

Delmore Fast-Track

04/05/2026 – Auckland Council Response

Annexure 21:

Auckland Transport

Specialist Response Template – Fast-track Approvals Act 2024 Substantive Application

1.0 APPLICATION DESCRIPTION

Application and property details

Fast-Track project name: Delmore Fast-Track

Fast-Track application number: FTAA-2512-1164

2.0 Technical Specialist Memo – Auckland Transport

To: Dylan Pope – Lead Planner & Carly Hinde – Principal Project Lead.

From: Nadine Perera - Principal Planner, Strategic Development Partnerships.

Qualifications & Relevant Experience:

I am a Principal Planner in the Strategic Development Partnerships Team within the Built Environment and Place Directorate of Auckland Transport (AT).

My responsibilities involve providing expertise to enable alignment of transport and landuse with a particular focus on transport infrastructure provision within developing areas of Auckland. My role includes leading AT's response to development and fast-track applications, primarily within the North and West of Auckland. I have been at AT since January 2023. Prior to this I held positions with various private consultancies including Lands and Survey, Axis Consultants Limited, Burton Consultants (now part of 4Sight Consultants), Plan4It, and Harrison Grierson.

In these positions my primary focus, for over 30 years, encompasses land development, policy, and planning in Auckland. My experience includes extensive involvement in preparing and assessing development proposals against the various district, regional and Regional Policy Statement provisions contained within the Auckland Unitary Plan Operative in part. I have also held planning positions with the New Zealand Defence Force and North Shore City Council prior to its amalgamation into Auckland Council.

I hold a Bachelor of Arts Degree in Geography from Te Herenga Waka - Victoria University of Wellington, a Bachelor of Planning Degree from Waipapa Taumata Rau – University of Auckland and a Diploma in Business Studies from Te Kunenga Ki Purehuroa – Massey University. I have been a full member of the New Zealand Planning Institute since 1996.

I have prepared expert evidence for resource consent applications, fast-track applications, proposed district and regional plans, and have appeared as an expert witness before consent authorities and the Environment Court on multiple occasions.

Preparation in Accordance: I confirm that I have read the Environment Court Practice Note 2023 – Code of Conduct for Expert Witnesses ([Code](#)), and have complied with it in the preparation of this memorandum. I

with the Code of Conduct: also agree to follow the Code when participating in any subsequent processes, such as expert conferencing, directed by the Panel. I confirm that the opinions I have expressed are within my area of expertise and are my own, except where I have stated that I am relying on the work or evidence of others, which I have specified.

Signature: *Nadine Perera*

Date: 29 April 2026

3.0 Executive Summary / Principal Issues

Auckland Transport (AT) considers that, based on the information currently available, the Project does not yet demonstrate that its adverse transport impacts can be appropriately avoided, remedied, or mitigated. Significant elements of the transport network required to support the development remain unresolved, and key information necessary to assess the adequacy of the proposed transport outcomes has not been provided.

The additional information requested of the applicant through the council engagement process—particularly relating to transport infrastructure design and delivery, stormwater interfaces and culvert design, bus operational requirements, paper road formation, road-stopping implications, and the integration of the development with both the remaining paper road and the Ara Hills network—is essential for AT to determine whether the transport impacts of the Project can be managed to an acceptable level. Much of this information cannot be addressed through consent conditions alone and may require substantive design changes.

In the absence of this information, AT cannot confirm that the transport infrastructure required to support the development will be delivered in a manner that aligns with Council’s funding and investment priorities. Should essential infrastructure not be provided by the developer, the cost burden and associated service level implications would fall to Council and future residents—an outcome that is considered unacceptable.

While the Project is out of sequence with the Future Development Strategy (FDS), the FDS does allow for consideration of unanticipated or out-of-sequence development where it does not adversely impact Council’s funding and investment priorities. At this stage, AT is unable to conclude that these requirements are met.

Accordingly, AT **opposes the Project at this time**. However, subject to the applicant providing the required further information and redesign where necessary, and the subsequent incorporation of mitigation measures and development thresholds via appropriately worded conditions, and an agreement between the applicant and Council being put in place for the applicant to deliver and fund the Grand Drive link there remains potential for the outstanding transport matters to be addressed.

4.0 Documents Reviewed

The following documents have been reviewed in preparing this memorandum:

4.1 FAST TRACK APPROVALS APPLICATION – EPA WEBSITE

- Delmore Assessment of Environmental Effects Report

Architectural

- Appendix 9 – Architectural Drawings Site Plans
- Appendix 9.1 – Architectural Memo Auckland Transport Response x2

Scheme Plans

- Appendix 10 – Stage 1 Scheme Plans
- Appendix 10 Stage 2 Scheme Plans

Transportation and Water Management

- Appendix 24.1 – Auckland Transport Response
- Appendix 24 – Integrated Transport Assessment
- Appendix 25 - Roading and Access Report
- Appendix 26 – Roading Drawings Stage 1
- Appendix 26 - Roading Drawings Stage 2
- Appendix 27 – Water, Wastewater and Utilities Report
- Appendix 28 – Water, Wastewater and Utilities Drawings
- Appendix 32.1 – Stormwater Peer Review
- Appendix 32 – Stormwater Report
- Appendix 44 - Proposed Conditions
- Appendix 45 - Indicative Timeline
- Appendix 48 – Paper Road Strategy.

4.2 ADDITIONAL INFORMATION SUPPLIED BY THE APPLICANT TO COUNCIL AND FORWARDED TO AT

16 April 2026 – Transport

- Auckland Transport Response Memo received 16 April 2026
- Attachment 2 – Russell Road Upper Ōrewa Road Upgrade
- Attachment 3 – Long Section Road 2

17 April 2026 - Stormwater

- AT Stormwater Response Memorandum (Applicant Comment on AT Stormwater Response Memorandum-appended),
- McKenzie & Co Drawings 3725-0-4500 and 3725-0-4540, Drawing Set series 3725-0-4610, Drawing series 3725-1-4800,
- McKenzie and Co Flooding Report,

- McKenzie Stormwater report,
- McKenzie and Co Technical Memo – Internal OLFP Analysis.

20 April 2026

- Updated Drawing Set
 - Appendix 10A – Stage 1 Scheme Plans
 - Appendix 10B – Stage 2 Scheme Plans
 - Appendix 26A – Stage 1 Rooding and Access Drawings
 - Appendix 26B – Stage 2 rooding and Access Drawings
 - Appendix 33 – Stormwater Drawings Part 1, 2, 3, 4, 5 and 6
- Updated Conditions

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

N/A

6.0 Specialist Assessment

OVERALL SUMMARY OF AUCKLAND TRANSPORT (AT) POSITION

6.1 THE PROJECT

Vineway Limited ('the applicant') seeks approval under the Fast-Track Approvals Act 2024 ('FTAA') to construct a comprehensively planned mixed use urban development across 109.18 hectares of land at 88, 130 and 132 Upper Ōrewa Road and 53A, 53B and 55 Russell Road, Ōrewa. The development is intended to be known as 'Delmore' and is a listed project in Schedule 2 of the FTAA. The Project will deliver:

- Up to 1,213 residential lots, comprising a mixture of dwelling types;
- Rooding and transport infrastructure, including a significant portion of the arterial road known as the AT Designation 14108 (New connection between Milldale and Grand Drive);
- An on-site wastewater treatment plant, and on-site water supply and treatment (in the event that connection to the public networks cannot be provided due to capacity constraints); and
- Paper road stopping under the Local Government Act 1974.

6.2 LOCATION CONTEXT

The Project adjoins the existing Ara Hills Development to the east and is in close proximity to the Milldale Development to the south, being constructed in stages. The Project involves transport upgrades to the area.

The land is zoned as Future Urban and is currently included in Auckland Council's Future Development Strategy 2023 (FDS) as being ready for urbanisation after 2050. Accordingly, the Project seeks consent for the development of this land out of sequence with the FDS.

6.3 TRANSPORT INFRASTRUCTURE DELIVERY

The Project involves several transport network upgrades including partial delivery of AT Designation 14108 (New connection between Milldale and Grand Drive) that bisects the site as an arterial, a further collector route from Grand Drive through to Upper Ōrewa Road, and various upgrades to surrounding transport infrastructure.

Specifically, the Project involves full build out of the arterial road for a portion of the 14108 designation; an alternative collector road route to be used until the remainder of the designation is built (the southern part connecting to Upper Ōrewa Road); active mode linkages within and beyond the site; consideration of bus operation design requirements; and various downstream intersection and roading upgrades. The provision of this intended transport network infrastructure is to some extent an improvement from the original fast-track application and the provision is supported by AT to enable the development. The inclusion within the Project of further transport network mitigation works and development thresholds through a redesign of aspects of the proposal and consent conditions goes some way to addressing the adverse impacts relating to transport.

However, there remains a transport infrastructure deficit in both delivery and funding in relation to the provision of access to the site. The Project does not involve the portion of Designation 14108 linking the project site to the recently delivered portion of Grand Drive in the north that is part of the Ara Hills development. This part of the designation comprises legally vested road together with a portion in private ownership with the constructed portion terminating prior to the project site boundary. Without the delivery of the arterial connector link to Grand Drive (the link) which forms part of designation 14108 there is no practical or physical access to the site from Grand Drive. The applicants Integrated Traffic Assessment (ITA) (refer applicant lodged Appendix 4) notes this deficiency and suggests that an interim road could provide the connection to Grand Drive. The interim road is not consistent with the indicative design for designation 14108 or the portion of the designation within the site that is being delivered by the Project. In any case given that the interim road is not part of the Project, additional resource consents will need to be obtained by the applicant.

Given there is no certainty over the delivery of the link as additional resource consents need to be sought, AT would only be supportive of a condition seeking that the link is delivered prior to titles being issued if the arterial road being delivered is to be the intended indicative designation design and not an interim alternative. This indicative design is depicted on the project drawings although it does not form part of the current Project.

The designation provides for route protection only of a 2 lane arterial with a lapse period of 30 years. The indicative alignment with active modes on each side was lodged with Council as part of the statutory Notice of Requirement (NoR6) which was then confirmed as Designation 14108. The delivery (construction and land acquisition) of the arterial route protected by the designation is currently unfunded.

The link is necessary to provide access to the site and is the only access to Stage 1. Intended project staging from east to west is dependent on the link being in place prior to titles being issued for Stage 1. A condition was suggested by the applicant to this effect. AT through the engagement process sought amendments to the condition to ensure that the road to be delivered encompasses the indicative alignment. This was based on AT Subject Matter Expert (SME) Transport Infrastructure analysis (Appended and listed in section 10 of this response)

which has determined that the alternative alignment advised by the applicant is not workable and will have major transport impacts that cannot be mitigated.

The deficiencies in the interim design as outlined in the PTM Memo comprise:

- It is not clear how the temporary road can be rebuilt with the permanent designation layout at a later date without closing it for a protracted period.
- Front and back berms have been removed. Potential effects; loss of amenity – discourages active modes as a travel choice. Absence of buffer between carriageway and cycleways/footpaths increases crash risk for pedestrians somewhat. Absence of buffer between the shared path and handrail on top of the retaining wall on the north side means that there is less usable space for cyclists resulting in a risk of handle bars or peddles getting caught on the barrier. Streetlight poles (and potentially other service poles or cabinets) will need to go in the footpath / shared path rather than the berm.
- 3m wide shared path replaces two-way separate offroad cycle path and separate footpath on the north side. Potential effects; increased risk of collision between cyclist and pedestrian. Some pedestrians may be less willing to use this path due to perceived risk of a collision with a cyclist. Note that a 3m wide shared path would need a departure from standards as it does not conform to the Auckland Transport's Transport Design Manual.
- Flush median removed. Potential effects; reduced separation between opposing traffic lanes means increased risk of head-on type crashes. Vehicles turning right into the vehicle crossing on the north side must wait in the westbound lane blocking it, resulting increased delays and increased rear-end crash risk.
- The drawings show a retaining wall on the north side which would become an Auckland Transport asset to maintain. A barrier able to restrain both errant vehicles (road safety barrier) as well as being able to prevent falling from heights Memorandum for pedestrians and cyclists will be needed but is not indicated on the drawing provided by the applicant.
- On the south side a batter slope is shown next to the footpath with gradients ranging from 1 in 3 to 1 in 1 (reinforced earth). This will need a similar barrier to the north side. It is not clear if the applicant has included space for the barrier.
- The drawings show a vehicle crossing which clashes with a proposed retaining wall for the temporary layout.

Information received to date is that the applicant will only now agree to the condition on the basis that ATs agrees to acquire the portion of land needed to construct the full road width.

There is no Council funding available for the delivery of the link to the site. Compulsory acquisition which would be undertaken on behalf of the applicant is subject to Public Works Act procedures. Any compulsory acquisition and subsequent construction pursuant to the Public Works Act would need to be 100% funded by the applicant. Whilst negotiations are ongoing there is currently no agreement in place for the Developer to deliver or fund the link. The Project lacks certainty over delivery and funding of construction works and land acquisition needed for the link. It also does not adequately document the works associated with the southern interface of the arterial road being delivered and the remaining portion of the designation through to Upper Ōrewa Road. The resultant adverse impacts on the transport network are significant. The proposal in its current form is considered to hinder the future delivery of Designation 14108. AT is unlikely to grant s176 approval for those project works needing to be carried out within the designation.

6.4 APPLICANT ENGAGEMENT PROCESS

Since the application was lodged and available for viewing on the Fast Track website Auckland Transport (AT) has through Auckland Council (AC) been part of an ongoing engagement process with the applicant.

ENGAGEMENT HAS INVOLVED THE FOLLOWING:

- **AT Subject Matter Experts (SME) reviewing** lodged technical transportation documents outlined in section 4.0 above.
- **AT Transport SME attending meetings** with the applicant on 13, 18 and 23 March 2026.
- **Receipt of an updated Auckland Transport Response Memo** from the applicant on 19 March 2026 containing:
 - Additional AT and applicant comment,
 - Matters, where there is agreement between AT and the applicant,
 - Matters where the applicant has confirmed they will provide additional information in relation to:
 - Integration of the site with the Ara Hills Development.
 - Updated roading drawings involving redesign of certain aspects of the Project's roading design and vehicle tracking information
- **Draft SME comment from AT** forwarded to AC on 27 March which AC then forwarded onto the applicant. This comment outlines:
 - That the additional information outlined in 6.4.3 above is yet to be provided by the applicant.
 - Key areas where additional information is needed to assess the adequacy of key transport outcomes and whether the transport impacts of the Project can be managed to an acceptable level. The additional information requested of the applicant relates to:
 - Transport infrastructure design,
 - Stormwater interfaces and culvert design,
 - Bus operational requirements,
 - Paper road formation and road-stopping implications, and
 - Integration of the development with both the remaining paper road and the Ara Hills network.
 - Amendments to certain conditions, and
 - Imposition of additional conditions (actual wording and subject areas where further conditions may be needed pending the availability of additional information).
 - AT's position is that, based on the information available at the time this previous response was prepared, the Project does not yet demonstrate that its adverse transport impacts can be appropriately avoided, remedied, or mitigated. Significant elements of the transport network required to support the development remain unresolved, and key information necessary to assess the adequacy of the proposed transport outcomes has not been provided.

