not to commit to acquiring public open space at the plan change stage and that any acquisition of public open space will be undertaken at the subdivision and development stage.

That said, the proposed "planted buffer areas" (and the riparian areas within them) on Precinct Plan 1 are intended to be open spaces and would be available for inclusion as public open spaces should Council eventually wish to acquire them. Otherwise, these areas would remain in private ownership.



P7 Please confirm if the property at 70 Lisle Farm Drive is included in the plan change area.

Response

While the property at 70 Lisle Farm Drive is currently zoned Residential – Mixed Housing Suburban Zone, this land is essential to enable access to the PCA and has been included in the Request accordingly. It is also included so that it forms part of the proposed precinct provisions.

We note also, that 70 Lisle farm Drive has been zoned Residential – Mixed Housing Urban under Proposed Plan Change 78. If the Request is approved – the zoning of this land will not need to change.

P8 Please confirm if any Cultural Values Assessment/s will be provided?

As discussed in section 7.0 of the Request AEE the Requestor has consulted with the following mana whenua:

- Ngāi Tai ki Tāmaki - Ngāi Tai ki Tāmaki Tribal Trust;
- Ngāti Maru - Ngāti Maru Rūnanga Trust;
- Ngāti Tamaoho - Ngāti Tamaoho Trust;
- Ngāti Te Ata - Te Ara Rangatu o Te Iwi o Ngāti Te Ata Waiohua;
- Te Ākitai Waiohua - Te Ākitai Waiohua Iwi Authority; and
- Waikato Tainui - Te Whakakitenga o Waikato Incorporated.

The Requester was contacted by Ngāti Tamaoho and Ngāti Te Ata who requested further engagement. Further to that request Ngati Tamoaho met on site to discuss the Request and a cultural values assessment was discussed. However, the Requestor has received no further contact with Ngati Tamaoho on this matter.

No group has requested a Cultural Values Assessment.

The Requester is committed to ongoing consultation with any of the identified mana whenua groups and the situation may change following notification.

P9 Has any consideration been given to the potential effects of increased development density within the precinct, over what has been anticipated and assessed in the application (i.e. 192 dwellings), and how these effects might be managed?

Response - Planning

The Requestor has adopted the same zoning that has been proposed by Auckland Council for PC78. Much of this land has similar characteristics to the PCA in terms of expected density and impact on infrastructure. Based on the densities of development that has occurred on residential zoned land to the south and west, the proposed scheme plan shows a density of development that responds to the economic demand and topographical constraints on surrounding land. There are also limitations on density created by the proposed SMAF1 overlay and the need to provide stormwater detention on site, especially in the lower eastern sections of the PCA.

If high densities were to be pursued this would most likely be limited to the upper western sections of the site and along the main ridgeline.

Response Urban Design (Ian Munro)

In my report, at several places, I confirmed that I have assessed a proposed change to the Auckland Unitary Plan based on a Mixed Housing Urban zone. All of my conclusions are premised on that. I confirm that I did not assess the concept plan as if it was an application for subdivision consent for 192 dwellings. At paragraph 5.7 of the urban design report I stated (my emphasis added):

> *The concept plan, **although indicative**, produced 187 allotments. Noting that the proposed **MHU zone would provide for higher densities than has been shown**, but also noting that the Site is not adjacent to a major urban centre or other 'density driver' that might otherwise support terraced houses, I consider it appropriate to **contemplate a range of 175 – 350 dwellings** could be delivered based on dwellings being detached or semi-detached. **A yield higher than 350 units** would require more extensive rows of attached buildings, which of note have not occurred in this part of Pukekohe to date.*
>
> Emphasis added

Mr Munro offers the following additional comments:

a. The zone only permits 3 dwellings on each existing title, and any meaningful housing outcome on the Site would require both subdivision and land use resource consents to be prepared, applied for, assessed, and then granted by the Council. I have on that basis been primarily interested in the extent to which proposed consent triggers and matters of assessment could manage potential urban design effects across what could be theoretically hundreds of different subdivision and housing density options.

b. It is my understanding that the MHU zone provides neither a minimum nor a maximum density requirement. Although it provides greater development enablement (i.e., choices and options) than the Mixed Housing Suburban zone, and less than the Terraced Housing and Apartment Building zone, I have no reason to assume that something inherently less than 192 dwellings, or equal to that, or more than that, is likely or specifically sought by the proposed Plan framework in any event.

c. To assist the assessment and help also test the likely and practical real- world issues that might be thrown up by the Site at the time of development design, a concept plan was prepared. This was based on a fairly ordinary set of assumptions, including a housing type comparable to what has occurred nearby to date. The concept plan *could* be one potential development outcome that eventuates, but I feel my report
made it clear that it was not the only one or a preferred one. The concept plan happened to include 192 dwellings. Nothing in my report was limited to or only applicable to the concept plan as a maximum development threshold for the Site.

d. My conclusions are that the policy framework and assessment matters that would apply to subdivision and land use development on the Site are sufficient to meet the likely urban design effects that could arise, including the site-specific matters that have been identified within the proposed Precinct provisions.

TRANSPORT MATTERS

T1 Please provide an assessment on the ability of the subject site to fulfil the functional transport requirements for the Residential – Mixed Housing Urban Zone, including:

- **Creation of walkable neighbourhoods, which requires convenient proximity of residential areas to local services and opportunities, such as retail activities, education and health services.**
- **Proximity to the public transport network**

One potential tool for such assessment could be isochrone style plans to indicate walking and cycling distances from key services and land use activities.

Response

Flow has assessed the accessibility of public transport, walking and cycling further in this section and provided comments on the Auckland Unitary Plan (Unitary Plan) zoning.

Public transport accessibility

Section 4.5.1 of the Flow Transport Assessment report provided an assessment of the site's public transport accessibility. This showed that:

- The nearest bus route to the Site is the 391 route, which loops around Pukekohe East and connects to the Pukekohe Centre. Figure 10 in the Transport Assessment showed the 391 route travelling on Valley Road.
- The Pukekohe Train Station is located in Pukekohe Centre and provides train access to the wider network. The 391 bus route also connects to the Pukekohe Train Station, providing connectivity for the Site.

Since preparing our Transport Assessment, Flow note the following:

- The 391 bus route now diverts through Twomey Drive from Valley Road, as shown in Figure 3. There are 3 bus stops located on Twomey Drive near the Site.
- The nearest bus stop on Twomey Drive is located approximately 280m from the Lisle Farm Drive access and 650 m from the William Andrew Road access. This is much closer compared to the previous bus stop locations on Valley Road, making it easier for people from the Site to use this bus route.
- The Pukekohe Station upgrade and electrification of the rail tracks between Papakura and Pukekohe has continued to progress and is set to be completed by mid-January 2025[2] .This will be completed by the time any potential development is completed within the Site.
- These updates mean that the Site will have much better access to public transport via bus and train than originally anticipated.

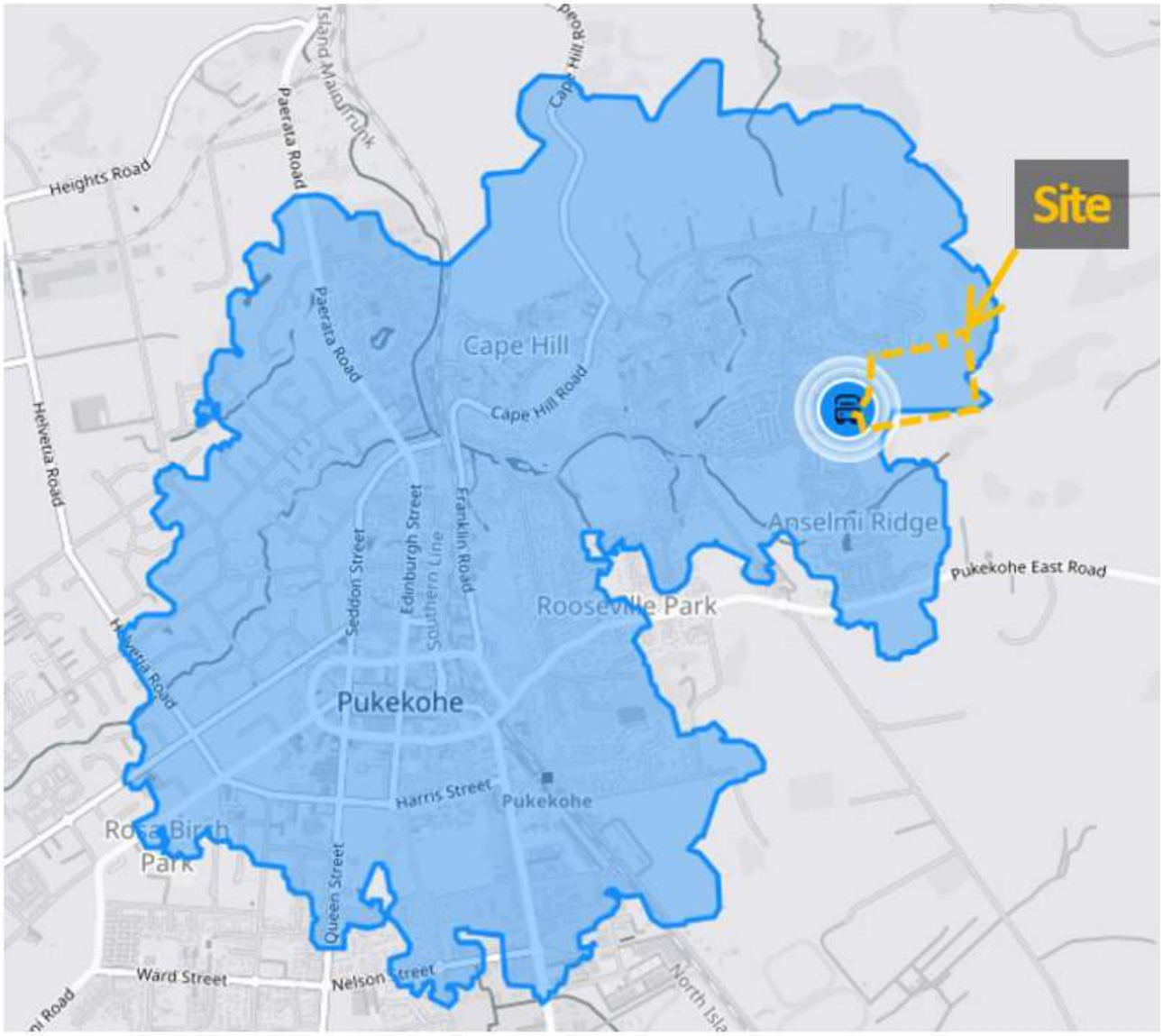
[2] https://www.rnz.co.nz/news/national/512342/re-opening-of-key-section-of-auckland-rail-line-delayed-till-january

Figure 3: 391 bus route near the Site

Figure 4 shows 30 minutes of public transport accessibility associated with the Site. This figure is an isochrone using the online TravelTime tool[3] and shows the public transport coverage is consistent with the area served by the 391 bus route.