- **Additional applicant technical transport infrastructure information** (detailed in section 4.2 above) including the Applicant Transport Response Memo was then received by AT on 16 April with updated drawings available for AT review on 20 April. This information covered some of the information deficits outlined in section 6.4.4 above. However, the applicant advised that additional information/analysis/drawings are to be forwarded by 11 May. This is after this response is to be forwarded to the Panel.
- **Ongoing Stormwater engagement with the applicant.** Detail of the specific additional information needing to be reviewed was requested from the applicant by AT's stormwater SME Sean Pearce of Awa Consultants on 14 April 2026 (Appended). Additional applicant stormwater information was then made available to AT on 17 April (appended), and a meeting was held with the applicant on 21 April. A further email from Mohammed Sahim of AT outlined additional information requirements necessary for culvert/dam assessments was sent to the applicant SME on 23 April (appended).

6.5 FURTHER MATTERS NEEDING TO BE ADDRESSED BY THE APPLICANT.

Significant technical information was not available for review prior to this response being completed. The Applicant has advised that further information is to be provided on May 11. This is after the statutory time frame for comment to be made to the EPA. It is not known if this additional information will be adequate to address outstanding transport infrastructure delivery and design issues.

The outstanding matters where additional information and drawing amendments should be provided by the applicant for AT's review involve:

- **Stormwater Management** and Culvert Design as outlined in the appended emails of Sean Pearce of Awa dated 14, April, 22 April, 23 April 2026, and the email of Mohammed Sahim of AT dated 23 April.
- **Transport Infrastructure** as outlined in the appended memos of:
 - Paul Schishka of PTM Consultants dated 28 April 2026 (PTM Memo)
 - Craig Richards of Beca dated 22 April 2026
 - Rob Mason of Beca dated 22 April 2026
 - Kang Hang (AT SME) dated 21 April 2026.
- **Integration of the Projects partial delivery of Designation 14108** and future designation works.
- **Bus-stop** requirements and indicative locations detailed on the applicant drawings to be amended as outlined the PTM memo. Noting there is slight amendments to the indicative locations outlined in the email and PowerPoint of Steve Wren of AT dated 17 March 2026 (appended).
- **Staging and Paper Roads / Road stopping.** The timetabling/staging of road vesting should ensure that alternate access along a vested or paper road is provided where portions of paper road are to be stopped and that adequate paper road widths are available for linkage of proposed road to remaining paper road corridors as outlined in the Email of Irene Tulloch of AT dated 23 April 2026. It is noted that road stopping approval occurs outside the resource consenting process however this issue should be considered by the applicant to ensure future changes to any approved consent, additional or new consents are not needed.
- **Integration of the site with the remaining Paper Road and Ara Hills Development.** This should include frontage upgrades to the paper road, including provision of an active mode path and potentially vehicular access.

- **Active Modes to Future School** there is no provision within the application material for active modes to enable future residents to access the intended school on Upper Ōrewa Road. This school is likely to encompass both a primary and secondary school and although the land is not yet designated planning is well advanced. Refer Ministry of Education Memorandum (appended) outlining information within the public realm.

6.5 CONDITION REVIEW

Section 9.0 of this response, specifically sections 9.1, 9.2 and 9.3 outline additional conditions needing to be imposed, amendments to conditions and areas where further conditions may be necessary once additional information outlined in sections 6.3, 6.4 and 6.5 of this response is provided. Section 9.4 outlines specific conditions supported by AT.

6.6 OVERALL AT RESPONSE

In the absence of all necessary information being provided and reviewed for acceptability and, based on the information currently available, AT does not consider that adverse transport impacts have been appropriately mitigated and is unable to support the Project at this time. The lack of provision of the transport infrastructure for which additional information is sought will, if not provided, negatively impact Council's funding and investment priorities. Where needed infrastructure is not provided by a developer, future residents may have a reduced level of service with funding gaps that may need to be met by Council. In such instances development is considered unacceptable.

Although the proposed development is out of sequence, the FDS does enable consideration of scenarios where unanticipated and/or out of sequence development is appropriate provided there is no impact on Council's funding and investment priorities. There is no Council funding and no agreement with the developer to construct the link to Grand Drive, This creates a major transport infrastructure deficit in delivery and funding.

The inclusion within the Project of further transport network mitigation and development thresholds through additional information and consent conditions may, subject to review and provided an agreement between the applicant and Council is put in place for delivery of the Grand Drive link, address outstanding adverse impacts relating to transport.

7.0 Section 67 Information Gap

At the time of writing this Memo I have identified the information gaps outlined in section 6.3, 6.4 and 6.5 above. These comprise:

- Stormwater Management and Culvert Design
- Transport Infrastructure including active mode provision
- Bus-stops
- Staging and Paper Roads / Road Stopping
- Integration of the Projects partial delivery of designation 14108 and future designation works

- Integration of the site with the remaining Paper Road and Ara Hills Development.
- Consent conditions.

7.1 WHY THIS INFORMATION IS ESSENTIAL

The inclusion within the Project of further transport network mitigation and development thresholds through the provision of additional information by the applicant and the imposition of additional and amended conditions may, subject to review, address outstanding adverse impacts relating to transport. To determine whether this is the case, further response from the Applicant is required.

The specialist Subject Matter Experts (SME) analysis of the Project has ascertained that in many instances the additional information sought relates to detail that is unable to be conditioned and may necessitate the need for redesign of some aspects of the proposal.

The applicant has advised that information that they have already agreed to provide to AT SME'S may result in design changes. In this respect AT SME's will need to assess the design amendments once received.

For stormwater and culvert design Sean Pence in the email of 22 April (appended) has advised that design of the culverts cannot be conditioned and must be assessed due to the need to consider natural hazards and risks to the environment pursuant to the Fast Track Act Part 2 and Schedule 5.

The lack of provision of the transport infrastructure for which additional information is sought will, if not provided, negatively impact Council's infrastructure and funding priorities if it falls to Council to make provision for the required upgrades. The lack of provision of information relating to stormwater management and culvert design means that AT SME's are unable to adequately assess natural hazard risk and consequential impacts. With regard to Designation 14108 the uncertainties associated with the form of the Project at its interfaces with Grand Drive and the link to Upper Ōrewa Road can be considered to hinder the future delivery of the Project where adjacent sites are consented as a result of the Project.

The additional information is needed to enable AT to give consideration to the mitigation of adverse transport impacts, risks to the environment from hazardous installations (stormwater culverts), the impact of the Project on Council's funding priorities, and the overall acceptability or otherwise of the Project.

8.0 Recommendation

AT is awaiting receipt of significant information for review. This information in many instances is unable to be conditioned and may necessitate the need for redesign of aspects of the proposal. It is noted that the applicant has agreed to provide some of the additional information already. In the absence of this information being provided and available for review to determine acceptability or otherwise, then based on the information currently available AT is **opposed** to the Project.

9.0 Proposed Conditions

9.1 NEW CONDITIONS TO BE IMPOSED

- **Acoustic Insulation:** It is noted that the applicant has advised that acoustic insulation can be provided for dwellings located adjacent the **AT designation 14108** arterial road and that wording of a suitable condition is to be provided by the applicant for AT's consideration. The imposition of a suitable condition is supported by AT.
- **Active Mode Bridge over Grand Drive Interchange:** A condition is sought in the PTM Memo. The following condition wording is proposed:

Prior to section 224(c) certification for the first stage of the subdivision that is developed, the consent holder must provide evidence to Council that an active mode bridge connecting the Ara Hills Intersection to the signalized pedestrian crossing at Arran Drive has been constructed and is operational.

- **Active Mode Path to School.** A condition is sought in the PTM Memo. The following condition wording is proposed:

The consent holder must, at their own expense, construct a temporary off-road footpath (minimum 1.8m in width and an all-weather surface) along Upper Ōrewa Road between the intersection with Russell Road and the Ministry of Education site in Upper Ōrewa Road. This condition will become inoperable if the Ministry of Education site is not designated for use as a school site within two years of consent being granted.

- **Road 10 Turning Head:** A condition is sought in the PTM Memo. The following condition wording is proposed:

Before any dwellings adjacent to Road 10 are occupied the consent holder must, at their own expense, construct a vehicle turning head at the south end of Road 10 in accordance with the Auckland Council Code of Practice for Subdivision and Development Chapter 3 Transport.

9.2 Conditions to be Amended (condition numbering as set out in the applicant updated condition document appended).

- **Condition 98: AT designation 14108 Connection to Grand Drive.** As referenced in the PTM Memo amend condition 98 to read:

*Prior to section 224(c) certification for the first stage of the subdivision that is developed, the consent holder must provide evidence to Council that access **from the Grand Drive Interchange** to the site **in the form of a two-lane arterial with active modes on each side** has been constructed and is operational.*

- **Condition 99:** As referenced in The PTM Memo amend condition 99 to read:

Prior to the occupation of more than ~~573~~ 1325 dwellings in the Delmore site, Roads 5 and 17 must be constructed and operational and the intersection of Road 17 and Upper Ōrewa Road must be constructed as a single-lane roundabout and designed to achieve sight distances in accordance with Austroads Guide to Road Design Part 4B: Roundabouts Part 4B for 60km/h operating speeds.

- **Condition 101: Development Trigger.** As referenced in the PTM Memo amend Condition 101 to be replaced with the following:
 - 1) Once the Road 17 / Upper Ōrewa Road roundabout is operational, the Consent Holder must undertake traffic surveys and undertake additional assessment at the earlier of:
 - a) 12 months following the opening of the roundabout; or
 - b) Prior to the occupation of 1,450 dwellings.
 - 2) The traffic surveys must be undertaken at the State Highway 1 / Grand Drive motorway interchange by a suitably qualified traffic engineer and must include, as a minimum:
 - a) Surveys undertaken over at least three separate weekdays, including both AM (6.00am to 9.00am) and PM (4.00pm to 7.00pm) peak periods, and excluding school and public holiday periods, including but not limited to the Christmas to New Years period. The surveys must be undertaken at least one week apart, and on different weekdays.
 - b) Measurement and recording of traffic volumes and queue lengths for all movements / lanes on all approaches to both of the roundabouts which constitute the interchange. Queue lengths should be recorded every three minutes with the longest length queue observed for each lane in the three minute interval recorded.
 - 3) Within 20 working days of completing the traffic surveys, the Consent Holder must provide to Council a Traffic Monitoring Report, prepared by a suitably qualified traffic engineer, that:
 - a) Summarises the results of the traffic surveys;
 - b) Includes an appendix with copies of all the data collected as part of the surveys; Memorandum
 - c) Assesses whether the Grand Drive interchange or any approach to the Grand Drive interchange is operating at Level of Service E or worse.
 - 4) Where the Traffic Monitoring Report identifies that the Grand Drive interchange is operating at Level of Service E or worse, the Consent Holder must:
 - a) Prepare a detailed design for mitigation in the form of a new 200 metre only left turn lane on Grand Drive the eastern approach to the interchange.
 - b) Consult with Waka Kotahi NZTA on the left turn lane design and undertake any changes to the design necessary to gain NZTA acceptance.
 - c) (c) Submit the left turn lane design to Council for approval within 20 working days of submitting the Traffic Monitoring Report. The assessment must include written confirmation from Waka Kotahi NZTA that it has reviewed the proposed design and considers it acceptable.
 - 5) The consent holder may propose alternative mitigation measures to the left turn lane but must provide detailed design drawings and assessment of the alternative mitigation prepared by a suitably qualified traffic engineer for the review of NZTA and Council. The left turn lane may be substituted but only upon mutual agreement, in writing, by the consent holder, Council, and NZTA.
 - 6) The Consent Holder must, at their own expense, implement the left turn lane under condition 101(4), or other mitigation measures, mutually agreed to by the Consent Holder, NZTA, and Council under Condition 101(5) as soon as practicable, and no later than 6 months following Council approval, unless otherwise agreed in writing by Council.

7) Additional traffic surveys and assessment, in accordance with Conditions 101(2) to 101(3) must be undertaken by the applicant prior to the occupation of 1,600 and 1,750 dwellings. If the assessment undertaken under Condition 101(3) identifies that the Grand Drive interchange or any approach to the interchange is operating at level of service E or worse, the Consent Holder must carry out the design, consultation, and mitigation works described in Conditions 101(4), 101(5), and 101(6)."

- **Condition 102:** As referenced in the PTM Memo amend to read:

The consent holder must provide new vehicle crossings to serve all residential lots. Vehicle crossings serving less than 10 dwellings are to be constructed **in accordance with the Auckland Council Code of Practice for Land Development and Subdivision Chapter 3 Transport as per the Auckland Transport Standard GD017A 1B or (VX0103 as per the TDM working draft, 14/02/20.**

- **Condition 106:** As referenced in the PTM Memo amend to read:

Prior to wastewater removal being required on Russell Road, the consent holder must **at their own expense** widen Russell Road **so that there is sufficient space for a 19.5m long truck and trailer tanker to pass a 6.3m long van travelling in the opposite direction with a minimum of 0.5m clearance between the vehicles and between the edge of the vehicles and the edge of the carriageway.** Road widening must also be undertaken at the intersection of Russell Road and Upper Ōrewa Road to ensure that a 19.5m long truck and trailer tanker can turn left from Russell Road onto Upper Ōrewa Road without crossing into the northbound traffic lane on Upper Ōrewa Road. This work must be in accordance with the **Auckland Council Code of Practice for Land Development and Subdivision Chapter 3 Transport** ~~as per tracking plans to accommodate wastewater collection vehicle~~

- **Condition 107:** As referenced in the PTM Memo amend to read:

Traffic calming measures shall be provided at 60m intervals on all local roads, **or in other such locations as approved by Auckland Council, and in accordance with the Auckland Council Code of Practice for Land Development and Subdivision Chapter 3 Transport.**

- **AT designation 14108 Termination Point:** The applicant proposes a new condition. AT suggests an addition as outlined in the PTM Memo so that the condition is to read:

A temporary turning head **with pedestrian path through to Upper Ōrewa Road** must be constructed at the termination point of the **AT designation 14108** arterial road within Stage 1 of the site in accordance with the Auckland Council Code of Practice for Land Development and Subdivision Chapter 3 Transport.

~~Advice Note: This should be in a form of a temporary asphalt turning head for vehicles only.~~

9.3 Additional Conditions / Amendments

Additional conditions / amendments may be needed once the additional information has been provided by the applicant and reviewed by AT. Likely additional condition subject matter includes:

- **Stormwater Management:** refer email of Sean Perce of Awa

- **Integration of the Projects partial delivery of designation 14108** and future designation works
- **Transport Infrastructure Matters** as outlined in the PTM Memo including:
 - **On and off-site road widening.**
 - **Pedestrian Access** from the turning head of **AT designation 14108** to Upper Ōrewa Road as outlined in the PTM Memo. A condition may not be needed if this is detailed on the drawings.
 - **Road 1 Cross Section and vehicle tracking:** to be the same as Roads 5 and 17 as outlined in the PTM Memo. A condition can only be imposed once the Project has been redesigned as it necessitates a wider road corridor width.
 - **Vehicle Tracking** to ensure compliance with condition 113 that sufficient road is vested to ensure compliance with the Auckland Code of Practice for Land Development and Subdivision Chapter 3 Transport and the requirements of condition 113
- **Vesting of the designated land** being part of proposed lot 5010 which includes the permanent road corridor for the portion of AT designation 14108 that lies on the subject land that is not being delivered as detailed in the PTM Memo.

9.4 Conditions supported by AT and set out in the updated condition document

The following conditions proposed by the Applicant are supported: 100(a)(b)(c)(d), 104, 110, 112, 135.

10.0 Supporting Documents

- **Stormwater Management and Culvert Design** as outlined in the appended emails of:
 - Sean Pearce of Awa dated 14, April, 22 April, and 23 April 2026.
 - Mohammed Sahim of AT dated 23 April.
- **Transport Infrastructure** as outlined in the appended responses of:
 - Paul Schishka of PTM Consultants dated 28 April 2026 (PTM Memo),
 - Craig Richards of Beca email dated 22 April 2026,
 - Rob Mason of Beca email dated 22 April 2026,
 - Kang Hang (AT SME) email dated 21 April 2026,
- **Bus-stop** requirements and indicative locations detailed on the applicant drawings to be amended as outlined in the PTM Memo. Noting there is slight amendments to the indicative locations outlined in the attached email and PowerPoint of Steve Wren of AT dated 17 March 2026.
- **Staging and Paper Roads / Road stopping.** As outlined in the email of Irene Tulloch of AT dated 23 April 2026.
- **Ministry of Education Memorandum** by Chris Horne of Incite dated 16 April 2026.
- **Applicant Documents:**
 - Amended Conditions
 - Comment on AT Stormwater Response Memorandum

Nadine Perera (AT)

From: Sean Pearce <sean.pearce@awa.kiwi>
Sent: Tuesday, 14 April 2026 14:02
To: shakti@fsconsulting.co.nz
Cc: Nadine Perera (AT); Mohammed Sahim (AT)
Subject: Delmore Fast Track Stormwater Matters

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Hi Shakti,

AT's stormwater comments on the Delmore Fast Track identified that while the Stormwater Report stated the culverts were designed to comply with the Stormwater Code of Practice, the calculations provided in Appendix B indicated otherwise. As a result, AT have requested further information on the culverts to ensure that they are designed to be compliant with the requirements of the Stormwater Code of Practice.

Flowstate Consulting have since confirmed that many of the culverts will be classified as Dams under the Building Act 2004 or the Building (Dam Safety) Regulations 2022.

To provide direction on what information is necessary for this Fast Track Application, this has been raised with AT's Principal Stormwater Engineer who has confirmed that the culverts cannot be conditioned, and full assessments of the culverts demonstrating compliance with the Stormwater Code of Practice, and therefore compliance with the Building Act 2004 and Building (Dam Safety) Regulations 2022 is required.

AT's Principal Stormwater Engineer is willing to meet with you and McKenzie & co to discuss this, which we can help to organise.

Kind Regards,



SEAN PEARCE

WATER INFRASTRUCTURE ENGINEER

a: Level 9, 4 Williamson Ave, Grey Lynn, Auckland 1021

Nadine Perera (AT)

From: Sean Pearce <sean.pearce@awa.kiwi>
Sent: Wednesday, 22 April 2026 11:25
To: Nadine Perera (AT)
Subject: RE: Delmore Stormwater

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Hi Nadine,

Based on my reading of the Fast-Track Act 2024 there are elements of the infrastructure proposed that can be conditioned. This includes:

1. the design of the roads;
2. road embankments; and
3. culvert collars.

This is because the design of these is unlikely to require a change in consent at later stages. However, the design of the culverts cannot be conditioned and must be assessed for the following reasons:

1. The consent may need to be changed at later stages. For example, if the culverts (inadvertent dams) are not assessed in the Fast-Track consent (or other Resource Consents) and are later found to be unsafe, then the consent granted (via either the Fast-Track Approvals Act, or Resource Management Act) may need to be changed by the consent holder. This can lead to frustrations from consent holders, and as such is better avoided by assessing culverts and overland flow paths in earlier stages.
2. The Fast-Track Approvals Act 2024 has sections that require risks to be assessed and included as part of their Assessment of Environmental Effects, and therefore cannot be conditioned. These include, but are not limited to:
 - a. Part 2 – Fast-track approvals process; 22 – Criteria for assessing referral application; (2)(a)(vii); For the purposes of subsection (1)(a), the minister may consider whether the project will support climate change adaptation, reduce risks arising from natural hazards, or support recovery from events caused by natural hazards.
 - b. Schedule 5 – Approvals relating to Resource Management Act 1991; 6 – Information required to assess environmental effects; (1)(b); The assessment of an activity's effects on the environment under clause 5(4) must include the following information: if the activity includes the use of hazardous installations, an assessment of any risks to the environment that are likely to arise from such use.
 - c. Schedule 5 – Approvals relating to Resource Management Act 1991; 7 – Matters to be covered in assessment of environmental effects; (g); The assessment of an activity's effects on the environment under clause 5(4) must cover the following matters: any risk to the neighbourhood, the wider community, or the environment through natural hazards or hazardous installations.

As the applicant has identified that 6 of the 12 proposed culverts will be inadvertent dams, and based on the above sections of the Fast-Track Act 2024; we believe that the applicant should investigate the risk of dam failure to demonstrate what hazardous conditions people may be exposed to.

During the meeting the applicant asked how many PIC assessments were required, noting that 6 of the 12 proposed will be inadvertent dams during a 1% AEP rainfall event. Mohammed requested that a single PIC assessment be provided; one that represents cascading failure of the dams. This is the most conservative type of assessment (in terms of over-estimating hazard), as it will assume that all inadvertent dams fail.

Kind Regards,



SEAN PEARCE

WATER INFRASTRUCTURE ENGINEER

a: Level 9, 4 Williamson Ave, Grey Lynn, Auckland 1021

From: Nadine Perera (AT) <Nadine.Perera@at.govt.nz>

Sent: Tuesday, 21 April 2026 1:56 pm

To: Sean Pearce <sean.pearce@awa.kiwi>

Subject: Delmore Stormwater

Hi Sean,

Further to this mornings meeting can you please provide detailed analysis as to why the provision of stormwater infrastructure can not be conditioned.

The developer SME's this morning stated that to have the information conditioned was a developer risk. But the management of stormwater is a council risk that is ongoing and is intensified once the developer has constructed the project. Once the project is finished the developer risk is at an end.

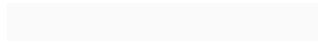
Kind Regards,

Nadine Perera | Principal Planner

Strategic Development Partnerships | Built Environment and Place

Auckland Transport

Level 4, 20 Viaduct Harbour Avenue, Auckland 1010



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Nadine Perera (AT)

From: Sean Pearce <sean.pearce@awa.kiwi>
Sent: Thursday, 23 April 2026 18:17
To: Nadine Perera (AT); Andy Irwin (AT); Traffic Engineering (AT); Rob.Mason@supportinggrowth.nz; Bethany Park (AT); Putri Kusumawardhani (AT); Katherine Dorofaeff (AT); Steve Wrenn (AT); Andrew McGill (AT); Paul Schischka; Jimin Hong (AT); Jubin Gautam (AT); Craig Richards; Irene Tulloch (AT); Tania Steen (AT); Alayna Fiatau (AT); Kang Han (AT); Traffic Engineering NorthWest (AT); Adrian Grant (AT); Saul Vingrys (AT)
Cc: Tessa Craig (AT); Hedre Dednam (AT)
Subject: RE: Delmore Fast Track #2 - EPA Panel Formal Request for Comment
Attachments: AT Stormwater Response Memorandum.docx

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Hi Nadine,

We have reviewed the applicant's response to our Stormwater items in the attached document, and their updated drawings. Please find our response below, combined for both reviews. We note that our response is not finalised as we are awaiting the applicant's response for the culverts, and that Carly is aware of this as per her email on Monday the 20th (at 5:02 pm).

Comment 1 (AT comment starting "Section 10.3..."):

- Response: Noted, this can be closed.

Comment 2 (AT comment starting "It appears that only the NZTA..."):

- Response: Please provide an assessment of the depth-velocity in the road. It is noted that several roads have the "very high hazard" classification in drawing 3725-0-4537.

Comment 3 (AT comment starting "It is not clear where the inflow notes..."):

- Response: It is noted that the annotations for the catchments appears to block the inflow nodes. Please clearly demonstrate where the inflow nodes for the subcatchments are located.

Comment 4 (AT comment starting "While the Flood Assessment..."):

- Response: Noted, this can be closed.

Comment 5 (AT comment starting "1. It is not clear what the Culvert Plans..."):

- Response: Noted, this can be closed.

Comment 6 (AT comment starting "3. It is not clear what the culvert dimensions..."):

- Response: Noted, this can be closed.

Comment 7 (AT comment starting "4. Section 10..."):

- Response: Item on hold pending dam assessment.

Comment 8 (AT comment starting "5. It appears that..."):

- Response: Item on hold pending dam assessment.

Comment 9 (AT comment starting "6. It is not clear..."):

- Response: Noted, this can be closed.

Comment 10 (AT comment starting "7. It is not clear if fish passage..."):

- Response: Noted, please demonstrate compliance with fish passage requirements.

Comment 11 (AT comment starting "8. It appears that not all culverts..."):

- Response: Noted, item can be closed.

Comment 12 (AT comment starting "9. It is not clear how many culverts..."):

- Response: Please provide access longsections, of the access and clarify what the width of the access tracks is.

Comment 13 (AT comment starting "10. OLFP..."): Response:

- Response: Please clarify if the TUFLOW model has been reviewed by Healthy Waters. It is noted that the previous OLFP assessment had sections of roads with depth-velocity products exceeding 0.4 m²/s, however the new drawings and assessment do not report this. Please clarify why this has changed.

Comment 14 (AT comment starting “2. The OLFP section...”):

- Response: Please clarify if the TUFLOW model has been reviewed by Healthy Waters. It is noted that the previous OLFP assessment had sections of roads with depth-velocity

Comment 15 (AT comment starting “3. In the OLFP drawings...”):

- Response: Please clarify if the TUFLOW model has been reviewed by Healthy Waters.

Comment 16 (AT comment starting “4. There is currently no...”):

- Response: Please clarify if the TUFLOW model has been reviewed by Healthy Waters.

Kind Regards,



SEAN PEARCE

WATER INFRASTRUCTURE ENGINEER

a: Level 9, 4 Williamson Ave, Grey Lynn, Auckland 1021

From: Nadine Perera (AT) <Nadine.Perera@at.govt.nz>

Sent: Tuesday, 21 April 2026 10:52 am

To: Andy Irwin (AT) <Andy.Irwin@at.govt.nz>; Traffic Engineering (AT) <TrafficEngineering@at.govt.nz>; Rob.Mason@supportinggrowth.nz; Bethany Park (AT) <Bethany.Park@at.govt.nz>; Putri Kusumawardhani (AT) <Putri.Kusumawardhani@at.govt.nz>; Katherine Dorofaeff (AT) <Katherine.Dorofaeff@at.govt.nz>; Steve Wrenn (AT) <Steve.Wrenn@at.govt.nz>; Andrew McGill (AT) <Andrew.McGill@at.govt.nz>; Paul Schischka <Paul.Schischka@ptmconsultants.co.nz>; Jimin Hong (AT) <Jimin.Hong@at.govt.nz>; Jubin Gautam (AT) <Jubin.Gautam@at.govt.nz>; Craig Richards <craig.richards@beca.com>; Sean Pearce <sean.pearce@awa.kiwi>; Irene Tulloch (AT) <Irene.Tulloch@at.govt.nz>; Tania Steen (AT) <Tania.Steen@at.govt.nz>; Alayna Fiatau (AT) <Alayna.Fiatau@at.govt.nz>; Kang Han (AT) <Kang.Han@at.govt.nz>; Traffic Engineering NorthWest (AT) <TrafficEngineeringNorthWest@at.govt.nz>; Adrian Grant (AT) <Adrian.Grant@at.govt.nz>; Saul Vingrys (AT) <Saulius.Vingrys@at.govt.nz>

Cc: Tessa Craig (AT) <Tessa.Craig@at.govt.nz>; Hedre Dednam (AT) <Hedre.Dednam@at.govt.nz>

Subject: RE: Delmore Fast Track #2 - EPA Panel Formal Request for Comment

Good morning,

Updated drawings have been provided by the applicant. Please refer the following link emailed separately (attached).

Please note comment is needed by Friday 24 April

Kind Regards,

Nadine Perera | Principal Planner

Strategic Development Partnerships | Built Environment and Place

Auckland Transport

Nadine Perera (AT)

From: Mohammed Sahim (AT)
Sent: Thursday, 23 April 2026 12:52
To: Shakti Singh; Sean Pearce
Cc: pranilw@fsconsulting.co.nz; Nadine Perera (AT); James Kitchen
Subject: RE: Delmore Fast Track Dam Meeting

Importance: High

Hi Shakti,

Draft SoW for dam assessment refers. Please include comments as suggested on email below, in blue colour and italics.

Please note, further technical details pertaining to inadvertent dams (road embankment) and culvert under new roads will be reviewed at EA.

Regards

Mohammed

From: Shakti Singh <shakti@fsconsulting.co.nz>
Sent: Wednesday, 22 April 2026 4:03 pm
To: Mohammed Sahim (AT) <Mohammed.Sahim@at.govt.nz>; Sean Pearce <sean.pearce@awa.kiwi>
Cc: pranilw@fsconsulting.co.nz; Nadine Perera (AT) <Nadine.Perera@at.govt.nz>; James Kitchen <james@mckenzieandco.co.nz>
Subject: Re: Delmore Fast Track Dam Meeting

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Hi Mohammed and Sean,

Thank you for meeting with us on Tuesday. As discussed, I have developed the scope of work for the dam assessment required for the fast-track application. Could you please review the following and suggest any necessary changes?

- A dam classification *assessment will be completed* in line with the NZSOLD 2024, Building Act 2004 and NZ Building Dam Safety Regulation 2022 requirements. The brief assessment identified 6 out of 12 culverts as 'classifiable dams.' Based on Tuesday's discussion, the memorandum will be updated to replace all reference of 'classifiable dams' with 'inadvertent dams'.
- *Memorandum needs to be updated to include illustrated cross sections for each dam showing heights, stored reservoir, and flood levels at various ARI's (note, use culvert completely blocked scenario for volume calc).*
- *A detailed potential impact classification (PIC) reports meeting all the requirement of NZSOLD 2024 is required for the fast-track application.*
 - I note that some identified 'inadvertent dams' have catchments too small for runoff to realistically approach the embankment crest level. We will address this in the report to provide a transparent view of the actual site constraints.

Dam-Break assessment

- Undertake a dam break assessment for the culverts identified as 'inadvertent dams' as per NZSOLD 2024 and AT discussions. This includes
 - Simulation of a Post-development model scenario to establish a base-case scenario.
 - Simulation of a scenario which allows for a 'rainy-day' and 'cascade' failure scenario:
 - A 100-year (+3.8°C) storm event, assuming culverts to be fully operational (or 0% blockage).
 - A 1000-year ARI storm event, assuming culverts are partially or completely in operational.
 - *Simulation to include guidance (storm events to consider) in accordance with NZSOLD 2024 when assessing dam breach.*
- Undertake a PIC assessment (to be completed by *Chartered Geotechnical engineer, specialised in SW management dams*) and categorize the risk of 'dam break'.
- Evaluate the risk to the lots/roads under the above-mentioned scenarios and recommend likely mitigation measures (if required) to reduce the likelihood and consequence of 'dam break'— this will be pursued during the EPA stage. *Note, likely new lots affected by the potential flood inundation arising from dam breach will be need to be protected and will require “registering consent notices on titles”.*
 - This will also include *Chartered Geotechnical/Dam Engineers* insights and commentary.
- Identify safety-egress routes for all areas in the development.
- Optional: Undertake additional scenarios to further include the existing NZTA culvert in the 'dam break' assessment.
- *Provide PIC providing parameters, assumptions, findings, dam locations, sections and flood level details and SW Flood modelling.*
- Provide a technical memorandum providing parameters, assumptions, findings and recommendations for the assessment.

As noted above, we will seek consent conditions to address any *low/medium/high risks dams* identified through the assessment that will be pursued during the EPA stage. The report will include commentary on the likely measures available to reduce hazard severity.