[3] https://traveltime.com/

Figure 4: Isochrone for public transport accessibility within 30 minutes of the Site



In summary, Flow consider the Site to have good public transport access.

Walking accessibility

Figure 5 shows the 20 minutes of walking accessibility isochrone associated with the Site.

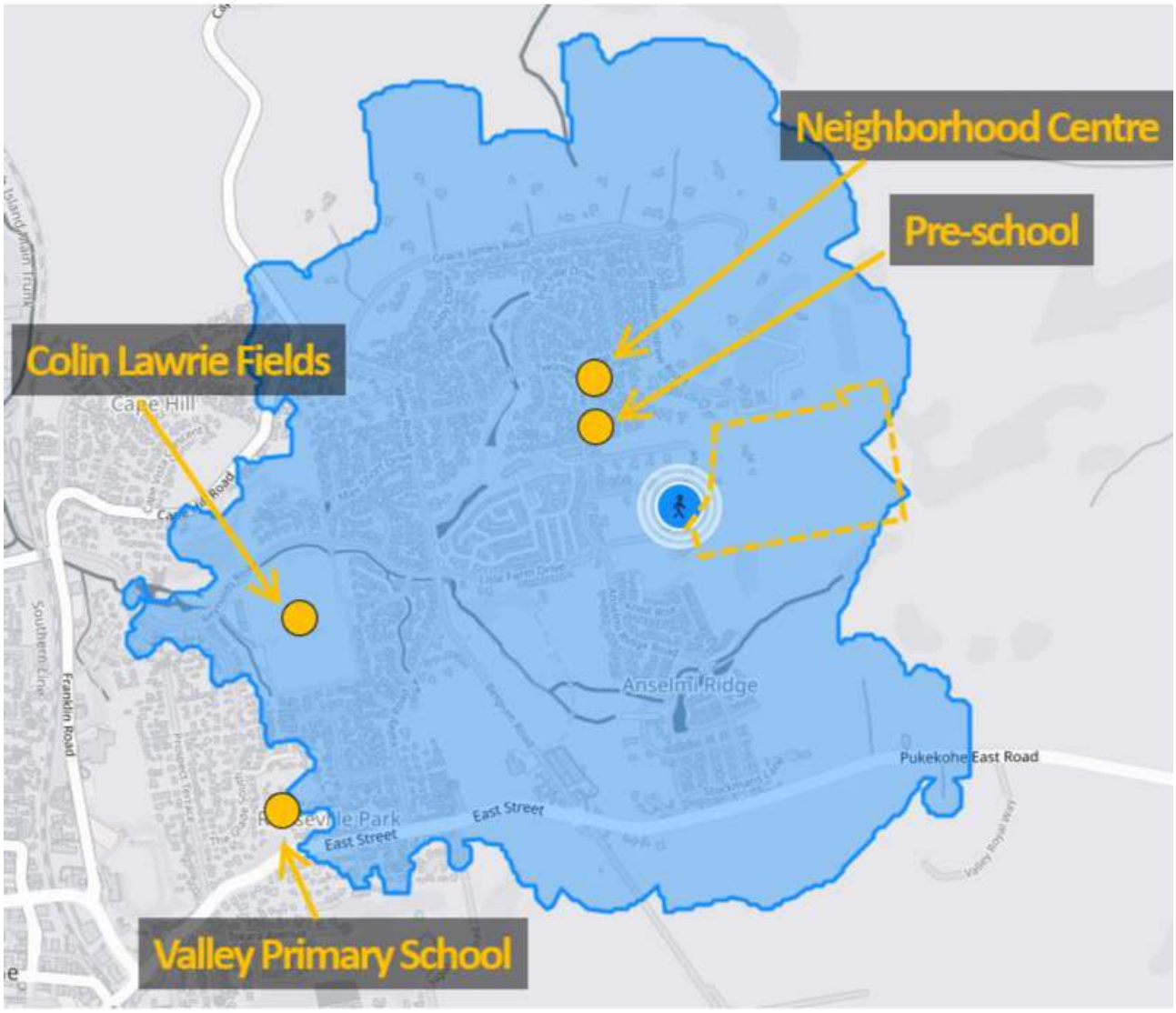
The following non-residential activities can be accessed within this area.

- A preschool located on Twomey Drive.
- A neighbourhood centre located on Twomey Drive. This currently contains a medical centre/pharmacy and a café.
- The Colin Lawrie Fields, located on Reynolds Road, which contains several large sports fields and contains the Pukekohe Rugby Club.

- Valley Primary School is located just outside of the 20-minute walking isochrone. This has the potential to be accessed by parents/teachers or students who are able and willing to walk for longer distances.

In summary, the Site has access to a range of non-residential activities within local walking distance. Further activities could be reached within Pukekohe with a combination of walking and public transport.

Figure 5: Isochrone for walking accessibility within 20 minutes of the Site and nearby non-residential activities



Cycling accessibility

Figure 6 shows 20 minutes of cycling accessibility near the Site.

This area covers the majority of the urban area within Pukekohe, including Pukekohe Centre.

As noted in Section 4.5.2 of our Transport Assessment, there are no dedicated cycle facilities in the local area. If cyclists were to travel around Pukekohe, we consider they would be more likely to use quiet local roads.

Figure 6: Isochrone for cycling accessibility within 20 minutes of the Site

Accessibility summary and Unitary Plan assessment

In summary, the Site has public transport, walking and cycling accessibility as follows:

- The Site has good access to public transport via the 391 bus route, which has bus stops located close by on Twomey Drive. This provides connectivity throughout Pukekohe and to the Pukekohe Train Station, where the wider Auckland area can be accessed. The Station is due to be upgraded in early 2025.

- The Site has a range of non-residential activities within walking distance of the Site. Further activities could be reached within Pukekohe with a combination of walking and public transport.

- The Site has a cycling catchment covering most of the urban area of Pukekohe. As there are currently no dedicated cycle facilities in the local area, cyclists from the Site would most likely travel around Pukekohe using quiet local roads.

We respond to the functional transport requirements for the Unitary Plan's Residential - Mixed Housing Urban zone raised in the information request.

Creation of walkable neighbourhoods, which requires convenient proximity of residential areas to local services and opportunities, such as retail activities, education and health services.

- The Site has some walkable access to some activities within the local area, including a preschool, a neighbourhood centre with a pharmacy and café, a sports field, and a primary school located slightly further away.

- Further activities can be reached within Pukekohe with a combination of walking and public transport.

- *Proximity to the public transport network*

  The Site has good access to public transport via the 391 bus route, which has bus stops located close by on Twomey Drive. This provides connectivity throughout Pukekohe and to the Pukekohe Train Station, where the wider Auckland area can be accessed. The Station is due to be upgraded in early 2025.

T2 Please provide an assessment of trip distribution for a scenario that includes the completion of the North East arterial road (including access to it from the subject site) and other improvements to the adjoining strategic road network.

Response

Flow's overall assessment assumes that the proposed Plan Change will be enabled prior to the completion of the Pukekohe North-East Arterial, our trip distribution and modelling assessment did not assume the completion of this project (or any other external upgrade).

The 80% assumption was adopted as a worst-case scenario for the number of vehicles that would potentially use the Anselmi Ridge Road / Pukekohe East Road intersection without the Pukekohe North East Arterial being provided. This was on the basis that people travelling from the Site could go through this intersection to access Pukekohe Centre to the west or SH1 to the east.

Figure 7 and Figure 8 (below) show the trip distribution patterns for people departing the Anselmi Ridge zone, which shows how people living in this area depart for either work or school. This image is from the Waka Commuter tool3, which is based on using travel to work data in different zones from the 2018 Census. This data shows that:

- 19% of people stay within the area for work or school
- 81% of people depart the area for work or school. Of these departures, the most common destinations were (zones with more than 4% of the total trips)
  - Areas within Pukekohe
    - Pukekohe Central (23%)
    - Rooseville Park (8%)
    - Pukekohe North West (4%)
  - Auckland Airport (6%).

Figure 7: Anselmi Ridge trip departures to the wider area, Waka Commuter tool using Census 2018 data

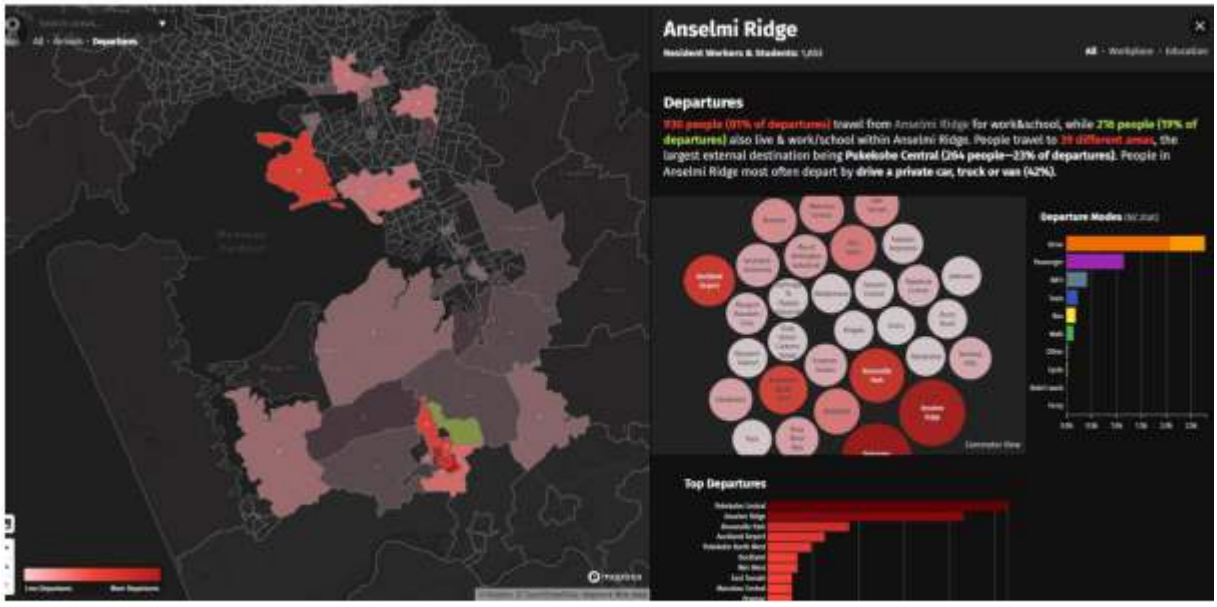


Figure 8: Anselmi Ridge trip departures to the Pukekohe area, Waka Commuter tool using Census 2018 data

These existing trip patterns show that a significant proportion of people living in the area currently travel within Pukekohe for work or education purposes. For trips travelling to the area beyond Pukekohe, Auckland Airport is a common destination.

Based on this trip distribution data, we consider that our estimation of 80% of trips travelling through the Anselmi Ridge Road / Pukekohe East Road intersection is conservative. Given the high proportion of trips staying within Pukekohe, a higher proportion of trips may travel west towards other areas of Pukekohe.

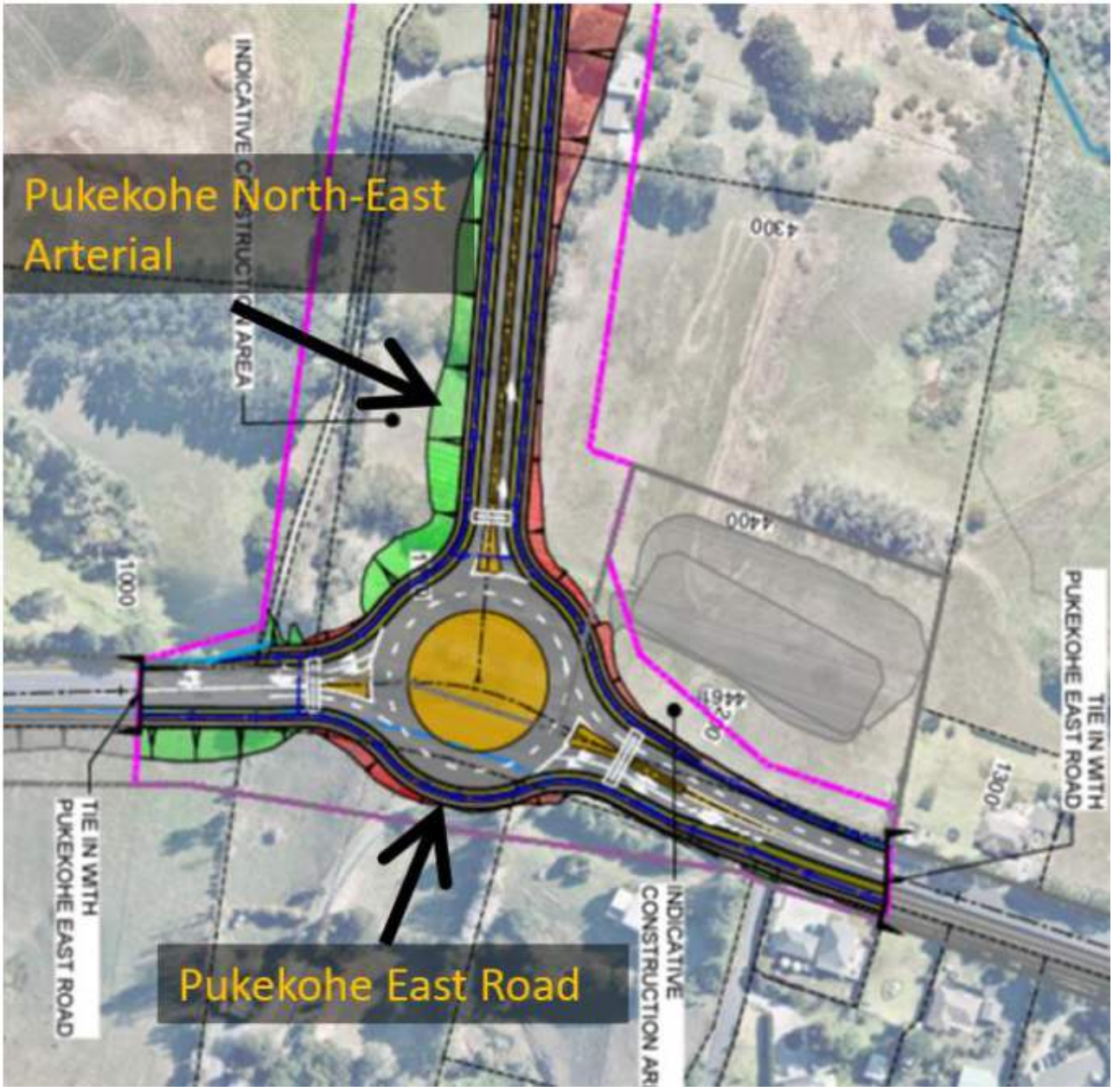
While our modelling assessment has assessed the Anselmi Ridge Road / Pukekohe East Road intersection, there are other routes available to access activities within Pukekohe, such as Reynolds Road, Valley Road and Cape Hill Road. As these roads and associated intersections are generally local in nature, trips travelling from the Site will likely be dispersed throughout these routes. We do not consider that modelling of these routes is necessary.

While we have not assessed a trip distribution with the Pukekohe North-East Arterial, we assume that if it was constructed, then trips would be reassigned from Anselmi Ridge Road and towards the Pukekohe North-East Arterial.

Figure 9 shows the layout of the Pukekohe North East Arterial/Pukekohe East Road intersection based on the Pukekohe North-East Arterial NoR 4.

- If this intersection was constructed, we anticipate there would be sufficient capacity to accommodate the traffic demands generated by the proposed Plan Change.
- This intersection would provide more capacity compared to the Anselmi Ridge Road intersection, as it would allow for 2 lanes in each direction on the Pukekohe East Road approaches.

Figure 9: Potential Pukekohe North East Arterial / Pukekohe East Road intersec



T3 Please confirm that new roads and transport connections within the subdivision can achieve compliance with appropriate Standards for vertical alignment, e.g., a maximum longitudinal footpath gradient of 12.5%, as stipulated in AT's Transport Design Manual (TDM).

Response

Please refer to the updated roading plans prepared by Birch Land Development Consultants, provided as part of the Clause 23 responses.

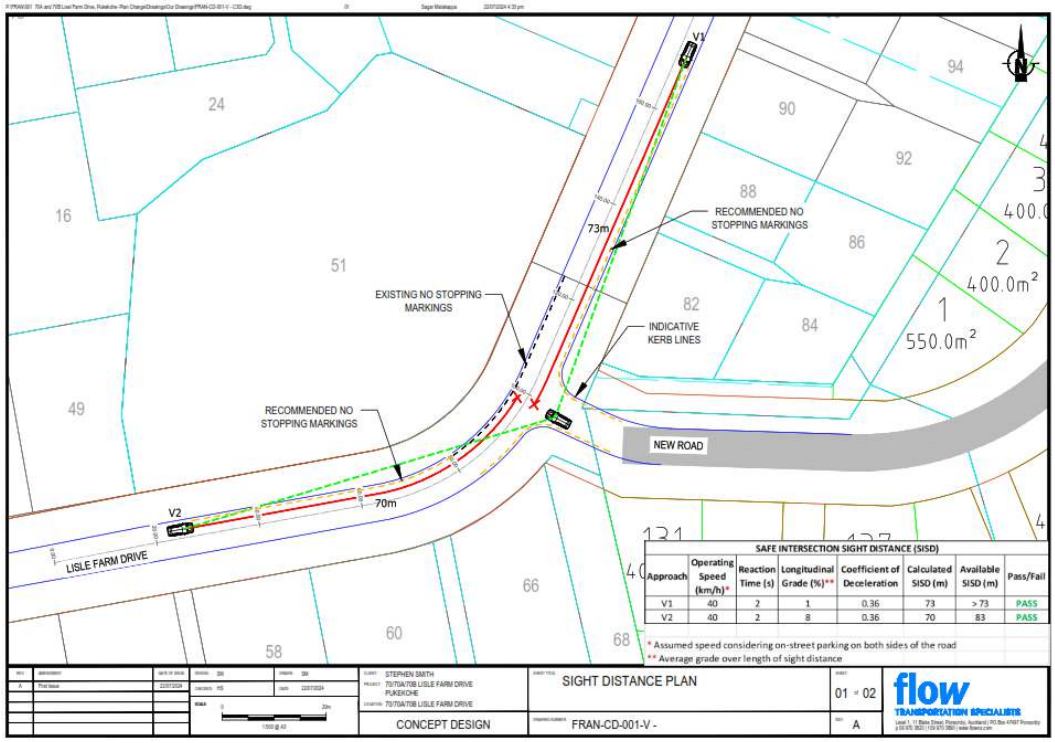
The roading plans show that the gradients of each road will not exceed 12.5%.

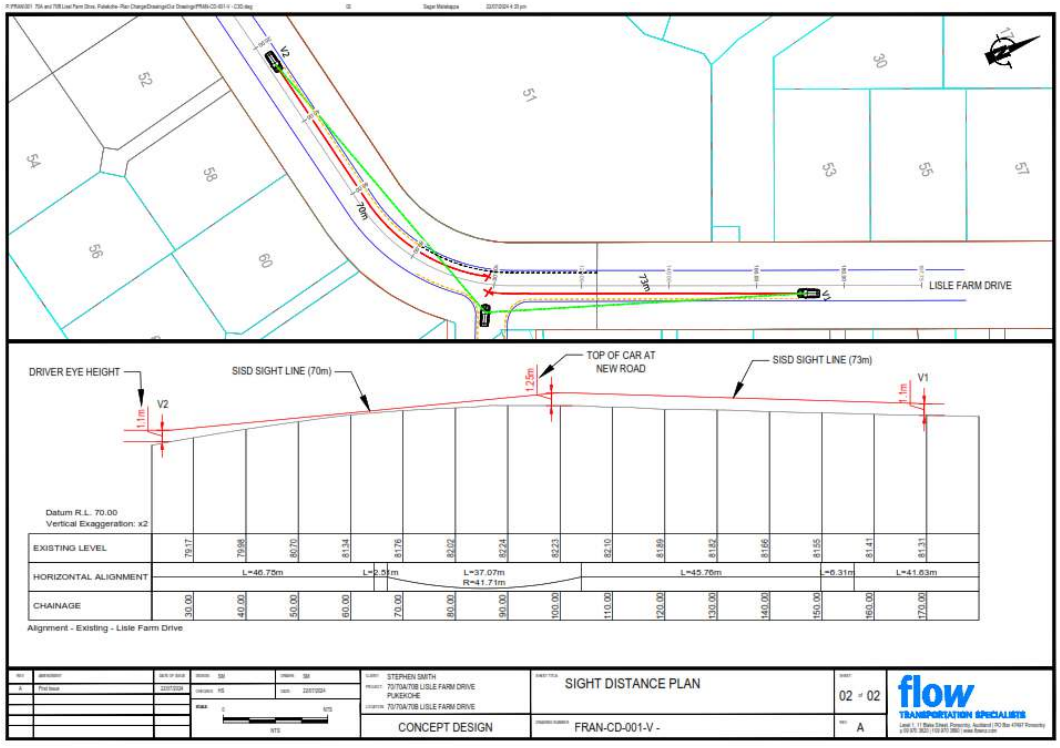
T4 Please provide a further assessment of vehicle intervisibility at the currently proposed site access point, with confirmation that vertical alignments of the approaches to the access have been fully

taken into account and consideration of mitigatory measures to address shortfalls in vehicle intervisibility.