Thanks and kind regards,



Shakti Singh - Senior Engineer
BEngTech, CPEng, CMEngNZ

www.fsconsulting.co.nz

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Memorandum

To: Nadine Perera | Principal Planner | Strategic Development Partnerships | Built Environment and Place | Auckland Transport

From: Paul Schischka | Consultant Transportation Engineer | PTM Consultants

Date: 28 April 2026

Subject: Delmore Residential Subdivision Second Fast Track Application Transport Assessment

Revision: 4

This memorandum contains my road safety / traffic engineering specialist review comments on the second Delmore fast-track application.

The proposed Delmore residential development, located in the Wainui / Orewa area north of Auckland contains approximately 1,213 new houses, new roads to vest, and has an overall area of around 109 hectares.

I have reviewed the application documents supplied by the applicant. The documents most pertinent to my review are;

- The Integrated Transportation Assessment (ITA) report prepared by Commute Transportation Consultants (Commute) dated 23 December 2025.
- The roading drawings prepared by McKenzie and Co. dated April 2025.
- The Upper Orewa Concept Structure Plan dated December 2025 (author not stated).
- Additional traffic engineering drawings provided on 19 March 2026, 17 April 2026, and 21 April 2026.
- Design for temporary road connection between the Delmore site and Grand Drive.
- Appendix 9.1 Auckland Transport Response Memo, amended version including responses from the applicant up to 18 March 2026.
- Appendix 25 Roding and Access Report
- Appendix 44 Proposed Conditions of Consent.
- Appendix 47.1 Draft Construction Management Plan.
- Auckland Transport Response Memorandum dated 16 April 2026, prepared by Leo Hills of Commute ("The 16 April 2026 Commute memo").

As part of the review of the first Delmore application I visited the site on 14 May 2025 in a joint site visit with Auckland Transport, Auckland Council, the applicant and their advisors.

Executive Summary

- A. I consider that residents of the proposed residential subdivision are likely to be dependent on the use of private motor vehicles as a mode of transportation. Several of the local roads within the subdivision have steep gradients which discourage walking and cycling. The challenging topography of the site makes it impractical to achieve higher densities. While there is a small planned commercial development within neighbouring the Ara Hills development, there are no supermarkets or larger retail developments within a practical walking distance. There are no schools within practical walking distance.

Memorandum

- B. There is presently no safe active modes route from the development across the SH1 / Grand Drive motorway interchange. My understanding is that the neighbouring Ara Hills developer is required to build a connection as a condition of their consent, but to my knowledge there is no firm date for construction of this to commence. I recommend that a condition of consent is sought for the proposed Delmore subdivision requiring that a safe active modes link across the motorway be provided before any dwellings are occupied.
- C. The applicant's trip generation assessment is based on a medium design residential rate. I consider that, due to most dwellings in the sub-division being standalone and the likelihood that the development will be highly car dependant, that actual trip generation rates will be higher.
- D. To address potential delay and congestion effects at the Grand Drive motorway interchange and surrounding road network the applicant proposes to provide an alternative route in the form of a connection between the development and Upper Orewa Drive. The applicant's proposed condition 99 controls the number of dwellings threshold for when the link must be provided. I consider that there is insufficient modelling in the ITA to confirm that this threshold is appropriate. I have suggested alternative wording for the condition.
- E. The applicant's proposed condition 101 would require them to undertake traffic monitoring and construct a new left turn lane on the eastern side of the SH1 / Grand Drive interchange if the monitoring identifies an unacceptable level of service on any approach. I consider that the wording proposed by the applicant does not require sufficient monitoring to confirm whether or not there is a problem at the interchange and I have suggested alternative wording for the condition.
- F. The applicant has proposed that the link to development will be via a new roundabout at the intersection of Road 17 and Upper Orewa Drive. I consider that this is an appropriate form for the intersection to take, but note that the roundabout design provided lacks information like vehicle tracking, sight distance assessment, and 3D design which would allow a full review. Nonetheless, there is nothing in the limited information provided to date which indicates that an appropriate intersection design cannot be provided.
- G. The applicant proposes to upgrade the Wainui Road / Upper Orewa Road intersection to provide a right turn bay for the turn into Upper Orewa Drive in order to mitigate potential road safety effects due to an increased volume of turning traffic at the intersection. They also propose to construct one metre wide sealed shoulders on Upper Orewa Drive for similar reasons. I consider that the section of Wainui Road east of Upper Orewa Drive should also be upgraded to mitigate potential road safety effects and the applicant is proposing this under Condition 100(b).
- H. There a pre-existing issue at the Russell Road / Upper Orewa Road intersection relating to limited driver sight distances for drivers turning right into Russell Road which the proposal could exacerbate by increasing the volume of traffic using Upper Orewa Road. The applicant has proposed upgrades at this intersection which I consider will mitigate the potential road safety effects under proposed Condition 100(d).
- I. The proposed subdivision has a road hierarchy of arterial roads, collector roads, and local roads broadly in line with the Upper Orewa Concept Structure Plan, which I consider to be generally acceptable. However, Road 1, which is a collector road, lacks the separated cycle facilities which are proposed on the other collector roads (Roads 5 and 17). I anticipate that Road 1 will carry a high traffic volume once the future urban zone land to

Memorandum

the south is urbanised, as show on the structure plan, and that cycling facilities will be needed in this road to manage potential effects on cyclists.

- J. The vehicle tracking drawings for some of the horizontal curves within the new road network indicate that there is insufficient space for vehicles to pass a rubbish truck coming in the other direction. Addressing this will require carriageway widening near the curves which could have an impact on the width of the road reserve. To mitigate the potential traffic safety and operational effects I recommend that a condition of consent is sought requiring that sufficient carriageway space be provided to allow vehicle tracking which complies with the Auckland Council Code of Practice for Land Development and Subdivision Chapter 3 Transport without the footpath or berm widths going below the minimums in the code. The applicant has agreed to do this as proposed Condition 113.
- K. The applicant has provided a sight distance assessment in the form of drawings for selected intersections and vehicle crossings serving jointly owned access lots (JOAL). These drawings show that in order to provide safe driver sight distances at some of the intersections or JOALs that certain areas of some of the residential lots adjacent to the road must be kept clear of low level planting or structures. In some cases these areas are only relatively small parts of the lot and I consider that in these cases the potential traffic safety effects could be mitigated with a consent notice on the title of the lots requiring these areas to be kept clear of high structures or planting.
- L. In other cases the area which would need to be kept clear is comprises a significant proportion of the overall lot and a consent notice could potentially prevent a dwelling being built on the lot. In these cases I recommend that the proposed development be redesigned to address the potential traffic safety effects by adjusting lot boundaries or moving vehicle crossings to locations to positions where driver sight lines are sufficient.
- M. The site will have a temporary wastewater treatment plant until such a time as it can connect to the Watercare network. Regular tanker access is needed between the east end of Russell Road and the south end of Road 1 to service this plant. This tanker is approximately 19.5m long, and will consist of a truck or trailer similar to a milk or petrol tanker. The applicant has provided a report showing that widening of the carriageway is needed in three places on Russell Road to facilitate use of this road by the tanker. Condition 106, which relates to this widening, has insufficient detail and I have recommended alternative wording.
- N. Recently land connecting the Delmore site to Grand Drive has been vested as road, however this land does not cover the same area as the NOR 6 designation and it is not possible to build the NOR 6 in accordance with the drawings provided with the designation in the land vested. The applicant has provided a design for a temporary connection road between their site and Grand Drive. I consider that this design will have potentially significant effects on traffic and pedestrian operations and safety. Reconstructing this section of road as the permanent layout at a later date when land becomes available would cause significant disruption for the occupants of any dwellings within the Delmore site which were occupied.
- O. The applicant has stated that is their *"intention is to provide the full roading width, notwithstanding this will require Auckland Transport to acquire the additional land required to construct it."* Should this occur it would need to be 100% funded by the applicant and because it would be subject to a statutory process under the Public Works Act Auckland Transport cannot confirm if the land can be acquired until the process is gone through.

Memorandum

- P. I consider that it is not necessary to connect the NOR 6 Road through to the intersection of Upper Oweria Road and Russell Road as part of the proposed subdivision provided that the measures proposed by the applicant, including a connection between Road 17 and Upper Oweria Road and upgrading Upper Oweria Road are undertaken. A turning head is now proposed the south end of the NOR 6 Road. The NOR 6 Road will eventually need to be connected through but this can happen when the land to the south of Delmore is urbanised.
- Q. Integration of the transport network between the Delmore site and the proposed Plan Change 119 Ara Hills Precinct immediately to the north is poor. There is only one road link proposed, which connects to a paper road running along the west side of Ara Hills and there are no roads or active modes routes between the two sites near the NOR 6 Road. This lack of connectivity will result in effects in the form of reduced access to local amenities and public transport for future residents.
- R. A two-way (bi-directional) separated cycle path is proposed on one side of collector roads 5 and 17, as well as the NOR 6 Road. Drivers using a vehicle crossing across a bi-directional cycle may not be expecting cyclists crossing their path to come from both directions. For instance, a driver exiting a site onto the road and intending to turn left may only look to their right for oncoming traffic, and may not notice a cyclist approaching from their left. For this reason this type of path is only appropriate where there are only a small number of vehicle crossings or intersections across it. I consider that the most recent version of the design drawings are appropriate in this regard.

Car Dependency

- 1. Car dependency in residential subdivisions occurs when land use and transport patterns heavily favour private motor vehicle use over alternative travel modes such as public transport, or active modes such as walking and cycling.
- 2. Car dependency in residential subdivisions can result in a number of adverse effects. High trip generation can cause congestion on the wider transport network causing delays and increased travel time both for motorists travelling to and from the development but also for other users of the transport network. It can make travel difficult or inaccessible to people who do not have readily available access to a private car. More private vehicle use can have adverse environmental effects in the forms of increased emissions, both greenhouse gases, but also fine particulate matter emissions which can cause health effects. There are health benefits from active travel modes which residents who travel exclusively or nearly exclusively by private vehicles are denied.
- 3. I consider that the proposed Delmore residential development is likely to have high levels of car dependency for the following reasons;
 - a. Several of the local roads and part of the NoR6 road within the development have steep gradients (over 8%) which discourage walking.
 - b. There are no schools within reasonable walking distance. The nearest school is Nukumea Primary School which is around 4km away (about 1 hour walking time) when measured by the shortest walking route. The Ministry of Education (MoE) owns land on the west side of Upper Oweria Road to the south of the site, but this is not designated in the AUP for use as a school, and the proposal does not include footpaths or cycling facilities which would allow access between the MoE land and the Delmore site.

Memorandum

- c. There is a small commercial centre included in the Ara Hills development (which is consented but not yet built) but things like supermarkets will require the residents to drive to them.
- d. This site is difficult to service by public transport. Practically servicing the site via public transport would require a road link through stage 2 to be complete and a connection to Upper Orewa Drive provided. Walking distances and road gradients to likely bus stop locations from the outer edges of the development are likely to discourage public transport use. The location and density of the proposed development mean that future bus services are unlikely to be more than a connector type service with around 30 minute frequency.
- 4. However, I also acknowledge that the applicant has taken steps help mitigate car dependency. Measures proposed include cycling facilities in the form of separate cycle paths have been proposed on Roads 5, 17, and the NOR6 road. These four roads also have carriageway widths which would allow bus services to operate on them. All collector roads and the most of the NOR6 arterial road have gradients under 8%. An active modes bridge is proposed between Roads 12 and 23. A temporary footpath is proposed along part of Upper Orewa Road and Russell Road, and between Road 08 and Russel Road. While I still consider that there will be a high level of car dependency I consider that these measures will go some way to mitigating the effects. The challenging topography of the site means that steep gradients and low density cannot be completely avoided.

Trip Generation

- 5. Car dependency is likely to result in higher trip generation rates per dwelling than would be expected for similar developments with better walkability and public transport access.
- 6. The Commute Integrated Transportation Assessment (ITA) section 5.1 has used a trip generation rate of 0.65 peak hour trips per dwelling based on the New South Wales Roads and Transport Authority Guide to Traffic Generating Developments ('The RTA guide') rate for medium density residential.
- 7. The RTA guide defines medium density residential as follows:
"A medium density residential flat building is a building containing at least 2 but less than 20 dwellings. This includes villas, town houses, flats, semi-detached houses, terrace or row houses and other medium density developments. This does not include aged or disabled persons' housing."
- 8. I note that most of the dwellings are stand alone and are larger (3 or 4 bedrooms) than is typical for medium density.
- 9. I consider that the RTA guide trip rate of 0.85 peak hour trips per dwelling for a dwelling house would have been a more appropriate rate for this development. The daily trip generation rate for dwelling houses in the guide is 9 trips per dwelling.
- 10. If this were used then the trip generation for the whole development given in Section 5.1 of the ITA peak hour would increase from 813 to 1,063 trips per hour and the daily trips would increase from 8,125 trips to 11,250 trips.

Traffic Modelling

- 11. Section 6 and Appendices C and D of the ITA provide information on traffic modelling (using the SIDRA traffic modelling software package) undertaken by Commute as part

Memorandum

of their traffic assessment. Of particular note is the modelling for the Grand Drive / SH1 motorway interchange.

12. The interchange is laid out as two roundabouts. I consider that the critical period will be the morning (AM) commuter peak hour. It is expected that in this period a high proportion of trips generated by the proposal will be vehicles turning right at the eastern roundabout then using the southbound motorway off-ramp to travel south on State Highway 1. As Delmore is developed and dwellings are occupied more vehicles from the development will make this movement and there will be less opportunities for drivers on the eastern side of the roundabout to enter the interchange. If the number of trips generated by the Delmore proposal gets too high this will result in increased delays and queue lengths on Grand Drive to the east of the interchange.
13. Appendix C of the ITA contains SIDRA model results. Seven scenarios have been modelled. The ITA does not provide a clear description of the scenarios and what follows is my understanding.
 - a. **Existing Scenario** (ITA Figures 57, 58, 65, and 66). The existing situation, based on traffic surveys undertaken in November 2024. This includes the approximately 173 dwellings within Ara Hills which had been constructed at the time of the survey.
 - b. **Consented Scenario** (ITA Figures 59, 60, 67, and 68). All traffic from the existing scenario, as well as estimated trips for the dwellings within Ara Hills which were consented but not built at the time of the 2024 traffic survey.
 - c. **Proposed Scenario** (ITA Figures 61, 62, 79, and 70). All traffic from the consented scenario plus estimated traffic from both Stages 1 and 2 of Delmore.
 - d. **Proposed With Additional East Approach Left Turn Lane Scenario** (ITA Figure 71). As per the proposed scenario but scenario includes an upgrade to the eastbound roundabout at the interchange where an extra 200m long left turn lane is provided on the east side (Grand Drive).
 - e. **Proposed with Ara Hills Plan Change Scenario** (ITA Figures 63, 64, 72, and 73). All traffic from the proposed scenario plus estimated traffic from the additional 375 dwellings which PC119 would facilitate within the Ara Hills Precinct, but which have not been consented.
 - f. **Proposed with Ara Hills Plan Change (With 30% Delmore reduction) Scenario** (ITA Figures 74 and 75). The proposed scenario but with 30% less Delmore Traffic due to the Upper Oweria Road link being open. This scenario has been modelled for the western roundabout only.
 - g. **Proposed with Ara Hills Plan Change AM (With 30% Delmore Reduction & Additional Eastern LT Lane** (ITA Figures 76 and 77) The proposed scenario but with 30% less Delmore Traffic due to the Upper Oweria Road link being open and an upgrade to the eastbound roundabout at the interchange where an extra 200m long left turn lane is provided on the east side (Grand Drive). This scenario has been modelled for the eastern roundabout only.
14. In the table below I have summarised the SIDRA modelling results from Appendix C of the ITA for the eastern roundabout in the AM peak period, focusing on the operating of the east leg of the intersection. LOS is level of service, using an A (best) to F (worst) range. Queue lengths are 95th percentile queues.

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Scenario	Intersection LOS	East leg (Grand Drive) LOS	East leg (Grand Drive) Queue Length	East leg (Grand Drive) Average Delay
Existing	A	A	43.2m	3.1s
Consented	A	A	59.2m	4.6s
Proposed	F	F	1,168.1m	233.5s
Proposed With Additional East Approach Left Turn Lane	A	A	51.9m	8.5s
Proposed with Ara Hills Plan Change	F	F	291.0m	479.7s
Proposed with Ara Hills Plan Change AM, with 30% Delmore Reduction & Additional Eastern LT Lane	A	A	51.9m	8.5s

15. The SIDRA modelling indicates that if all dwellings proposed in the Delmore site were to be constructed without the Upper Owera Road link being open there would be significant adverse effects on queue lengths and average delays on the eastern (Grand Drive) approach to the motorway interchange.
16. However, the modelling shows that the additional delays on the eastern leg can be almost entirely eliminated by constructing a new 200 metre long left turn lane on the eastern leg of the interchange, and that with this mitigation, as well as the link through to the Upper Owera Road the eastern roundabout at the interchange should operate with low levels of delay even when both all dwellings in the Delmore site and all dwellings in the proposed Plan Change(PC119) Ara Hills precinct are occupied.
17. The applicant's proposed Condition 101 would require the applicant to undertake monitoring of the interchange and would only require the applicant to build the left turn lane mitigation if the monitoring finds that level of service on is E for any approach. The wording on this condition is therefore critical. I have concerns with the applicant's proposed wording which are covered further below in this memorandum.
18. The applicant's proposed Condition 99 requires that the Upper Owera Link is provided before 1,325 dwellings are occupied across the Delmore and Ara Hills site.
19. The 16 April 2026 Commute memo contained modelling for an additional scenario with 1,325 dwellings across the Ara Hills (575 dwellings) and Delmore (750 dwellings) developments without the connection between Road 17 and Upper Owera Road. I will refer to this as the Stage 1 complete scenario as it assumes all dwellings in Stage 1 of Delmore are completed and occupied as well as all of the currently consented dwellings in Ara Hills.

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20. The results of this modelling are summarised and contrasted with the “consented” scenario model in the table below.

Scenario	Intersection LOS	East leg (Grand Drive) LOS	East leg (Grand Drive) Queue Length	East leg (Grand Drive) Average Delay
Consented	A	A	59.2m	4.6s
Stage 1 Complete	B	C	250.9m	34.7s

21. The results indicate that in the period between Stage 1 of Delmore being completed and the connection between Road 17 and Upper Oweria Road being opened there will be a very noticeable increase in queues and average delays for motorists on the eastern leg of the Grand Drive interchange in the critical AM peak period.
22. The Auckland Network Operating Plan (ANOP) sets out target levels of service for Auckland Transport’s arterial road network and other critical routes. Grand Drive is classified as a secondary arterial east of the interchange and the target LOS for this type of route is C in the AM peak. On this basis I consider that the Stage 1 Complete model indicates that Grand Drive will operate acceptably in the AM peak but it is close to the limit of acceptability and there is little to no spare capacity before the performance of the interchange becomes unacceptable.
23. It should be noted that the left turn lane mitigation involves works on a motorway interchange under the control of NZTA, and confirmation should be sought from them as to whether they would accept the proposed mitigation or foresee any potential issues with it.

Proposed Condition 99

24. Proposed conditions 99 and 101 relate to potential congestion and delay effects for motorists using the road network which could be caused by the additional trips on the network generated by the Delmore development.
25. The updated version of Condition 99 proposed by the applicant on 18 March 2026 reads;
- “Prior to the occupation of more than 1,325 dwellings across the Delmore site and Ara Hills sites, Roads 5, and 17 must be constructed and operational and the intersection of Road 17 and Upper Orewa Road must be constructed as a single-lane roundabout and designed to achieve sight distances in accordance with Austroads Guide to Road Design Part 4B: Roundabouts Part 4B for 60km/h operating speeds.”*
26. Page 2 of the ITA states *“This corresponds to the 575 Ara Hills consented dwellings and 750 Delmore dwellings or 1,325 dwellings in total.”*
27. This condition would only be binding on the Delmore developer. The Ara Hills developer already has consent to build 575 dwellings. In section 5.3.2 of the ITA Commute estimates that only 173 dwellings have been completed inside the Ara Hills site, which leaves 402 dwellings remaining.

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28. Depending on the order in which each developer completes their dwellings the 1,325 dwelling threshold could be completed before the connection to Upper Ower Road is opened. In fact it would be possible, although perhaps unlikely, for the Delmore developer to complete 1,152 of the total 1,213 dwellings inside their development without reaching the 1,325 dwelling threshold in Condition 99 if the Ara Hills developer does not complete any more dwellings first.
29. I consider that it would be better the 575 dwellings which already have consent in the Ara Hills development to be treated as if they were already complete and part of the receiving environment.
30. The Ara Hills developer has applied for a private plan change (PC119) to rezone their site with to facilitate an anticipated 900 residential lots (325 above the number of existing consented dwellings, assuming only one dwelling per lot). Since PC119 has been notified I consider that the ITA and proposed conditions should have regard to it.
31. Removing the 575 already consented Ara Hills dwellings from Condition 91 results in the threshold being reduced to 750 dwellings. Accounting for the additional dwellings PC119 would facilitate, but which are not already consented would mean this 750 dwelling threshold is shared across the two developments.
32. The SIDRA modelling in the ITA is based on the medium density trip generation rate of 0.65 peak hour trips per dwelling, which I consider to be too low for reasons outlined above. If the 0.85 peak hour trips per dwelling rate which I consider to be more appropriate was used then it is likely that the modelling would show even longer queue lengths and delay times at the eastern roundabout.
33. I consider that the proposed development should be considered to be a low density residential development when considering trip generation.
34. Section 5.3.4 of the ITA notes that the traffic assessment for PC119 uses a trip generation rate of 1.0 peak hour trips per dwelling. The Commute ITA states that *"A trip rate of 1 per dwelling in the peak hour is in excess of best practice based on the RTA and TfNSW guides and considered highly conservative and unlikely to eventuate."*
35. While I agree that rate of 1.0 trips per dwelling is too high, I consider the rate of 0.65 trips per dwelling used in the Delmore ITA to low and that a rate of 0.85 should be used to account for potential effects of high levels of car dependency within the Delmore development.
36. To address this, I recommend that the 750 dwelling threshold be reduced proportionately by a factor of 0.764 (calculated by $0.65 / 0.85$). This would equate to a threshold of 573 dwellings.
37. Taking into account this reduced threshold, PC119, and the already consented 575 dwellings inside the Ara Hills site I suggest the following wording for Condition 99 should be applied;

"Prior to the occupation of more than 573 dwellings in the Delmore site, Roads 5 and 17 must be constructed and operational and the intersection of Road 17 and Upper Ower Road must be constructed as a single-lane roundabout and designed to achieve sight distances in accordance with Austroads Guide to Road Design Part 4B: Roundabouts Part 4B for 60km/h operating speeds."

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Proposed Condition 101

38. Proposed condition 101 provides for monitoring of the effects of trip generation from the site at the Grand Drive motorway interchange and potential mitigation measures. It states;

"101. Once development reaches 1,425 dwellings, and prior to the occupation of more than 1,450 dwellings within the Delmore and Ara Hills sites, the consent holder must:

- (a) Provide a written report to Council, prepared by a suitably qualified traffic engineer, setting out the following:*
 - Results of a survey outlining the level of traffic generated from the Delmore site using the Grand Drive interchange.*
 - Results of a survey outlining the level of traffic generated from the Delmore site using the Upper Orewa access (from Road 17).*
 - Survey and assessment of performance of the Grand Drive / SH1 interchange. This is to determine if the Level of Service (LOS) has reached "E" for any approach.*
 - If the performance level in Condition 93(a)(iii) is reached at the time of monitoring, an assessment of traffic effects must be provided, setting out the mitigation options, including physical changes at the Grand Drive interchange, travel and traffic demand management options.*
- (b) Construct the mitigation options as outlined in Condition 93(a)(iv), if recommended by the written report.*

39. My comments on this condition are as follows;

- a. Delmore has 1,213 dwellings and there are already 575 dwellings consented in the Ara Hills site with a combined total of 1,788 dwellings. This is 338 dwellings more than the 1,450 dwellings which would trigger the need for a traffic survey. It is possible that the interchange will work acceptably at 1,450 dwellings but not 1,788 dwellings. The traffic assessment provided for the Ara Hills Plan Change is based on 950 dwellings, 375 more than already consented.
- b. I consider that additional traffic surveys and assessment needs to be undertaken as the number of dwellings occupied moves from 1,450 to 1,788 dwellings.
- c. The condition only requires a single survey for each of the matters listed in the bullet points under Condition 101(a). This could potentially consist of a one day survey. I consider that this is not sufficient to understand traffic conditions surrounding the site and that several days of survey should be undertaken.
- d. The peak periods for the surveys should be specified as 6am to 9am and 4pm to 7pm. Surveys should be taken at least a week apart and on three different weekdays.
- e. The surveys must not occur in the period around Christmas and New Year, as traffic volumes are known to be atypically lower in this period.
- f. The surveys should include not only the volume of traffic making each movement, but also queue lengths (being the maximum observed in three minute long increments).

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- g. There should be a clearly stated requirement for all survey data to be provided to Council in the traffic monitoring report and not just a summary.
 - h. The trigger point for mitigation should be LOS E or worse on any one approach, not just LOS E or worse at the interchange as a whole.
 - i. It is not clear what the purpose of surveying traffic using the roundabout at the Upper Oweria Road / Road 17 intersection to enter and leave the site is since the matter being monitored is whether there is unacceptable congestion at the motorway interchange, and not how many vehicles are entering or leaving the Delmore site.
 - j. The ITA has already identified an appropriate mitigation measure if a congestion issue is identified by the assessment in the form of an additional left turn lane on the eastern leg of the interchange (Grand Drive). Rather than require an assessment of mitigation options I recommend that the condition specially that that left turn lane be constructed by the consent holder if the level of service threshold of E or worse is reached, with alternatives accepted only if mutually agreed between the consent holder, Council, and NZTA.
 - k. The ITA modelling is based on a 200m long left turn lane and the condition wording should include this.
 - l. The reference to condition 93(a)(iii) in the applicant's proposed conditions of consent is incorrect and needs to be updated to accord with new condition numbering.
40. On this basis I suggest the following wording for Condition 101;
- "1) Once the Road 17 / Upper Orewa Road roundabout is operational, the Consent Holder must undertake traffic surveys and undertake additional assessment at the earlier of:*
 - (a) 12 months following the opening of the roundabout; or*
 - (b) Prior to the occupation of 1,450 dwellings.*
 - 2) The traffic surveys must be undertaken at the State Highway 1 / Grand Drive motorway interchange by a suitably qualified traffic engineer and must include, as a minimum:*
 - (a) Surveys undertaken over at least three separate weekdays, including both AM (6.00am to 9.00am) and PM (4.00pm to 7.00pm) peak periods, and excluding school and public holiday periods, including but not limited to the Christmas to New Years period. The surveys must be undertaken at least one week apart, and on different weekdays.*
 - (b) Measurement and recording of traffic volumes and queue lengths for all movements / lanes on all approaches to both of the roundabouts which constitute the interchange. Queue lengths should be recorded every three minutes with the longest length queue observed for each lane in the three minute interval recorded.*
 - 3) Within 20 working days of completing the traffic surveys, the Consent Holder must provide to Council a Traffic Monitoring Report, prepared by a suitably qualified traffic engineer, that:*
 - (a) Summarises the results of the traffic surveys;*

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- (b) *Includes an appendix with copies of all the data collected as part of the surveys;*
 - (c) *Assesses whether the Grand Drive interchange or any approach to the Grand Drive interchange is operating at level of service E or worse.*
- 4) *Where the Traffic Monitoring Report identifies that the Grand Drive interchange or any approach to the interchange is operating at level of service E or worse, the Consent Holder must:*
 - (a) *Prepare a detailed design for mitigation in the form of a new 200 metre only left turn lane on Grand Drive the eastern approach to the interchange.*
 - (b) *Consult with Waka Kotahi NZTA on the left turn lane design and undertake any changes to the design necessary to gain NZTA acceptance.*
 - (c) *Submit the left turn lane design to Council for approval within 20 working days of submitting the Traffic Monitoring Report. The assessment must include written confirmation from Waka Kotahi NZTA that it has reviewed the proposed design and considers it acceptable.*
- 5) *The consent holder may propose alternative mitigation measures to the left turn lane but must provide detailed design drawings and assessment of the alternative mitigation prepared by a suitably qualified traffic engineer for the review of NZTA and Council. The left turn lane may be substituted but only upon mutual agreement, in writing, by the consent holder, Council, and NZTA.*
- 6) *The Consent Holder must, at their own expense, implement the left turn lane under condition 101(4), or other mitigation measures, mutually agreed to by the Consent Holder, NZTA, and Council under Condition 101(5) as soon as practicable, and no later than 6 months following Council approval, unless otherwise agreed in writing by Council.*
- 7) *Additional traffic surveys and assessment, in accordance with Conditions 101(2) and 101(3) must be undertaken by the applicant prior to the occupation of 1,600 and 1,750 dwellings. If the assessment undertaken under Condition 101(3) identifies that the Grand Drive interchange or any approach to the interchange is operating at level of service E or worse, the Consent Holder must carry out the design, consultation, and mitigation works described in Conditions 101(4), 101(5), and 101(6). ”*

Active Modes Link Across Interchange and Along Grand Drive

- 41. Section 7.7.2 of the ITA assessed active modes accessibility for the development. It relies on an active modes bridge across the motorway interchange and a shared path along one side of Grand Drive which is a condition of the Ara Hills development but which has not been constructed yet.
- 42. My understanding is that the Ara Hills developer is well advanced with the design of this bridge. However, it should not be assumed that the Ara Hills developer will have completed this link before the first dwelling of the Delmore development is occupied. I

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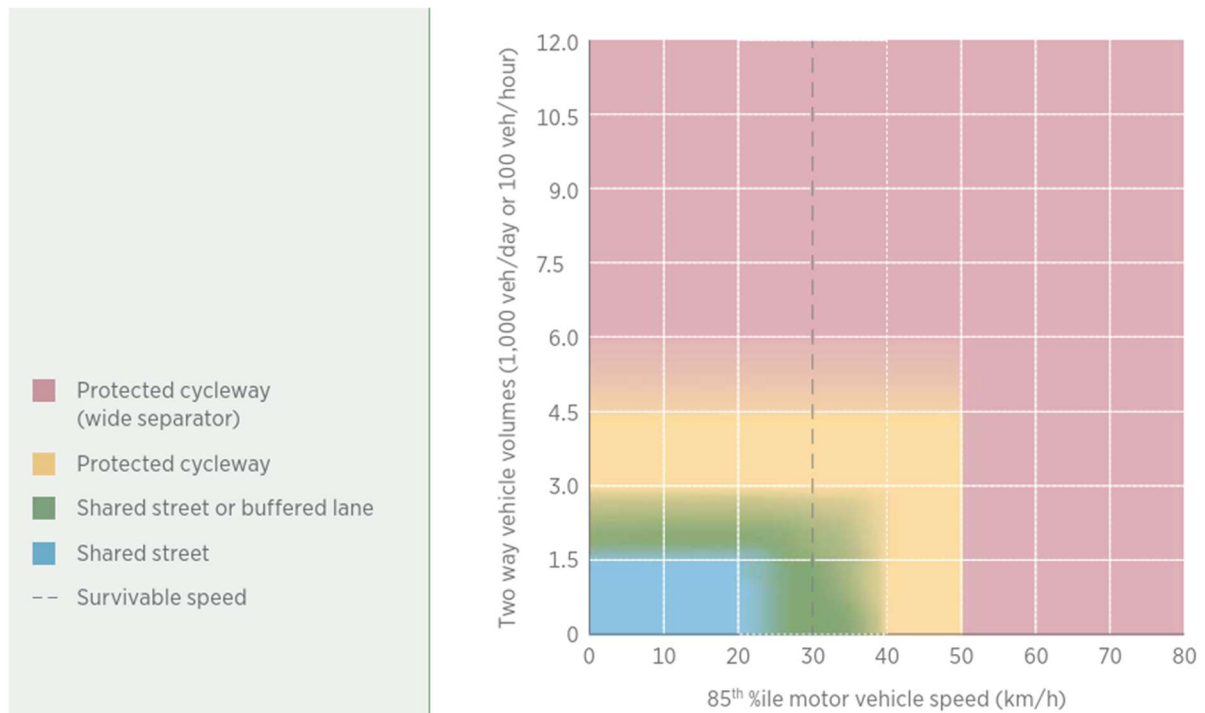
recommend a that there is condition of consent requiring that the bridge and path are complete and open for public use before the first dwelling is occupied. This condition does not need to specify that the Delmore applicant is responsible for undertaking the works, only that it must be open.