Response

Please see the Sight Distance Plan annexed to the Flow Clause 23 Response.





This shows visibility based on the Austroads Safe Intersection Sight Distance (SISD) criteria for the intersection of Lisle Farm Drive and the new road.

- As noted in Flow's Transport Assessment report, it is considered that an operating speed of 40 km/h is appropriate given the narrow carriageway and side friction provided by on-street parking.
- As shown in Sheet 1, 73m of visibility is required for V1 approaching from the north. V2 approaching from the west requires 70 m of visibility, which accounts for the uphill gradient of Lisle Farm Drive.
- In Sheet 1, Flow have shown recommended locations to extend the existing yellow no-stopping-at- all-times (NSAAT) road markings, to ensure visibility can be met for both directions.
- Sheet 2 shows the vertical alignment, noting that there is a vertical crest on Lisle Farm Drive. This shows that an eastbound driver approaching from Lisle Farm Drive (V2) will be able to see at least the top of a car waiting at the intersection of the new road. The driver's eye height and stopped vehicle height are based on the Austroads SISD criteria.
- Figure 10 shows the perspective of an eastbound vehicle on Lisle Farm Drive (V2) at the 70 m position, where the minimum SISD would be required. The position of the stopped vehicle is aligned with the approximate location at the end of the existing retaining wall.
- The visibility for a driver approaching from the north (V1) is less constrained as Lisle Farm Drive is relatively flat at this point.
- Flow also note that visibility for V2 would only be required if a vehicle was turning right out of the new road onto Lisle Farm Drive. Due to the layout of Lisle Farm Drive relative to the rest of the road network, we consider that the majority of vehicles will turn left onto Lisle Farm Drive. The majority of these left-turning vehicles would only need SISD based on V1.
- The provision of SISD provides sufficient distance for a driver of a vehicle on Lisle Farm Drive to observe a vehicle on the new road intersection approach moving into a potential collision situation and to decelerate to a stop before reaching the collision point.

In summary, the required SISD can be achieved at the intersection of the new road and Lisle Farm Drive.

Flow recommend that additional NSAAT road markings be provided to ensure these sightlines can be met continuously.

Figure 10: Visibility on Lisle Farm Drive travelling eastbound, located 70 m from the new intersection

LANDSCAPE MATTERS

L1 Please confirm whether the 'Paerata – Pukekohe Structure Plan Landscape and Visual Assessment Background Investigation for Auckland Council' (Opus, 2017) was reviewed and whether this broader landscape analysis contains any pertinent information to inform the PPC.

Response

Rob Pryor from LA 4 responds as follows:

This document was reviewed as part of the LVA. The document identified potential adverse landscape character effects from inappropriately located built form into the skyline on the northern steep face of Pukekohe East Crater rim, including the ONF, and potential loss of landmark /placemaking value - near the southeast of LCA 12; and potential adverse visual amenity effects from inappropriately located built form into the Pukekohe East Crater rim – northern area of LCA, southeast of LCA 13.

I considered that the visual and physical integrity of the Pukekōhe East tuff ring ONF would not be adversely affected by the proposal and would remain the dominant natural feature within the area.

L2 Please provide a map identifying the various features identified in the site and context analysis set out in Section 4 of the ALVE (including contour information for the Site an immediately surrounding context).

Response

Rob Pryor from LA 4 responds as follows:

Respectfully, it is not considered necessary to provide this information which would have been identified when undertaking the site investigation. Figure 1 in the Wildlands Ecological Assessment provides a good overview of the vegetation habitats and types throughout the site.

Figure 1. Vegetation and habitat types at 70a & 70b Lisle Farm, Pukekohe

L3 **Given the considerable topographical constraints of the land, please consider whether any Precinct-specific provisions are necessary to ensure the amenity outcomes sought by the policy framework will be achieved, given the scale and intensity of built development enabled by the Residential: Mixed Housing Urban zone.**

Response

Respectfully, it is not considered necessary or appropriate to provide specific precinct provisions based on topography – these constraints apply to a multitude of MHU zoned land (including land in the vicinity that has been zoned MHU under PC78) and there is nothing to prevent a lower intensity of development where necessary. As noted above, the SMAF1 overlay to the PCVA will necessitate some sites will be of lower densities due to the need to detail stormwater on the site.

L4 **The landscape effects analysis contained in the ALVE notes (Para. 6.20)notes that the concept masterplan has been designed with an extensive green open space network with retention, enhancement andprotection of the stand of taraire-totara-pukatea forest and swamp maire forest and retention of other areas of indigenous vegetation.**

Please confirm how the PPC will ensure this open space network will be delivered and associated vegetation retained.

As outlined in the Ecological Assessment, ecological benefits will be achieved once stock are excluded from the wetlands and streams. Key measures for protecting and enhancing the ecological values of the SEA/SNA quality vegetation include covenanting, undertaking targets pest plant and animal control, and undertaking buffer planting as illustrated on Precinct Plan 1. These areas will be protected either by covenant or acquired by the Council as an open space reserve and would occur as part of the subdivision and development process.

The Requestor has indicated that the areas of the PCA enclosed by proposed buffer planting would be appropriate as public open space but that decision can be taken by Council at the time of subdivision and development.

Response

L5 **Please provide further analysis of the visual effects on established residential properties immediately to the west, enabled by the Residential: Mixed Housing Urban zone compared with the Residential: Single House zone (as anticipated by the Structure Plan).**

Response

Rob Pryor of LA 4 responds as follows:

The established properties to the west are subject to Auckland Council Plan Change 78 – Intensification that implements the Medium Density Residential Standards. The adjoining land under PC78 is zoned Residential – Mixed Housing Urban Zone (**MHU**). This proposal seeks to rezone the land as MHU in its entirety such that is aligned with PC78 and the adjoining land to the west. The proposed lot sizes, between approximately 400m^2 and 600m^2 will not be too dissimilar with the residential properties within Anselmi Ridge, and considerably larger than the recently and under-construction residential subdivision to the south with lots sizes as small as 90m^2 (3 Aituaa Road).

As outlined in the Urban Design Assessment Mr Ian Munro considers:

> *"I see no other fundamental need for a SHZ-type (lower-density) zone on the Site based on my assessment of its characteristics and involvement in developing the concept plan, and if anything,*

having a flexible zone that allows clustering of density on part of sites around and between sensitive features or steep slopes is a more flexible approach than a more uniform lower density zone."

I concur with Mr Munro's observations.

L6 Precinct Plan 1 identifies areas of 'existing bush'. Please identify which provisions would require the retention of this vegetation.

Response

These areas will be protected either by covenant or acquired by the Council as an open space reserve. Please see Precinct Plan 1 and Precinct Standard I4XX.6.3 Riparian Setbacks and Buffer Planting.

L7 The Proposed Concept Plan contained in Annexure 1 of the ALVE is not consistent with the Concept Scheme Plan contained in Attachment 12. I assume the version contained in Attachment 12 is an updated version.

Please confirm whether this version has been reviewed in carry out the assessment (acknowledging that the concept plan demonstrates just one potential subdivision layout).

Response

Rob Pryor of LA4 responds as follows:

The latest version of the concept plan has been reviewed and the revised layout does not materially alter the findings of the LVA.

URBAN DESIGN MATTERS

UD1 Please provide a map identifying the various features described in the context analysis provided in Section 4 of the UDA to better understand the relationship of these features to the Site.

Response

Ian Munro Urban Design responds as follows:

The site and context analysis varies in scale from within the Site to Pukekohe as a whole. Attachments 4, 5, and 8 speak to the characteristics and form of the Site, and how adjoining lots interface with it. It also indicates the latest thinking (within the Site) on the Council's north eastern arterial road identified in the Council's structure plan. I disagree that further information here is required.

Attachments 1, 2, 3, 6 and 7 speak to the relationship and location of the Site in the context of Pukekohe as a whole including existing and proposed (PC78) land use zones, key roads, and the town centre and train station. I disagree that further information is required here.

What could possibly be of additional assistance is the mid-range scale of the Site in the context of development east of Belgium Road / Valley Road, and north of Pukekohe East Road. Numerous aspects of this are discussed in the site and context analysis but have not been specifically collated in graphic form.

I have provided this in Attachment Cl23.1.

UD2 Given the site characteristics and noting the proposed MHU zone:

a. Please identify any constraints this would place on achieving the objectives of the Precinct, particularly Objective 2 and supporting Policy 1, and 2.

b. Please advise whether any Precinct-specific provisions are recommended to ensure development that is suitable to the location and avoids adverse amenity effects is achieved.

Response

Ian Munro Urban Design responds as follows:

There are no urban design constraints other than the unknown of whether and what open spaces the Council may accept as public open spaces (which policy 2 is focussed on) – a matter that can only be addressed at the time of subdivision. The MHU zone has been applied across Auckland including on sites that contain arterial roads, streams/wetlands and Significant Ecological Areas, and steep topography. There is nothing about the Site that would separate it from this generality and I have no reason to suspect that the provisions would not be properly workable noting that they provide for a variety of housing types, densities, and solutions.

As noted earlier, no urban development of the Site could occur until a subdivision has been granted and the Council possesses sufficient AUP: OP discretions to refuse subdivision applications that would generate inappropriate adverse effects.

UD3 While the Concept Scheme Plan (Attachment 12) that has been used to inform the UDA shows a public street connection from the Precinct to Lisle Farm Drive, the UDA notes (Paragraphs 5.5 and 6.5(a)) that this connection may only be in the form of a pedestrian/cycle link). Included in Attachment 5 is a series of diagrams showing possible connections considered.

Please advise why a full street connection may not be achievable in this location.

Response

Ian Munro Urban Design responds as follows:

At the time of the UDA it was not certain whether adjoining landowners would agree to the use of land required to accommodate the width of a street, or otherwise not object to a proposal to position a road adjacent to their land. This is not a matter that an applicant or a Council can compel through this plan change and for this reason in addition to the ideal solution of a street, I considered less-than-ideal options as well.

Subsequent to my UDA, I am advised that the Applicant has obtained necessary landowner support and approvals to accommodate a street link and on this basis a street link would be provided. Those aspects of my report premised on a street not occurring can be disregarded.

- The parcel of land providing access into the site (LOT 311 DP 530538) is now owned by the Requestor.

UD4 The UDA includes an assessment in relation to achieving a well connected and integrated built form outcome (Paragraphs 6.4 – 6.6).

Please provide further analysis of how suitable connectivity will be achieved with the existing urban environment to the west if a full street connection to Lisle Farm Drive is not achieved.

Response

Ian Munro responds as follows:

This possibility is no longer relevant as the parcel of land providing access into the site (LOT 311 DP 530538) is now owned by the Requestor.

UD5 Section 6.5(g) of the UDA discusses integration between the stream network and the road network.

a. Please advise which AUP and proposed Precinct provisions are relied on to ensure an appropriate integration is achieved.
b. Please advise whether any additional Precinct provisions are recommended to ensure good integration is delivered.