Road Network Hierarchy and Typical Cross-sections

43. All proposed roads within the development have been designed as local roads except for the NOR 6 road (which is an arterial road) and Roads 1, 5, and 17 which are collector roads.
44. This is consistent with Appendix 14 Upper Orewa Concept Structure Plan and I consider that the hierarchy proposed is appropriate.
45. Typical cross-section drawings for the local roads and the NOR6 road are show component element widths which are generally in line with Auckland Transport's Transport Design Manual. Wider carriageways may be needed on curves and around intersections to allow space for heavy vehicle tracking. This matter is covered in additional detail in the section of this memorandum which covers vehicle tracking.
46. There is a minor issue with the width of the back berms for the local roads which are 50mm below the Transport Design Manual's minimum width, but I consider that this matter can be addressed at engineering approval stage, and in any case it does not cause an effect in AUP terms.
47. Road 1 is indicated as a collector road in McKenzie & Co. Drawing 3725-1-3600-Rev H which also provides a typical cross section for Road 1. The drawing shows a 7m wide carriageway, which is suitable for use as a potential future bus route (subject to widening on curves for bus tracking) and footpaths, front and back berms on both sides with widths compliant with the minimums in the AT Engineering Design Code Footpaths and the Public Realm.
48. However unlike the other two collector roads this road does not have any separate cycling facilities, and I consider that this will have a significant adverse effect on cyclists, both in terms of reduced safety as they will need to share the carriageway with faster moving motor vehicle traffic, but also in terms of active modes usage because if safe cycling routes are not available then people are less likely to choose cycling as a travel mode.
49. This matter has been discussed with the applicant who has responded that they do not believe that Road 1 will carry sufficient traffic to justify cyclist facilities. While I accept that traffic associated with activities located solely within the Delmore site may not generate enough traffic to justify cyclist facilities, I consider that consideration should be given to traffic using Road 1 to travel to and from land outside of the Delmore site.
50. The Upper Orewa Concept Plan shows Road 1 as a collector road linking through to the future urban zone (FUZ) land to the south of the Delmore site. The concept structure plan shows this area as being developed as residential. This road will be the most direct link to the Grand Drive interchange for this land when it is urbanised and I expect that it will in time carry a high volume of traffic.
51. AT's Engineering Design Code Cyclist Infrastructure contains a diagram (Section 2.2 types of cycling infrastructure) showing what type of cycling infrastructure is appropriate in what circumstances based on traffic volumes and vehicle operating speeds

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52. Road 1 is designed for a 50 km/h operating speed. Collector roads in urban Auckland typically carry upward of 3,000 vehicles per day or 300 vehicles per hour. I expect that Road 1 will eventually carry this volume of traffic or more.



53. I recommend that Road 1 are designed as cycle routes and cycle infrastructure in the form of off-road cycle paths, separate from the footpath, are provided on each side. This is necessary to help mitigate the effects of an otherwise very car dependant development. For Road 1 I recommend that it have the same cross-section as Roads 5 and 17.
54. This will require additional space within the road reserve, and this is not able to be addressed via a condition of consent. The scheme plans for the proposal should be updated to widen Road 1 to allow for this before issue of consent.

Intersection Design – Upper Orewa Road / Road 17 Intersection

55. The drawings show the proposal includes a roundabout at the intersection of Upper Orewa Road and Road 17 (refer McKenzie & Co. Drawing 3725-2-3005-Rev H).
56. This design is presented on a conceptual level only. No 3D design vertical information on levels or gradients is shown, no vehicle tracking is provided, nor has an updated sight line assessment been undertaken.
57. However, I consider that nothing in the information provided to date indicates that an appropriate roundabout design cannot be achieved at the intersection. The approximate 32 metre diameter size is within the range which I would expect for compact roundabout design in this type of location.

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58. The central island has been offset to the north of the true centre of the intersection, which appears to have been done to avoid issues with the property boundary and steep topography on the south side of the intersection. In some circumstances this can result in poor speed control as drivers enter the roundabout, however in this case I consider that the design has appropriately dealt with this issue by bending the eastern leg around to point in toward the central island.

Intersection Design – Russell Road / Upper Orewa Road Intersection

59. There is a pre-existing traffic safety issue at the Russell Road / Upper Orewa Road intersection near the site. This intersection is currently laid out as a T-intersection with a Give Way priority control on the Russell Road approach. There is a horizontal curve in Upper Orewa Road at the intersection and vegetation on the inside of the curve (much of which is in private land) limits sight distances between drivers turning right into Russell Road and southbound drivers on Upper Orewa Road. This limited sight distance increases the risk of a crash between a vehicle turning right into Russell Road and a southbound vehicle.
60. An excerpt from Google Streetview showing the intersection is shown in the figure below.



Figure: Excerpt from Google Streetview showing the Upper Orewa Road / Russell Road intersection.

61. While this is a pre-existing issue, the proposal would increase traffic volumes on Upper Orewa Road near this intersection by 183% and this would significantly exacerbate the pre-existing issue.
62. It is acknowledged that the proposal would not increase traffic entering or leaving Russell Road itself, but the increase in southbound traffic on Upper Orewa Road which the drivers of existing traffic turning right into Russell Road must give way to results in a traffic safety effect.
63. A drawing prepared by Commute dated 15/04/2026 has been supplied by the applicant containing a sight distance assessment for the right turn into Russell Road as well as proposed changes to the road marking layout. The applicant has proposed

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Condition 100(d) which would require them to implement the markings changes shown before the Road 17 / Upper Orewa Road connection is opened.

64. I consider that the proposed road marking changes, when combined with the shoulder widening on Upper Orewa Road proposed by the applicant under Condition 100(a) will be sufficient to mitigate the potential road safety effects at this intersection.

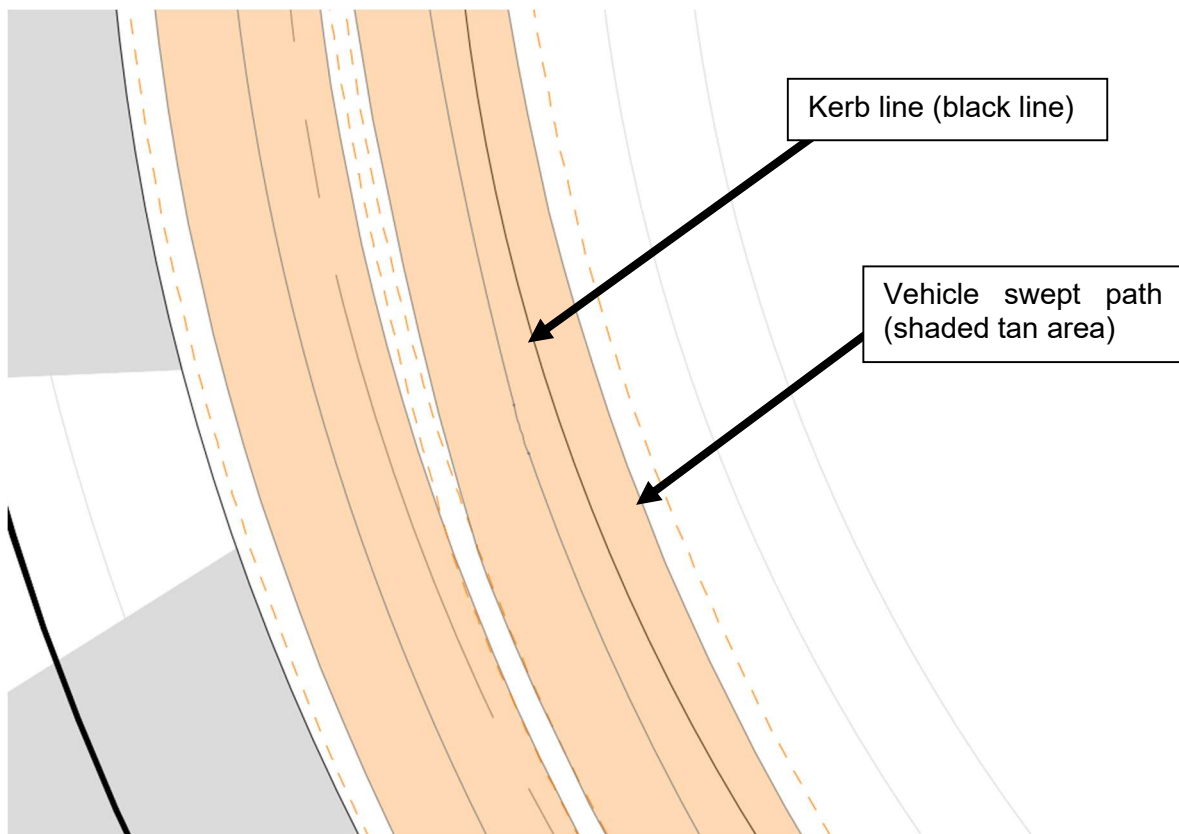
Intersection of Upper Orewa Road and Wainui Road

65. The Upper Orewa Road / Wainui Road intersection is presently a give way priority controlled T-intersection. There is no right turn bay on Wainui Road and no shoulders which could be used by a westbound driver on Wainui Road to pass a vehicle waiting in the lane to turn right into Upper Orewa Road. If the intersection is not upgraded this is likely to result in an increase in delays for westbound drivers on Wainui Road, even if they are not travelling to or from the Delmore development.
66. There is also a potential traffic safety effect as vehicles waiting in the traffic lane to turn right from Wainui Road into Upper Orewa Road will be vulnerable to rear-end type crashes. An increase in the number of vehicles turning out of Upper Orewa Road is also likely to increase the crash risk at the intersection.
67. An upgrade to a three-legged roundabout at this location is included in NOR 6. I note that the purpose of the NOR is to secure route protection designations. No implementation funding or definite timeline is associated with the NOR, and even if public funds were allocated it could be over a decade before the roundabout is constructed. The intersection should be upgraded at the same time as the proposed Delmore development to address the effects of traffic generated by the development.
68. Proposed Condition 100(b) requires the applicant to *"Upgrade the Upper Orewa Road / Wainui Road intersection to provide a right turn bay on Wainui Road and a left turn lane on Upper Orewa Road."*
69. I consider that this is appropriate. The proposed plan change for Milldale North proposes rezoning land around the intersection to live zone urban and extending it through with a fourth leg to the south. The proposed plan change also shows a roundabout at the intersection.
70. While I consider that a three legged roundabout could potentially be built within the existing road reserve land at the intersection an optimal design for a four legged roundabout would require the central island to be positioned more to the south, using land which is currently outside of the road reserve. I therefore consider that the future fourth leg would require extensive reconstruction of the intersection, involving additional costs and disruption for road users, which is not justified given that it appears that the additional fourth leg may be constructed in a relatively short time frame.
71. A right turn bay will require less work to upgrade than rebuilding the three legged roundabout as a four legged roundabout and I consider that condition proposed represents a reasonable approach in the circumstances.
72. I note that there are power poles in close proximity to the intersection which I expect will need to be relocated to construct the right turn bay. This can be confirmed at engineering approval stage, but the applicant should take this into consideration.

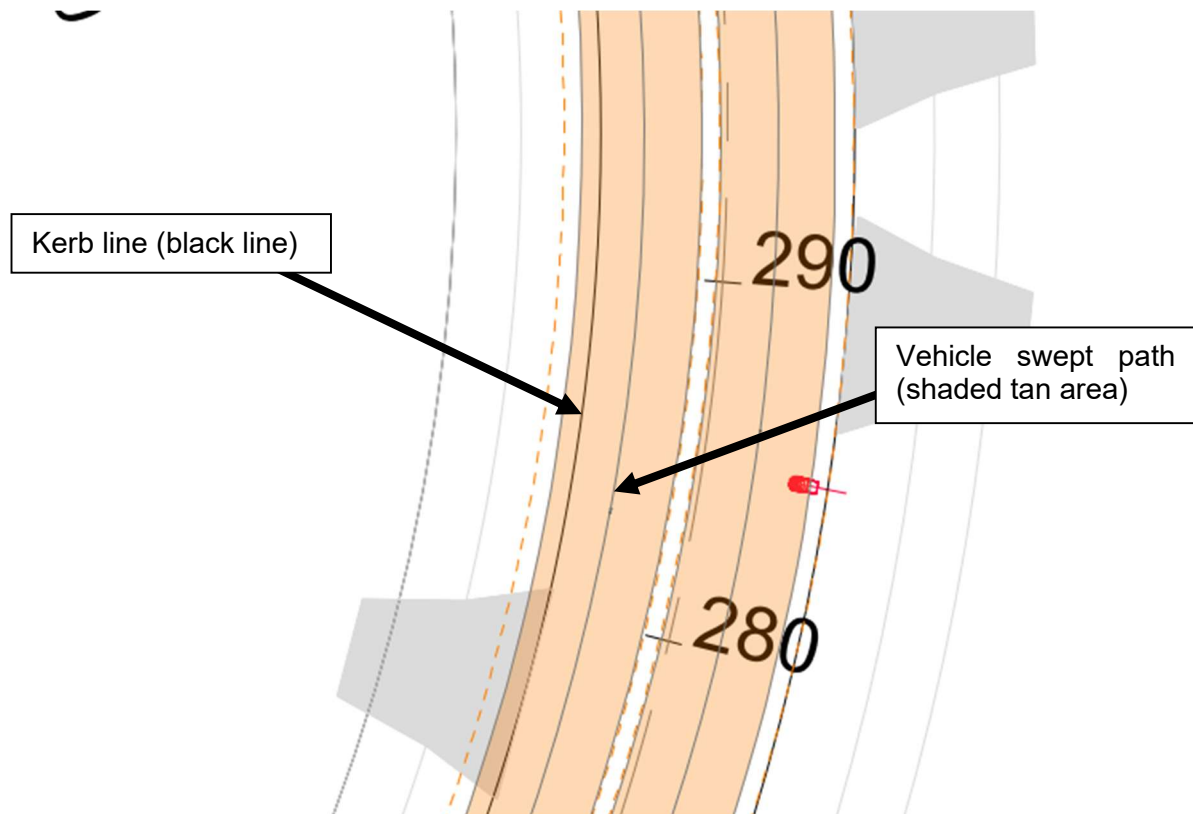
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Vehicle Tracking Issues

73. Appropriate design of roads and intersections for the appropriate design and check vehicles is important to address potential traffic safety and operational effects on the road network. If insufficient space is provided this can cause safety effects in the form of increased side-swipe or head-on crashes between vehicles travelling in opposite directions or operational effects where heavy vehicles (like buses or rubbish trucks) cannot use a route without mounting the kerb. If excess space is provided then this increases both crossing distances for pedestrians and vehicle turning speeds and it can result in a pedestrian safety effect.
74. The Auckland Code of Practice for Land Development and Subdivision Chapter 3 Transport Contains information on requirements for vehicle tracking on roads on the Auckland Transport network. This document requires that a 0.5m clearance is provided between the kerb face and the swept path of the body of the turning vehicle and between the vehicle and another vehicle.
75. Section 9.1 and Appendix F of the ITA contains a vehicle tracking assessment for the proposed new roads and intersections.
76. I have reviewed the drawings provided and note that there are many locations where heavy vehicles are shown driving over kerb lines on curved when passing another vehicle coming in the opposite direction. Below are two examples from Commute Drawings 2 and , where I have annotated an excerpt from the tracking drawings, but these are examples only and are not the only two places where this issue occurs.



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77. Vehicles track over kerb lines on the following Commute Tracking Drawings in relation to the following locations.
 - Drawing 26A - Intersection of Roads 22/26.
 - Drawing 7D - JOAL9/Road 1.
78. No tracking drawing has been provided for the JOAL11/Road 1, JOAL11/Road 1, or JOAL 37/Road 4 vehicle crossings.
79. The applicant has proposed Condition 113 which reads;
"113. Sufficient carriageway space is to be provided to ensure vehicle tracking in compliance with the Auckland Code of Practice for Land Development and Subdivision Chapter 3 Transport without the footpath or berm widths going below the minimums in the Code."
80. I note however that more land may need to be vested as road to comply with the proposed condition. If the design has to be changed with more road to vest this is unable to be conditioned. The road and scheme plan drawings will need to be updated before consent is granted.
81. Page 6 of the Auckland Transport Response Memorandum from Barker & Associates states the updated roading plans would be provided 20 April 2026. While updated plans were provided, there was no updated vehicle tracking drawings supplied with them.

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Vehicle Tracking For Wastewater Tanker

82. The Delmore site will have its own wastewater treatment plant which will operate until such time as the site is able to connect to the Watercare system.
83. During engagement between the applicant and Auckland Transport they were asked about vehicle routes and tracking for vehicles servicing the treatment plant. In response they provided a report prepared by Commute dated 3 July 2025 as well as an additional drawing for truck tracking at the Wainui Road / Upper Oweria Road intersection.
84. The Commute report refers to *"a truck capacity of 28.8 m³ for transportation of treated wastewater and reverse osmosis reject. The vehicle is based on a Fonterra Truck and Trailer which is approximately 19.5m long"*.
85. This vehicle would reach the site via Wainui Road, Upper Oweria Road, and Russell Road, where it would get access via a barrier arm at the south end of Road 1, with the loading point for the truck in the cul-de-sac head.
86. The Commute report identifies three locations on Russell Road where additional widening is needed to accommodate the tanker vehicle. These are shown in the Figure below which is excerpted from the report.



87. Proposed condition 106 requires this widening to be undertaken. The wording refers to tracking plans but does not specify which plans or the standard to which the work will be undertaken. The plans provided (refer to the figure above) have insufficient detail to see how much widening is needed on each curve.
88. To address these ambiguities I recommend the following alternative condition 106;
"106. Prior to wastewater removal being required on Russell Road, the consent holder must at their own expense widen Russell Road so that there is sufficient space for a 19.5m long truck and trailer tanker to pass a 6.3m long van travelling in the opposite direction with a minimum of 0.5m clearance between the vehicles and between the edge of the vehicles and the edge of the carriageway. Road widening must also be undertaken at the intersection of Russell Road and Upper Oweria Road to ensure that a 19.5m long truck and

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trailer tanker can turn left from Russell Road onto Upper Oweria Road without crossing into the northbound traffic lane on Upper Orewa Road. This work must be in accordance with the Auckland Council Code of Practice for Subdivision and Development Chapter 3 Transport.”

Sight Distance Assessment – Internal Roads

89. Austroads Guide to Road Design Part 4A (AGRD4A) provides recommendations for driver sight lines at intersections and vehicle crossings.
90. The appendix to the ITA includes driver sight distance assessment drawings for public road intersections and the intersection between key JOALs and public roads. While most intersections are shown to have appropriate sight distances Commute Drawings 17AA, 19AA, and 10BB show that in order to achieve appropriate sight distances sight lines must cross over areas inside land which is not road reserve.
91. Since Auckland Transport cannot control what future owners may construct or plant on these areas it is possible that sight lines will become obstructed. I consider that this would present an unacceptable effect on traffic safety.
92. In the particular case of sign lines from JOAL 9 looking south along Road 1 shown on Commute Drawing 17AA four lots are impacted. The worst affected lot is Lot 184 where approximately one fourth of the lot is needed for driver sight lines to be preserved. Cross-referencing against architectural drawings shows that the proposed dwelling on Lot 184 is in a location which will block driver sight lines.
93. This could be resolved by placing consent notices on the affected titles limiting what can be planted or built on parts of the lots, but there is a risk that the future owners may not comply with the consent notice, and it would cover a significant portion of some lots and would be very difficult to enforce. No consent notice requiring this has been proposed by the applicant.
94. This matter could also be resolved by vesting the affected land as road reserve.

Visibility Splays at Vehicle Crossings

95. Providing sufficient Inter-visibility between drivers exiting private property and pedestrians crossing or about to cross vehicle crossings is important to help reduce the risk of a vehicle colliding with a pedestrian on a vehicle crossing and associated pedestrian safety effects.
96. Proposed Condition 104 requires that 2m by 2.5m visibility splays be provided on both sides of all vehicle crossings. I consider that the condition is appropriate.

Vehicle Crossings

97. The applicant's proposed Condition 102 on the construction of vehicle crossings refers to superseded versions of Auckland Transport's standard engineering detail drawings for vehicle crossings.
98. Vehicle crossings serving less than 10 dwellings are to be constructed as per the Auckland Transport TDM Technical Standards Drawing VX0103 Revision E dated 23/01/2025. Vehicle crossings serving 10 or more dwellings are to be constructed as per the Auckland Transport TDM Technical Standards Drawing VX0203 Revision D dated 23/01/2025. The Auckland Transport Transport Design Manual Practice Note 07 (Edition 1) Vehicle Crossing Design Standards contains detailed design guidance for vehicle crossings which the applicant should refer to when preparing their detailed design for engineering plan approval.

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99. I recommend that the condition be amended to read as follows:

"102. The consent holder must provide new vehicle crossings to serve all residential lots. The vehicle crossings must be constructed in accordance with Auckland Council Code of Practice for Subdivision and Development Chapter 3 Transport."

Proposed Temporary Connection of the NOR 6 Road to Grand Drive

100. The land needed for the link to Grand Drive is subject to NoR6. This designation provides for route protection. Auckland Transport and Auckland Council have no funding to construct the link to Grand Drive so construction of a link would need to be at Delmore's expense.
101. Some land has recently been vested as road connecting the Delmore site to the western end of Grand Drive by the developer of the neighbouring Ara Hills development. The area vested covers only part of the land designated for NOR 6 in this area. The full NOR 6 design cannot be constructed without additional land which has not been vested. Some of this additional land is needed for permanent occupation by the road and temporarily needed for earthworks and other enabling works.
102. The Delmore applicant has provided a design for a temporary road connection between their site and the end of Grand Drive which uses only the land which has been vested.
103. I consider that there are significant traffic engineering issues with the temporary road connection design provided which will result in adverse effects on traffic and pedestrian safety and operations.
104. In comparison to the NoR6 design the temporary road has a reduced width cross-section with several elements either removed or combined. Below I cover the differences and the potential effects.
 - a. Front and back berms have been removed. Potential effects; loss of amenity – discourages active modes as a travel choice. Absence of buffer between carriageway and cycleways/footpaths increases crash risk for pedestrians somewhat. Absence of buffer between the shared path and handrail on top of the retaining wall on the north side means that there is less usable space for cyclists resulting in a risk of handle bars or peddles getting caught on the barrier. Streetlight poles (and potentially other service poles or cabinets) will need to go in the footpath / shared path rather than the berm.
 - b. 3m wide shared path replaces two-way separate offroad cycle path and separate footpath on the north side. Potential effects; increased risk of collision between cyclist and pedestrian. Some pedestrians may be less willing to use this path due to perceived risk of a collision with a cyclist. Note that a 3m wide shared path would need a departure from standards as it does not conform to the Auckland Transport's Transport Design Manual.
 - c. Flush median removed. Potential effects; reduced separation between opposing traffic lanes means increased risk of head-on type crashes. Vehicles turning right into the vehicle crossing on the north side must wait in the westbound lane blocking it, resulting increased delays and increased rear-end crash risk.
 - d. The drawings show a retaining wall on the north side which would become an Auckland Transport asset to maintain. A barrier able to restrain both errant vehicles (road safety barrier) as well as being able to prevent falling from heights

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for pedestrians and cyclists will be needed but is not indicated on the drawing provided by the applicant.

- e. On the south side a batter slope is shown next to the footpath with gradients ranging from 1 in 3 to 1 in 1 (reinforced earth). This will need a similar barrier to the north side. It is not clear if the applicant has included space for the barrier.
 - f. The drawings show a vehicle crossing which clashes with a proposed retaining wall for the temporary layout.
105. Page 2 of the updated ITA states that the applicant will work with Auckland Transport on the permanent connection after the completion of the entire Delmore development. There is uncertainty as to how this would work particularly how the applicant could be bound to undertake this. No condition of consent in relation to this matter has been proposed by the applicant.
106. It is not clear how the temporary road can be rebuilt with the permanent (NoR6) layout at a later date without closing it for a protracted period. Given that this temporary road will initially be the only access to the Delmore site, and that the only other access (via Upper Oweria Road) will only be opened once a substantial number of the dwellings are occupied, it appears that constructing the permanent layout will have a significant adverse effect on Delmore residents. It would be best if Auckland Transport could acquire, on the applicant's behalf, the land inside Ara Hills which is part of the NoR6 designation so that the permanent layout can be constructed instead of the temporary layout
107. Page 7 of the 16 April 2026 Commute memo states that *"The applicant's intention is to provide the full roading width, notwithstanding this will require Auckland Transport to acquire the additional land required to construct it"*.
108. Auckland Transport could potentially buy the land in the NoR6 designation needed to construct the full roading width permanent connection, but it would be subject to a statutory process under the Public Works Act and therefore there is no certainty that the land can be compulsorily acquired until the statutory process has been gone through. In any case, the applicant will need to fund 100% of the cost of acquiring the land.

NOR 6 Road Connection to Upper Oweria Road

109. The possibility of the Delmore applicant constructing the full NOR 6 connection through to the intersection with Russell Road and Upper Oweria Road was discussed with the applicant as part of the engagement process.
110. I consider that this connection is not needed to support the proposed development. The applicant is providing connection in the form of a roundabout to Upper Oweria Road at the south end of Road 17, which the applicant's traffic modelling indicates will provide sufficient capacity for those parts of Stage 2 which cannot be provided for at the Grand Drive interchange. The applicant is also proposing to upgrade Upper Oweria Road by constructing shoulder widening, which will help address potential road safety effects on this road.
111. I remain concerned about road safety effects on driver sight lines at the intersection of Upper Oweria Road and Russell Road, and this matter could be resolved by constructing a roundabout at this intersection, as per the NOR 6 design, but a full link to the north is not needed and there may be other ways by which the driver sight lines

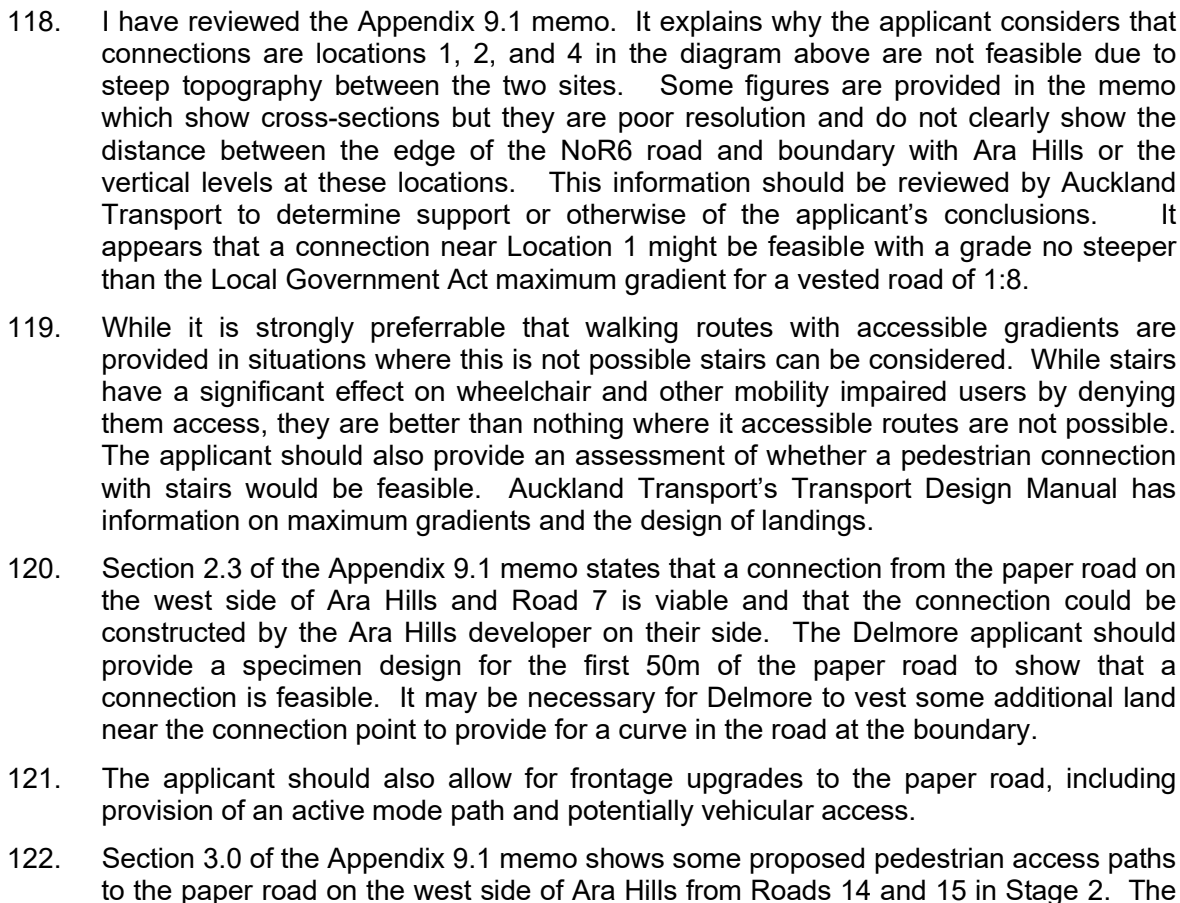
Memorandum

issue can be addressed. This matter is discussed in more detail elsewhere in this memorandum.