Response

Ian Munro Urban Design responds as follows:

The AUP: OP and proposed Precinct provisions provide sufficient guidance and no additional provisions are required. In summary the key provisions I consider relevant are:

a. E38.3(3) – designing roads to integrate with the landform and relate to contours inherently lends itself to roads that follow the undulations that give rise to ridges and stream valleys.

b. E38.3(10) – a liveable, walkable and connected neighbourhood links with, among other things, open spaces and the recreational, character, and other amenity benefits they bring.

c. E38.3(14) – this directly encourages the incorporation and enhancement of natural features and vegetation into subdivision patterns.

d. E38.3(18) – requiring the provision of appropriately "prominent" and accessible open spaces and pedestrian / cycle linkages.

e. I4XX.3(2) – encouraging subdivision layouts that include roads fronting public open spaces.

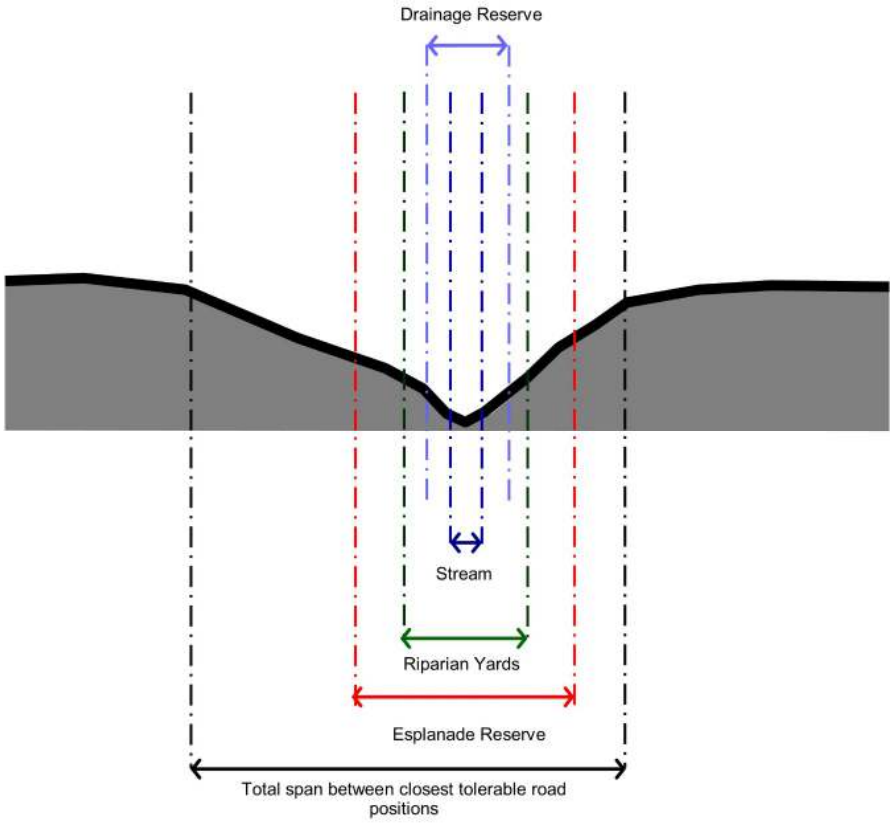
f. I4XX.3(10) – encouraging accessible green spaces including (where practical) along stream corridors.

These give the Council ample ability to ensure an acceptable outcome can be achieved, and to refuse consent applications that do not.

The design problem is not whether the Plan provisions can be theoretically more prescriptive than the above, it is that the land is not flat or necessarily (even if offered for free) cheap to maintain on an ongoing basis. The Council will not commit to land ownership until the time of subdivision. Regrettably I must report frequent experience where due to land slope and/or budgetary priorities the Council has not wanted to acquire the land between a stream- based open space edge (when it will accept a drainage reserve at all or an Esplanade Reserve is required) and a potential road (and AT will often not want roads on sloped land or requiring expensive retaining works).

I refer to Figure 1 where I have illustrated the issue of the 'open space gap' (this is taken from my evidence on the PC76 Private Plan Change – Kohe Precinct, south of Pukekohe East Road).

Figure 1 – illustration of the different open space width demands relevant to 'park edge roads'.



In summary, a Council needs to be able to confirm that it will acquire all of the land between a stream and the closest workable position for a road (that needs to separately also be acceptable to AT), before a park edge road can be itself assumed to be viable – and that is just to establish viability; the discussion on overall merit about what and where a park edge road might actually be desirable would still need to

occur. This all assumes as a starting point that a Council is willing to accept public open space at all in the first instance.

I am currently (July 2024) working on a new subdivision application in the Plan Change 74 land in Pukekohe facing this exact design question (which was also traversed at the PC74 hearing), where despite a stream being typically greater in width than 2m (but not 3m to trigger an Esplanade Reserve), and has an associated flood area of 30m in total width, the Council's Healthy Waters team has declined the offer of a (free) drainage reserve to vest (Attachment Cl23.2). Although the Council's parks team is commendably still investigating whether it might be able to acquire the functional drainage reserve / flood area as a recreation reserve, this seems like a long-shot (and would not in any event be operationally sustainable over the long-term). I am as a 'Plan-B' now working on a solution for the subdivision that retains the stream and associated drainage land in private ownership but still has a pedestrian walking and cycling linkage in public ownership in association with it. As disappointing as this situation is, it is the reality of subdivisions in Auckland at this time and I do not see why the Site would not face the same challenges when the Council likewise changes hats from being primarily an RMA regulator to primarily an LGA asset manager.

Where streams and associated features are to be retained in private ownership, then the placement of roads along their edges becomes a less workable proposition and it should not be subject of Plan provisions requiring them in a general way.

It is in this light premature to make decisions as to what particular stream outcome(s) should be required ahead of that subdivision process, and the use of the word "encourage" in Precinct policy 2 is appropriate (and I note that the term appears to work well in the case of the residential zones and the encouragement of safe and high-quality streets (see for example H4.3(3)).

UD6 Section 6.14(b) of the UDA notes that if the open spaces associated with the streams and riparian areas through the Precinct were vested as drainage reserves (or similar) it would be possible to provide pedestrian trails through them. I note that indicative walking and cycleways are indicated on proposed Precinct Plan 1.

a. Please advise which Precinct Provisions would secure their delivery and the constraints to their delivery if these open spaces are retained in private ownership.
b. Also please advise whether there are topographical constraints to achieving these indicative connections.

Response

Ian Munro Urban Design responds as follows:

As above, this is a matter that cannot be determined until the time of subdivision, largely because of the way that the Council divides responsibility for acquiring land between multiple departments, each with its own ideas and objectives. Drainage reserves may have pedestrian and cycle facilities within them - wholly at the discretion of the Council's Healthy Waters team and/or the Parks team. They must be kept in an 'indicative" status for this reason.

I am not supportive of any publicly usable but privately owned trails and linkages through highly-vegetated areas of sloped bush, although in Queenstown there is a model of a 3rd-party body with expertise in large-scale network management that does work well (no such equivalent exists in Auckland). There are significant liability and insurance (risk) issues associated with a member of the public being injured and respectfully if the Council sees a general public linkage as being of such critical resource management importance then it should acquire and manage such facilities.

But ultimately if indicative trails are shown on the Precinct Plan then at the time of subdivision policies I4XX.3(4) and (10) would apply. Based also on my direct experience with Precinct Plans

generally and the question of trails specifically, the Council will typically seek to ensure that any proposed subdivision application explained the response arrived at with reference to the Precinct Plan and the policies.

I cannot speak to the severity of topographical constraints because no specific trail routes have been yet identified (this would require the input of the Council at the time of subdivision and needs a 'final' area of public open space land (if any) to be arrived at). I would make the observation that pedestrian facilities that can have stairs will likely be much simpler and flexible on this Site than cycle trails. I note that even if the Council elected to require no drainage reserve / recreation reserve land, it would still be possible to provide a dedicated cycle / pedestrian facility as a local purpose reserve or even as road reserve, and this would need to also be investigated in due course. But it is necessary that the final route and configuration of any linkages be kept flexible so as to be able to best respond to the eventual subdivision open space outcomes agreed to by the Council's asset management departments.

UD7 Section 6.14(f) of the UDA discusses the way private development adjacent to the stream corridors would interface with these open spaces. The author notes they see benefit in, but do not see a specific need for, additional Precinct controls on fencing to ensure a suitable interface is created. This issue was considered in the recent PC76 which created the now operative Pukekohe East – Central Precinct.

Please provide comment on the applicability of the fencing and drainage reserve boundary control contained in that precinct (14XX.6.1) to this PPC precinct.

Response

Ian Munro Urban Design responds as follows:

I am generally unsupportive of concessions exacted from an Applicant in one private plan change being used as a planning precedent on other private plan changes where the latter applicants were not a part of and had no opportunity to object to the initial private plan change decision (i.e., public plan change precedents are better). I was involved in PC76 and confirm that the applicant agreed to the Council's request purely for its own reasons (including my advice). The matter was not contested in any material way at the Hearing and that the Precinct contains a provision that is not indicative of any definitive finding as to merits or need being ever made.

I am overall neutral on whether the PC76 provision should apply in this instance, although if forced to take a side I would oppose it.

My experience is that where a high-quality visual amenity is available and free from any unintended access or overlooking concerns, people will generally not need to be told to not build a solid visual barrier; they will maximise their own views. PC76 had a quite different context to the current Site, including that the PC76 open space / pedestrian-cycle link / residential interface example is much flatter and visually spacious than the current Site; includes a much more important pedestrian / cycle link connecting to Pukekohe East Road where passive surveillance along that path for school children and commuting cyclists was a demonstrably more important outcome than on the current Site; and had land-levels and a proximity between the future path and future property boundaries such that a desire for solid privacy fences by residents could be credibly foreseen. On this site, the open space is densely vegetated and much steeper. Recreation trails within that will be used by a lesser volume and type of users and will often be at a much lower land level than residential sections on the high ground. The likelihood of solid residential boundary fences occurring is in these circumstances quite a bit less than was the case in PC76.

One additional area of uncertainty in my mind is the unknown final form and alignment of the proposed north-east arterial. Depending on the elevation, noise, and visibility of this, there may be a justifiable case

for adjacent residents backing onto a green feature to seek a degree of attenuation or privacy from that. This should not be foreclosed.

Please see the Ian Munro Urban Design report for the Attachments referred to in this response.

STORMWATER AND FLOODING MATTERS

SW1 Please confirm if the proposed stormwater management approach has considered the type (streams, wetlands, lakes, underlying aquifers) and condition (possible erosion risk, capacity and required infrastructure upgrades, SEAs) of the downstream receiving environments?

Response

It is confirmed that that the downstream environment has been considered for the proposed stormwater management approach. The proposed 20m wide riparian buffer is designed to provide treatment prior to discharging into downstream wetlands, as identified by the ecological assessment undertaken by Wildlands Ltd. All earthworks modelled for the concept subdivision layout have been designed to be outside of all riparian buffers.

SW2 Please provide an assessment of:

- **Pre- and post-development flows entering the watercourse.**

Response
Under the HEC HMS Report Section 2.3.7 and 2.3.8, as well as the conclusion, the pre- and post-development peak flows under different rainfall events are demonstrated and summarised, the post-development peak flow is attenuated to not exceed the pre- development peak flow.

- **Potential changes to erosion risk at the discharge points from the development enabled by the plan change.**

Response
The discharge points for those three communal devices will be subject to detailed design at Resource Consent stage to ensure the post-development flows are controlled with energy dissipation approaches, including the rip-rap apron, baffle blocks, designed planting or Gabion Basket etc. There is sufficient discretion in the Unitary Plan at either subdivision or development stages to require this.

Private discharge points for the proposed residential lots facing the gullies can be designed to have bubble up cesspit/chambers, level spreaders or similar devices. As stated above, these can be designed and confirmed at Resource Consent Stage or Building Consent Stage.

- **Locations of outlets and proposed mitigation measures.**

Response
The communal stormwater device for the post-development catchment C is designed at Lot 30, the communal stormwater device for the post-development catchment B is designed at Lot 45 (Stormwater Reserve) and the communal stormwater device for the post-development catchment D is designed at Lot 194. The proposed residential lots, within post-development catchment A, E, F and G cannot discharge to the communal stormwater device and will have individual overflow discharge points within the property.

SW3 Please show in the SMP the location of any natural hydrological features within the plan change area, including natural wetlands, and demonstrate how the development and proposed stormwater management will ensure the vitality of these wetlands.

Response

Please find the attached amended SMP. The natural hydrological features within the plan change area have been identified to be enhanced and protected. In addition, the designed stormwater management approaches and treatment will ensure any adverse effect to those features are minimised. The location

is shown under Section 2.1 under SMP and the detailed ecological features are included in the Ecological Assessment.

It is noted that earthworks are being proposed in close proximity to some of the wetlands. Erosion effects and how they are intended to be avoided and/or mitigated should be addressed in the SMP.

Response

Three wetlands are identified as per the ecological assessment being: the northern wetland, the south-eastern wetland and the south-western wetland.

- The concept earthworks would extend close to the northern wetland but would remain clear with approximately 9.5-10m clearance from the edge of the wetland, the appropriate erosion and sediment control can be designed at Resource Consent Stage and the construction phase to be monitored and certified by suitably and qualified engineering professionals. This would ensure that any adverse effect is minimised and minor.

- The concept earthworks extend close to the south-eastern wetland and can remain clear from the existing wetland and proposed 15m buffering. Appropriate erosion and sediment control measures can be designed at Resource Consent Stage and the construction phase can be monitored and certified by the suitable and qualified engineering professionals. This would ensure that any adverse effect is minimised and minor.

- The concept earthworks extend close to the south-western wetland, but is not encroached, the detailed measurements can be determined at Resource Consent Stage. Given the upstream catchment through the earthwork area is small, between the post-development catchment B Road Reserve to the wetland, approximately 500m^2. This would ensure that any adverse effect is minimised and minor.

SW4 **Please provide details of Mana Whenua engagement undertaken to date and/or how and when it is intended to be undertaken.**

Response

Mana Whenua groups have been engaged prior to lodgement and one site visit has occurred, but no responses have been received after the site meeting with the applicant. Further engagement and involvement may occur post-notification and this would be welcomed.

SW5 **Please confirm the stormwater management approach proposed for different areas and activities and update the SMP accordingly.**

Please confirm and/or clarify the following:

- **The table in the executive summary does not propose any water quality measure for residential lot – roof areas, whereas elsewhere the use of inert building materials is sought.**

Response
The inert roofing material is shown in the table under Executive Summary of SMP.

- **Pre-treatment devices are specified for residential hardstand areas in the figure in Section 5.2.1 and the table in the executive summary, but not in the first figure in Section 5.2.9.**

Response

The first figure under Section 5.2.9, Stormwater Treatment Flowchart is updated for the post-development catchment B, C and D, the residential other hardstand area is designed to be pre- treated by gross pollutant traps or LittaTrap and the quality treatment to be undertaken by the communal bioretention device, Stormwater 360 Filterra or Filterra Bioscape, to be detailed designed at Resource Consent Stage.

- **The figure in Section 5.2.1 and the table in the executive summary does not include centralised bioretention devices, rain garden or rain smart tank as a measure to achieve hydrological mitigation for residential hardstands, though this is proposed in the first figure in Section 5.2.9.**

Response
Section 5.2.1 and 5.2.9 have been updated in the latest Stormwater Management Plan which indicate the approaches to achieve water quality and hydrological mitigation requirement.

- **Consider adding attenuation requirements to the table in the executive summary and the figure in Section 5.2.1 so it is clear that this is a requirement in some catchments.**

Response
The attenuation requirements are summarised in the executive summary table and the flow chart under Section 5.2.1.

- **Section 2.3.4 of the Stormwater Assessment mentions the use of five communal stormwater devices, which contradicts Section 5.2.8 of the SMP, stating the design of three communal stormwater devices. Please confirm the number of communal devices being implemented within the SMP**

Response
It is confirmed that the total number of communal devices is three, the inconsistency under HEC HMS Report Section 2.3.4 is corrected.

The stormwater management approach for catchments A, E, F and G as described in Section 5.2.9 suggests use of permeable paving for residential hardscapes. This should be incorporated into the second figure in Section 5.2.9.

Response
The permeable paving demonstrated under Section 5.2.9 for catchment A, E, F and G is a one off solution. Concrete (impervious) material can be utilised for the private driveway in catchment A, E, F and G, but need to be treated to achieve SMAF 1 requirement and proprietary device to achieve water quality treatment as per GD01.

SW6 **Please confirm and clarify if all impervious areas are proposed to be treated to meet GD01 requirements as per the requirement of the NDC's water quality performance criteria:**

- **Section 5.2.1 of the SMP specifies deep sump cesspits as pretreatment devices for Public Roads and Hardstand Area. The deep sump cesspit does not achieve GD01 treatment. We recognise that this pre-treatment option in series with bioretention devices would achieve GD01 treatment, but discharge via a tank would not provide any additional treatment.**

Response
All the designed deep sump cesspits for the road reserves and LittaTrap for individual residential properties would only do pre-treatment. Runoff from the private driveway and road reserves within post-catchment B, C and D is to be treated by the communal bioretention device (Filterra or Filterra Bioscape) to achieve water quality requirement as per GD01. Runoff from the private driveway within post-catchment A, E, F and G is to either use permeable pavement (small area with low traffic movement) or

proprietary device to achieve water quality treatment requirement for impervious driveway, including grassed swale and raingarden/Filterra.

- **Similarly, the SMP specifies Gross Pollutant Traps for pretreatment only for the residential surfaces in catchments A, E, F, G. Catchment E, F, and G then discharge directly into natural wetlands.**

Response
The proprietary water quality treatment device (grassed swale, raingarden or Stormwater 360 Filterra) would be applied for to the proposed driveway/hardstand pavement for each lot with in catchment A, E, F and G to achieve the water quality requirement under GD01 and TR2013/035, to be confirmed at Resource Consent. Otherwise, permeable pavement must be utilised.

- **Section 5.2.2 promotes the use of bio-retention swales and rain gardens for roads, though these are not included in any figures.**

Response
Three communal Stormwater 360 Filterra Devices are designed to achieve the water quality requirement under GD01 and TR2013/035 from the proposed impervious area within Road Reserves, including road formation and vehicle crossings. Raingardens are not utilised for the public road as per Auckland Transport requirement, the private swales and rain gardens can be utilised for private lots if required, to be confirmed at Resource Consent/Building Consent Stage.

SW7 Please provide an assessment and justification of why the proposed treatment methods for private residential roofs, private residential hardstand, and public roads and hardstand area are considered the Best Practicable Option (BPO) and how they meet the requirements of the NDC and the relevant policies under Chapter E1.3 of the Auckland Unitary Plan.

Response
Please find the BPO assessment under updated SMP 5.2.5.

SW8 Please provide information on how stormwater runoff from any communal waste storage areas in apartments and/or multi-unit developments is proposed to be managed and treated.

Response
The Request is for a change of zoning to Residential -Mixed Housing Urban Zone – no development is actually proposed. While this zone enables apartment or multi-unit developments, it is noted that any such development that exceeds three dwellings requires resource consent for a restricted discretionary activity. Appropriate assessment of how stormwater runoff from any communal waste storage areas in apartments and/or multi-unit developments can be undertaken at the development stage and there is sufficient discretion in the Unitary Plan provisions to undertake such an assessment.

The concept subdivision plan devised for the request is based on a likely subdivision and development scenario under current market conditions and based on the scale and intensity of other similarly zoned land in the locality (i.e to the west and south of the plan change area).

SW9 The SMP specifies that "no soakage is proposed" due to the "geotechnical constraints and steep site features".

Please comment on the underlying soil materials, infiltration potential (including whether any site-specific percolation testing has been completed) and any other known "geotechnical constraints" which preclude infiltration.

Response
The underlying soil materials are clayed silt with stiff and moist condition. According to the preliminary earthwork plan, the bulk earthwork activities include cut up to 9.0m deep and fill up to 8.0m deep. A geotechnical investigation has been undertaken by Land Development & Engineering (LDE) but the large depth of the testing bore is 3.0m, the current geo result will need to be updated after the cut activities. For the proposed filling part, the engineering fill will be placed and compacted, the infiltration rate is considered as limited. At the same time, the site features steep slope from 1 in 4 to 1 in 2, detailed geotechnical assessment will be undertaken at Resource Consent Stage.

S10 Please confirm whether and where retention can be provided.

Response
Each individual property will provide retention volume by tanks (above-ground recommended due to the steep site) for the proposed roof. The proposed impervious driveway retention requirement can be taken up by detention only by an underground tank. Alternatively, if permeable material is utilised for the driveway, retention requirement is not applicable, subject to the detailed design for each lot at Resource Consent Stage.

The retention volume requirement from the public area, such as road reserve, will be taken up by detention and provided by the communal stormwater devices, given no activities can re-use the retention water and soakage is not applicable due to the steep slope and bulk earthwork activities. This is outlined in the SMP in the Executive Summary and Sections 2.2 and 2.5

SW11 Please confirm and explain the values presented in Table 7 of the Stormwater Assessment.

We note that for "To South East" the 10% AEP unmitigated peak flows increase, whereas the 1% AEP unmitigated peak flows decrease. "To South West" appears to have inconsistent decreases.

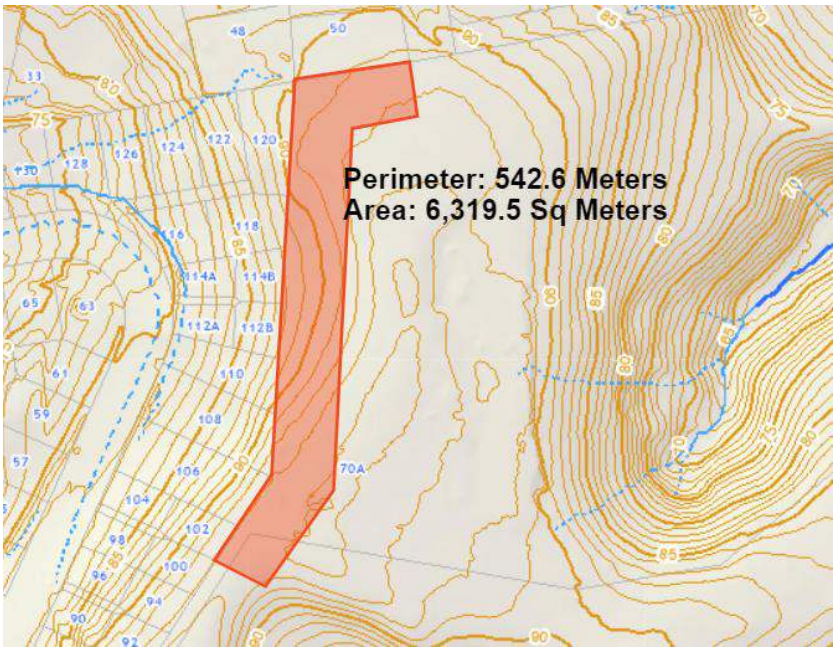
Response
To the South West outlet, the pre-development peak flow is generated by pre-development catchment G and H, in a total of 28,204m^2 but the post-development peak flow comes from the post- development catchment G only which is 17,035m^2.

To the South East outlet, the pre-development peak flow is generated by pre-development catchment E and F, in a total of 30,902m^2 but the post-development peak flow comes from the post- development catchment E and F where the total area is 17,546m^2.

The post-catchment area is calculated after the earthwork activities.

SW12 Please confirm the 1% AEP flow path for runoff from the residential lots in Post Stormwater Catchment A.

Response
No overland flow path will be generated by post-development catchment A. As seen in the screenshot below, there are no existing overland flow paths from the subject PPC towards the west, according to Auckland Council Geomaps.



The pre-development peak flow under 1% AEP is 144.64L/s under HEC HMS Report Section 2.3.6 (appendix in Stormwater Management Plan), and the post-development peak flow under 1% AEP from the post-development catchment to the west is attenuated to 129.60L/s. Therefore, there are no adverse effects to the existing overland flow path on the west of PPC and downstream properties flooding risks is reduced.

SW13 Please provide a sensitivity assessment of device sizing allowing for 3.8 degree climate change increase to ensure that the device(s) can be incorporated into the proposed future urban layout.

Response

The sensitivity check assessment has been updated to the stormwater management plan and the updated HEC HMS report indicates the new stormwater devices information, both the 2.1-degree climate change rainfall intensity and 3.8-degree climate change rainfall intensity has been modelled and the results are shown in the updated HEC HMS report and SMP. It is confirmed that the new devices allow for 3.8-degree climate change rainfall intensity to support future urban development as requested.

SW14 Where attenuation is proposed, please confirm which storm events this SMP is seeking attenuation for. The attenuation requirements for communal and "offset compensate" devices need to be clear.

Response

The attenuation design (private devices and communal devices) holistically achieves attenuation for post-development 50%, 10% and 1% rainfall events. Where some parts of a catchment are under-mitigated, other parts in the same catchment are over-mitigated to ensure the hatchment as a whole achieves required mitigation in all storm events.

SW15 Please confirm the type of device that is proposed for communal attenuation.

Response

All three proposed communal attenuation devices are Cirtex Rainsmart Modular tanks, the schematic detail of the tank to be provided at Resource Consent Stage. Typo error of the communal device under flowchart is updated.

Each communal attenuation device will have a communal Stormwater 360 Filterra device to undertake runoff quality treatment before discharging to the communal tanks.

SW16 SMP implementation:

a. Please provide information on how the proposed stormwater management methods outlined in the SMP are intended to be implemented.
b. Please confirm and clarify at what stage of the development the proposed communal device and other public network/devices are intended to be constructed. If staging of development is proposed, please provide information on how the SMP will be implemented corresponding to each stage of development.

Response

a. How the outlined stormwater management methods within SMP will be implemented to support the development is to be confirmed and determined at consenting stage. If the site will be developed by stages, the communal devices and treatment facilities will be required to be constructed and implemented based on the staging plan to ensure that the designed water quality, hydrological mitigation and water quantity attenuation are achieved, completed and vested prior to 224c application.

b. The SMP provided (and updated) indicates the feasibility of the proposed plan change area to achieve the stormwater management requirements, the staging plan and construction phases should be addressed at later consent stage, i.e. Resource Consent Stage. If the current concept plan (or similar) is approved at consent stage, all the communal devices and relative public networks/devices are to be constructed and vested to Auckland Council prior to 224c application.

SW17 Please provide an amended SMP which includes the further information and assessment as requested above.

Please also consider the following feedback on other sections of the SMP:

- Section 5.2.2 specifies promoting the use of permeable paving to achieve the water quality control target. However, it should be noted that permeable paving only provides limited treatment for active systems. Please amend this detail within the SMP.

Response

Using permeable pavement is one method for the proposed residential lots. Once the permeable pavement is utilised as driveway, garage entry or parking for the private residential lots, the water quality treatment is required under TR2013/035 given the area is small and vehicle movements are limited. At the same time, utilising permeable pavement is one option to reduce the impervious area of the private residential lot development and reduce the required volume of detention/attenuation devices.

- Labelling of tables and figures would assist with future reviews.

Response

All the tables and figures in HEC HMS Report and SMP are labelled.

- Please use consistent referencing to design storms i.e. 1% AEP or 1 in 100 year ARI throughout the SMP and stormwater assessment.

Response

10% & 1% AEP has been used for all stormwater reports

- In addition to setting out the preferred stormwater management for a development, the SMP should also identify further investigative works that are required in the later stages of design. This should include:
  - erosion study once the stormwater pipe network is conceptually designed to enable an assessment of whether SMAF 1 is appropriate, or whether a higher standard is required.

- Site-specific infiltration testing.
- Assessment to confirm that the vitality of the wetlands can be maintained and enhanced.

Response

- Please find the updated SMP Section 5.2.12.
- Please find the updated SMP Section 5.2.12, but the green outfalls are designed for the communal stormwater devices for sub-catchments B, C and D, to ensure no concentrated flow to be discharged directly to the existing hydrological features to minimise the erosion risks.
- Site infiltration testing is not applicable at this stage. It is to be undertaken after the earthwork activities to ensure the post-earthwork infiltration rate can support designed stormwater devices.
- Five wetland habits type have been assessed by Ecological Assessment, the proposed stormwater mitigation design, hydrological treatment and quality treatment was designed to enhance and protect the existing wetland habits and ecological features.

GEOTECHNICAL

G1 **We note that the review of aerial photographs presented in the LDE geotechnical report has been limited to image from 2003/2004 and 2010/2011 and the site walkover survey was undertaken in 2022. Considering current availability of the aerial photographs from 2022 and 2023, observed instabilities on the site, and severe weather experienced in the Auckland area in 2023 resulting in numerous geotechnical instabilities,**

Please provide further review of aerial photographs and site walkover survey to support this proposed Private Plan Change.

Response

Jasmine Lam from LDE Limited responds as follows:

LDE were unable to find any useful aerial photographs from 2022 and 2023 on available public platforms. Therefore, LDE have re-visited the site on 30 April 2024. Based on our observations, we consider that the site is more or less in a similar condition as was observed on the date of our previous site visits. However, recent slips observed (i.e. since our 2022 site visit, presumably as a result of the 2023 severe weather events) were generally limited to reactivations of existing slip features previously mapped and addressed by LDE in our report. Therefore, our existing conclusions and recommendations remain applicable. UAV site imagery taken by LDE on 30 April 2024 illustrating our observations are attached in Appendix A.

G2 **We have undertaken a review of existing available geotechnical information from neighbouring properties. Findings from our review indicates that Tauranga Group Alluvium and recent alluvium of various strengths are likely to be present beneath the published geology South Auckland Volcanic Field in this aera. We understand LDE considers the risk of consolidation settlement affecting the proposed private plan change to be low.**

Please clarify and confirm that LDE has taken the present of potential low strength alluvium into account.

Response

Jasmine Lam from LDE Limited responds as follows:

The site is, for the most part, elevated and forms part of the rim of a volcanic tuff ring. Any alluvial soils in the area would have been deposited in low lying areas. The subsequent formation of the elevated tuff ring would have buried any underlying soils with thick volcanic ash, lapilli and scoria deposits and as such underlying soils would be unlikely to be exposed by earthworks operations. This is supported by published geology maps as outlined in Section 3 of the geotechnical report, and the findings of preliminary hand auger boreholes outlined in Section 5 of the geotechnical report. The exception would be the inverts and lower flanks to the various water courses / gullies within the site, where recent alluvium / colluvium can be expected, however such areas are mostly beyond the future development areas.

We consider that the risk that any such organic or alluvial deposits will have a substantial impact on the earthworks or end-use is low.

Notwithstanding, this is a matter for Resource Consent level investigations to further investigate the subsoil composition at this site once the proposed earthworks schemes are reviewed. We expect that the following typical geotechnical engineering solutions are likely to be applicable to mitigate geotechnical risk in the unlikely event that alluvial deposits are encountered upon the elevated ridgelines and beneath the development areas:

a) Organic or alluvial materials may be at sufficient depth that the anticipated fill and/or building loads imparted onto these materials will be minimal.

b) A preloading and/ or settlement monitoring programme may be detailed in order to ensure that fill induced settlements and/ or that any settlement likely to result due to the equivalent building loads have attenuated prior to construction commencement.

c) A reduced geotechnical ultimate bearing capacity along with a stiffened raft type foundation system may be recommended in order to reduce the likelihood of differential building settlements.

d) If organic or alluvial materials are sufficiently thin and near surface, these may be undercut and reinstated with inorganic, engineered fills.

G3 It is understood that a concept scheme plan was not provided to LDE at the time of report preparation.

Please review the submitted concept scheme plan and confirm that the geotechnical recommendations presented in the geotechnical report remain valid and relevant. Subsequently, please update the geotechnical report accordingly.

Response

Jasmine Lam from LDE Limited responds as follows:

LDE has reviewed the submitted 'Concept Scheme Plan'. The concepts and recommendations outlined in their geotechnical report remain valid and should be heeded on the basis that they are general and specific geotechnical investigation and design will be required at Resource Consent stage to refine these. By way of further information, revised Figure 05 attached to this memorandum (Appendix B) provides an overlay of roads and residential lots that was unable to be submitted at the time of the original geotechnical report. It should be noted that this revised Figure 05 remains a concept only and LDE reiterate that it is subject to detailed investigations and design at the Resource Consent stage.

Please see the LDE report for the Attachments referred to in this response.

ECOLOGY

E1 Please provide a relevant arboricultural assessment against applicable notable / scheduled tree criteria, and if these trees are deemed notable, please update the precinct standard to include the notable trees.

Response

An arboricultural assessment by Peers Bown Miller has been undertaken and is annexed to this response.

The conclusion of the assessment is:

Five (5) groups of trees and vegetation were recorded and assessed, as outlined in Appendix A to the arboricultural assessment. Of those tree groups, only one group (Area 3) was deemed worthy or inclusion as a Notable tree grouping, with this grouping identified as a mixed Kahikatea-Pukatea forest type remnant. As noted in the Plan Change Request lodged with the Council, Area 3 is within an existing riparian corridor and has already been identified for protection and enhancement and subject to a 20m setback in the precinct provisions.

E2

a. **Please undertake a robust and best-practice long-tailed bat survey and provide an updated ecological report.**
b. **Please provide appropriate precinct standards to address adverse effects on bats such as the use of PIR sensor lights, low lux, hooded lighting options etc.**

Response

Nick Goldwater of Wildlands Limited responds as follows:

Wildlands can undertake a bat survey, but this cannot be done until October at the earliest (when the bat season commences). Bat surveys cannot generally be undertaken in the colder months.

Effects on bats (e.g. from lighting) can be assessed once we have confirmation of bat presence/absence.

As agreed with the Council Planner this work will be undertaken in October.

E3 Please provide a herpetofauna survey, and if present appropriate precinct standards to address adverse effects on indigenous herpetofauna.

Response

Nick Goldwater of Wildlands Limited responds as follows:

As I understand, there will be no impact on woody indigenous vegetation, although it is possible that areas of rank grass within the development footprint could support copper skinks. The best option may be to default to a Lizard Management Plan rather than doing a preliminary lizard survey. Note that we cannot carry out lizard surveys until October.

E4 Two intermittent streams were identified in the Ecology Report by assessing the streams against the definitions of 'permanent', 'intermittent" and 'ephemeral' streams in chapter J of the AUP. During the site visit, both streams classed as 'intermittent' (IS1 & IS2) had continuously flowing reaches, which meets the definition of a permanent stream. Please reevaluate this assessment.

Response

Nick Goldwater of Wildlands Limited responds as follows:

Two intermittent streams were identified in the initial site visit. However, on subsequent visits to the site by the council reviewer and the Wildlands ecologist, it was noted that these streams were continuously flowing. As per Chapter J of the Auckland Unitary Plan (AUP), "*the continually flowing reaches of any river or stream"* should be classed as a permanent river or stream. As such, these streams have been reclassified as permanent (PS1 and PS2 in Figure 1).

Intermittent and permanent streams receive the same treatment and protections under the AUP, and as such, the constraints assessment remains the same.

E5 Stream Reach IS2 contained wetland habitat and was found to be a broad gully system of up to 8m wide; it appears under-represented in the Ecology report and Precinct Plan 1 (Figure 1). Please resurvey and classify

Response

Two small areas of creeping buttercup-water celery herbfield occur in a narrow gully near the southwestern property boundary. Point E5 noted that the extent of one of these wetlands appeared underrepresented in the original figure provided in the Wildlands report. During the site visit on 4 July 2024, the wetland was resurveyed by walking around the edges with a Garmin GPS unit. The updated wetland extent is shown in the revised Figure 1 below.

Figure 1 - Revised vegetation and habitat types

Figure 2: Updated Vegetation proposed for protection and proposed buffer planting

E6 Please update the ecological report and precinct plan to include a buffer for upstream of the permanent stream crossing, the soft-water celery rush land wetland and addition wetlands identified onsite.

This should include the vegetation type 9 in the Ecological report. Figure 2 below shows the areas mentioned above outed in a thick red line.

Response

Four buffer planting areas (PAs) have been proposed on the site (Figure 2). These consist of:

- Revegetation planting in areas of exotic grassland surrounding existing indigenous vegetation to enhance buffering capacity (PA1 and PA2).
- Riparian and upslope planting throughout areas of exotic grassland to provide buffering for an intermittent stream and a wetland (PA3 and PA4).

Indigenous buffer revegetation updates

PA2a has been extended and a new planting area (PA2c) has been added to provide additional buffering for the permanent stream and the small wetlands near the eastern property boundary, as per E6 of the Section 92 request. The revised indicative planting schedules for PA1, PA2a, and PA2b are provided in Table 1. A new indicative planting schedule for PA2c is provided in Table 2.

Additional areas of existing indigenous vegetation (Vegetation Type 9) have been included as part of the area proposed to be covenanted (Figure 2 above).

Table 1: Indicative planting schedule for PA1, PA2a, and PA2b

Species	Common Name	Size	Spacing (m)	%	PA1 (9,560 m^2)	PA2a (2,840 m^2)	PA2b (3,660 m^2)
Beilschmiedia tarairi[1]	taraire	2L	5	1.5	30	5	5
Coprosma robusta	karamū	1L	1.4	10	730	180	230
Cordyline australis	tī kōuka	1L	1.4	10	730	180	230
Dacrycarpus dacrydioides[1]	kahikatea	2L	5	2.5	20	10	10
Kunzea robusta	kānuka	1L	1.4	25	1,450	400	515
Leptospermum scoparium	mānuka	1L	1.4	12	730	180	235
Melicytus ramiflorus	māhoe	1L	1.4	10	730	145	190
Pittosporum eugenioides	tarata	1L	1.4	10	350	110	140
Podocarpus totara[1]	tōtara	2L	5	3	120	35	45
Pseudopanax arboreus	five-finger	2L	3	5	240	70	95
Veronica stricta	koromiko	1L	1.4	5	240	70	95
Vitex lucens[1]	pūriri	2L	5	3	120	35	45
Total				**100**	**5,490**	**1,420**	**1,835**

1. Plant in Years 3-5 when sufficient shelter is provided from surrounding plants. Taraire should be planted in damper, less exposed areas, e.g., top slope.

Table 2: Indicative planting schedule for PA2c

Species	Common Name	Size	Spacing (m)	%	PA2c (950 m^2)
Coprosma robusta	karamū	1L	1.4	15	70
Cordyline australis	tī kōuka	1L	1.4	15	70
Kunzea robusta	kānuka	1L	1.4	25	120
Leptospermum scoparium	mānuka	1L	1.4	15	70
Melicytus ramiflorus	māhoe	1L	1.4	10	50
Pittosporum eugenioides	tarata	1L	1.4	7.5	35
Pseudopanax arboreus	five-finger	2L	3	5	25
Veronica stricta	koromiko	1L	1.4	5	25
Vitex lucens[1]	pūriri	2L	5	2.5	10
Total				**100**	**475**

1. Plant in Years 3-5 when sufficient shelter is provided from surrounding plants.

E7 An additional wetland was identified during the site visit.

Please identify additional areas of wetland and provide a wetland delineation in accordance with the wetland delineation protocol (MfE 2020).

Note: Below is a non-exhaustive map (Figure 3) of additional areas (circled area with green arrow pointing at the additional wetland) that should be included in your assessment.

Response

Wildlands Goldwater of Wildlands responds as follows:

An additional wetland was identified on site. This wetland is described below and mapped in Figure 1 above.

Water pepper-soft rush herb field (Vegetation Type 16)

A small area dominated by water pepper (*Persicaria hydropiper*; FACW) is present on the bank of the permanent stream near the eastern boundary of the site (Plate 1). Soft rush (*Juncus effusus* var. *effusus*; FACW) is commonly present underneath the water pepper and in gaps. Water celery (*Helosciadium nodiflorum*; OBL), creeping buttercup (*Ranunculus repens*; FAC), Yorkshire fog (*Holcus lanatus*; FAC) and *Isolepis sepulcralis* (FAC) are also occasionally present.

This area satisfies the rapid test (as per Ministry for the Environment 2021) for the presence of hydrophytic vegetation as the dominant species (water pepper and soft rush) are Facultative Wetland species.

Plate 1: Water pepper-soft rush herbfield (Vegetation Type 16). 4 July 2024.

OPEN SPACE / PARKS / COMMUNITY FACILITIES

OS1 Please provide a clear delineation showing which areas of proposed open spaces are required / proposed for stormwater purposes and which areas are proposed for recreation purposes.

For information only – no response required.
There is an over provision of open space, and council would not seek to acquire the proposed open space located north within the plan change area, even at no cost to council unless an esplanade is triggered under the subdivision process or Healthy Waters has agreed to and has established that these areas will form part of stormwater network.

Therefore, any mention of land vesting should be removed from the plan change, precinct plans, and concept plans. The matter can be addressed during the further subdivision of the land.

Response

At this stage all we can identify is areas that are appropriate for riparian protection and buffer planting and yards. Some of these areas could also be suitable for recreation use (walkways and/or cycleways) and we have identified these as such on the precinct plan. If this has not been identified it is almost certain that the question of public access and open space would be raised by other Council officers or submitters (i.e. Auckland Transport).

The Request has identified areas where public open space could be considered but the Requestor accepts that there is no presumption that the land would be acquired for this purpose. However, it is considered appropriate to identify land that **could** be acquired for open space use.

Infrastructure

L1 The proposed road up from Lisle Farm Dr will be significantly flatter than the existing accessway grade. I would estimate that an up to 5m cut will be needed along the boundary with 82 and 84 Lisle Farm Drive.

Response

A topographical survey has been carried out recently for the proposed access vicinity area from Lisle Farm Drive to PCA, the existing contours are significantly different from GIS contours which indicates the temporary levels during the construction phase. The proposed retaining wall along the boundary with 82 and 84 will be maximum 3.75m high.

And the existing V shape retaining wall for the existing access to service 70 Lisle Farm Drive and the newly built pedestrian access to 14 Knoll Rise Reserve would need to be pushed back and re-constructed to compensate the designed 20m road reserve to service PCA.

Please confirm that the road reserve can be designed to function as intended given the land slope. An option is to provide a cross section for the road at the rear of 84 Lisle Farm Dr and lot 137 showing retaining wall details and all road features.

Response

The typical cross section drawing is provided.

CONLUSION

The assessment above has addressed each of the Clause 23 requests for further information. The answers to each question are supported by individual assessments annexed to this response. If the Council has any further queries related to the matters included in this response, please contact the undersigned in the first instance. Further direct engagement between specialists for the Requestor and the Council can also be facilitated.

Yours faithfully

SCOTT WILKINSON PLANNING

Robert Scott
Planning Consultant

Cl23 Response No 1