112. However, as the NOR 6 road is not being extended through to Upper Oweria Drive a turning head should be provided in vested road reserve at the south end of this road. The applicant has proposed Condition 111 which would require them to provide a temporary turning head in this location. However this is not shown on the drawings.
113. The applicant should be asked to add the turning head to the drawings. The level of the NoR6 road is approximately 4 to 5m above the existing ground level at the termination and it is not clear how the turning head will integrate with the adjacent lots 606 and 609 given the difference in levels.
114. The future NoR6 road will have a bridge located between the end of the road formed as part of this proposal and Upper Oweria Road. Lots 606 and 609 are close to the future bridge and it is not clear how development of these lots can be accomplished while integrating with the adjacent bridge abutments and future road levels. The applicant should be asked to provide more assessment of this matter, which should take the form of a scheme design for the bridge and abutments near Lots 606 and 609, including an assessment of the construction area needed.

Lack of Integration between Delmore and Ara Hills

115. Plan Change 119 (PC119), which covers approximately 85 hectares of currently Future Urban Zone land to the north and east of the Delmore site, was notified in 2025. This application seeks to rezone this land and enable approximately 900 residential lots. The Integrated Transport Assessment for PC119 is based on 950 dwellings. The owner of the Ara Hills site currently has consent for 675 dwellings, so PC119 would allow for an additional 375 dwellings.
116. I am concerned about the lack of integration between the Ara Hills and Delmore sites. The site layout as originally presented had no direct road or active modes links between the two sites. This will result in increased travel distances and times for future residents of the two sites. This particularly effects active modes like walking and cycling, and also impacts public transport as longer walking routes to public transport discourages its use. I am particularly, but not solely, concerned about the ability of residents in the south-western corner of the Ara Hills site to access the future public transport route on the NOR 6 road.
117. During engagement with the applicant Auckland Transport provided suggestions for potential locations for links between the sites which the applicant assessed and responded to in Appendix 9.1 Auckland Transport Response Memo.



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applicant should provide long-sections and typical cross-sections for these paths and integrate them into their other drawings. The path alignments shown are not direct and have potential CPTED (Crime Prevention Through Environment Design) issues, and they do not provide as direct of a walking route to Grand Drive (which is a future bus route) as the locations suggested by AT, but if these are the only viable options they may be better than nothing.

123. Overall, there is poor connectivity between Ara Hills and Delmore and this is likely to result in residents on both sides being more car dependant due to the lack of suitable active modes links in the area.
124. The 16 April 2026 Commute memo states that, in regard to the integration with the Ara Hills development, *"The applicant is currently working through options with AVJ and will provide further detail to Auckland Transport as soon as practicable, but by 11 May at the latest."*
125. This further detail has not been supplied to Auckland Transport at the date this memorandum was prepared.

Transport Network Resilience for Stage 1

126. During engagement with the applicant concern was raised in regard to lack of resilience in the proposed network for Stage 1 as despite the high number of dwellings proposed there was only one transport connection open to the public out of the site (via the connection to Grand Drive).
127. Stage 1 will have access to Russell Road (via intersection with Road 1) which provides emergency resilience, but is not open to the public and is for use of wastewater vehicles only. it is unclear how this access is proposed to operate. During engagement with the applicant they were asked to confirm how the access to Russell Rd will be managed for both stages including during events when Grand Drive Interchange is closed.
128. During engagement with the applicant they were asked to comment on this matter. They responded that *"Access to Russell Road is provided via Road 1 and is proposed to be controlled by an automatic lifting arm installed to restrict general traffic associated with the temporary wastewater off-take. In the event of an incident, closure, or significant congestion at the Grand Drive Interchange, this access can be converted to an alternative route for Stage 1 traffic. The lifting arm is capable of being operated remotely or via an emergency override, allowing controlled access to Russell Road when required. The use of this access during incident scenarios would be managed in coordination with 1 Memorandum emergency services and the road controlling authority, with appropriate traffic management measures implemented to ensure safety and maintain network function. This access arrangement would apply until the secondary access is opened at Upper Orewa Road."*
129. While Russell Road, which is an unsealed road, is not suitable in its current form is not suitable for sustained and ongoing use as an access to the Delmore site by the general public, I consider that it could be used in emergencies or unexpected events should the link to Grand Drive become unavailable. Should this alternative route be needed for more than a few days temporary traffic management could be provided on Russell Road to help ensure that it can be safely used.

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130. The applicant has proposed Condition 112 which covers use of the Russell Road via Road 1 during an incident, closure, or significant congestion at the Grand Drive interchange. I consider that the proposed condition is appropriate.

Path Along Upper Oweria Road and Russell Road and Connection to Road 17

131. Proposed Condition 100(c) requires the consent holder to *“Construct a temporary off-road footpath (minimum 1.8m in width and an all-weather surface) along Upper Oweria Road and Russell Road between the Road 17 / Upper Oweria Road intersection and the eastern boundary of the Delmore site.”*
132. I consider that this path is most likely to be used for recreational purposes as it does not provide the most direct link to local shops, schools, public transport, or other likely walking destinations.
133. Auckland Transport's Engineering Design Code Footpaths and the Public Realm sets out the types of materials suitable for footpaths. In rural areas compacted gravel or hoggin paths are acceptable in the right context. I consider that the exact materials and design of the paths can be addressed at Engineering Approval stage and that the proposed condition is appropriate.
134. The Ministry of Education has accrued land on the west side of Upper Oweria Road near the intersection with Wainui Road for a new school (although there is as yet no designation for the school on the land). Providing an suitable walking route between the development and the school will help reduce car dependency for residents of the Delmore site and encourage walking as a travel mode. I therefore recommend that the temporary footpath be extended down Upper Oweria Road to connect to the school.
135. I recommend the following wording;
- “x. The consent holder must, at their own expense, construct a temporary off-road footpath (minimum 1.8m in width and an all-weather surface) along Upper Oweria Road between the intersection with Russell Road and the Ministry of Education site in Upper Oweria Road. This condition will become inoperable if the Ministry of Education site is not designated for use as a school site within two years of consent being granted”.*

Shoulder Widening on Oweria Road and Wainui Road

136. The applicant has proposed Conditions 100(a) and 100(b) which would require the consent holder to upgrade Upper Oweria Road between Road 17 and Wainui Road and Wainui Road between Upper Oweria Road and the Waterloo Creek Bridge respectively to both be upgraded to provide minimum one metre wide sealed shoulders on both sides of the road prior to opening the roundabout at the intersection of Road 17 and Upper Oweria Road.
137. Opening the roundabout will connect the development through to the Auckland Transport road network to the south of the site and will allow residents of the site, particularly those in Stage 2, to access the motorway network via Upper Oweria Road and Wainui Road. As a result I expect that the volume of traffic using these two roads will increase significantly. Shoulder widening will help mitigate potential road safety effects on these roads resulting from the increased volume of traffic using them, and I consider that the proposed conditions are appropriate.
138. Auckland Transport's Engineering Design Code Urban and Rural Roadway Design states that 1.0m wide shoulders are the minimum recommended for most situations. Widening the shoulders will help mitigate potential road safety effects resulting from

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the increased volume of traffic using this road, and in particular risks around loss of control and run-off-road type crashes.

139. It should be noted that widening the shoulders will require ancillary works in the roadside areas involving matters such as extending culvers, relocating roadside drains, regarding the shoulder areas, relocating structures such as road signs or utility poles, potentially relocating underground services (if any), and other works, but I consider that the exact details can be worked out as part of the engineering approval process.

Vehicle Crossings on Road 5 Crossing Bi-directional Cycleway

140. The applicant's drawings show that Collector Roads 5 and 17 have a two-directional off-road cycleway along one side only. This type of layout is most appropriate where one side of the road has a lot less vehicle crossings and intersections than the other.
141. An earlier iteration of the design drawings for Road 5 had 10 vehicle crossings on the west side between chainages 140 and 260.
142. The drawings have subsequently been updated replacing the 10 vehicle crossings with two which serve a JOAL providing rear access to the lots on the western side of Road 5 in this location. I consider that the updated vehicle access arrangements in this location are appropriate where they cross the cycleway.³

Intersection Spacing

143. The side road intersections between Road 5 and Roads 7 and 12 are very closely spaced. This can result in increased crash risk where drivers turning in and out of one intersection conflict with turning drivers at adjacent intersections. The same issue appears on Road 17 at the Road 24 and 28 intersections.

Bus Stops and Other Public Transport Requirements

144. I have been provided a copy of a Power Point presentation dated 17 March 2026 prepared by Auckland Transport's internal public transport specialists which gives information on bus requirements within the Delmore site. My understanding is that this information was provided to the applicant in March.
145. The most recent version of the road drawings prepared by McKenzie and Co. for the development (provided 21 April 2026) show bus stop locations generally according to the locations indicated in the Power Point presentation. In this section I provide traffic engineering specialist comments on the public transport related aspects of the updated drawings, having regard to the Power Point presentation.
146. The Power Point presentation requested that the roundabout at the intersection of the NoR6 Road, Road 5, and Road 6 be designed to allow for U-turn movements by buses. This would facilitate a potential bus route serving Stage 1 of the site before State 2 and the connection through to Upper Oweria Road was opened.
147. The applicant has not provided vehicle tracking drawing showing that a U-turn by a bus is possible at the roundabout. The applicant should be asked to provide this.
148. The Power Point presentation indicates that a pair of bus stops was needed on the NoR6 road east of the roundabout between approximate chainages 540 and 590, but notes that 'careful thought' will need to be given to visibility and treatment adjacent to the cycle lane'.

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149. McKenzie & Co. Drawing 37525-1-3002-Rev G dated 14 April 2026 shows bus stops in this location. I consider that the bus stop on the north side of the NoR6 road near chainage 585 is appropriately located, but more information is needed from the applicant to show that a bus stop, including a shelter can be accommodated next to the cycle path on this site. I consider that the bus stop on the south side near chainage 555 could potentially cause sight distance issues for pedestrians crossing the east leg of the NoR6 road at the roundabout from the south side when a bus is stopped. The applicant should be asked to provide a crossing sight distance (CSD) check and provide an assessment sight lines for pedestrians when a bus is stopped at the proposed stop.
150. The Power Point presentation indicates that a pair of bus stops is needed on the NoR6 road on either side of the roundabout at the intersection with Road 1. These bus stops are indicated on the departure side of the roundabout, which helps prevent sight line issues for pedestrians crossing near the roundabout.
151. McKenzie & Co. Drawing 37525-1-3003-Rev G dated 14 April 2026 shows bus stops in this location. The bus stop on the south side near chainage 995 is located next to a road barrier in the front berm area. This is not appropriate because bus passengers getting on or off the bus at the stop would need to climb over the barrier. This barrier appears to be intended to prevent errant vehicles from going over the headwall of a culvert which passes under the road near chainage 975. I recommend that the applicant investigate moving the barrier to the back berm area and combining it with the pedestrian barrier in this location shown on the drawing.
152. The drawings show a reduced front berm width at the bus stop on the north side of the NoR6 road near the chainage 1095. This may prevent a bus shelter being installed at this stop. The applicant should provide more assessment to confirm this will not be the case as more lane may need to be vested as road from lots 22 to 25 to provide space for a future shelter.
153. The Power Point presentation indicates that provision should be made for a potential future pair of bus stops on Road 1 between approximate chainages 375 and 325. The presentation shows that the bus stops do not need to be built as part of the development, but a pedestrian refuge should be provided when the road is built.
154. McKenzie & Co. Drawing 37525-1-3006-Rev G dated 14 April 2026 shows this pair of bus stops. The bus stop on the east side, near chainage 335 has a road barrier located in the front berm at the stop. I recommend that the applicant investigate moving the barrier to the back berm area and combining it with the pedestrian barrier in this location shown on the drawing.
155. The pedestrian refuge requested by the Point Presentation is not shown in the drawings. This is needed to ensure that bus patrons can cross safely between the two bus stops. Providing this refuge is likely to require localised widening of the carriageway and the vesting of more land as road reserve. The applicant should be asked to provide an assessment of the road safety effects of not providing a pedestrian facility near the stops.
156. The Power Point presentation indicates that a pair of bus stops on Road 5 between approximate chainages 320 and 450. The presentation shows that a pedestrian refuge should be provided along with the stops.
157. McKenzie & Co. Drawing 37525-2-3003-Rev H dated 14 April 2026 shows this pair of bus stops. The bus stop on the north side near chainage 340 is located on the outside

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of a curve. I am concerned that buses may not be able to come parallel to the kerb in this location, resulting in gap between the kerb and the bus which could trip bus passengers as they get on or off the bus. The other stop in the pair has a similar issue, but to a lesser extent. No pedestrian refuge islands are shown on the drawings, but this appears to be due to a potential clash with the intersection with Road 13 which is located between the stops.

158. I consider that the applicant should investigate positioning this pair of bus stops further south, between the Road 15 intersection and JOAL 42 vehicle crossing. I note that this relocation would provide more even spacing between this pair of bus stops and the adjacent pairs in either direction.
159. The Power Point presentation indicates that a pair of bus stops near the roundabout at the Road 5 / Road 17 intersection. McKenzie & Co. Drawings 37525-2-3007-Rev H and 37525-2-3008-Rev H dated 14 April 2026 shows this pair of bus stops.
160. The stop located on the north side of Road 5 near chainage 570 is located next to a road barrier in the front berm area. I recommend that the applicant investigate moving the barrier to the back berm area and combining it with the pedestrian barrier in this location shown on the drawing.
161. The Power Point presentation indicates that a pair of bus stops on Road 17 between approximate chainages 240 and 330, as well as a pedestrian refuge. McKenzie & Co. Drawing 37525-2-3006-Rev H 14 April 2026 shows this pair of bus stops, but does not show the pedestrian refuge island.
162. The pedestrian refuge islands are needed to ensure that bus patrons can cross safely between the two bus stops. Providing this refuge is likely to require localised widening of the carriageway and the vesting of more land as road reserve. The applicant should be asked to provide an assessment of the road safety effects of not providing a pedestrian facility near the stops.

Other Road Drawings Matters

163. The longitudinal gradients of several of the local roads are steep and will discourage active modes. Anything over 8% is considered to potentially discourage walking as a travel mode, including walking to public transport. I note that the applicant's civil and transportation specialists have endeavoured to minimise the number of roads with gradients over 8%, and that in steep topography like that found on the site some roads with steeper gradients are unavoidable.
164. It should be noted that Auckland Transport's Engineering Design Code Footpaths and the Public Realm requires a departure from standards from Auckland Transport for footpaths over 8% gradient. This is normally sought during the Engineering Approval stage and the applicant should be cautioned as an advice note that there is no guarantee a departure will be granted.
165. A turning head, in accordance with the standard engineering detail drawings in Auckland Transport's Transport Design Manual should be provided at the end of Road 10. If this is not provided then vehicles, especially heavy vehicles like rubbish trucks, will need to reverse back along Road 10 in order to exit, and this will have both a traffic safety and operational effect. To address this matter I recommend the following condition of consent;

"x. Before any dwellings adjacent to Road 10 are occupied the consent holder must, at their own expense, construct a vehicle turning head at the south end of Road 10 in

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accordance with the Auckland Council Code of Practice for Subdivision and Development Chapter 3 Transport.”

166. Road 01 will need to be designed to connect to Russell Road in future when the land next to Russell Road is urbanised. The turning head shown in the application drawings at the south end is acceptable for now, but the applicant should be advised that Auckland Transport will require that a specimen design of a future connection to the south showing that that an adequate future connection will be able to be made will be required at Engineering Approval stage and that this may have an impact on road boundaries and levels inside private property.
167. The McKenzie and Co. roading drawings show traffic calming in the form of speed tables on the local roads. While I support the use of traffic calming on these roads to help moderate vehicle operating speeds, I note that some speed tables shown on the drawings are not appropriately located. Some are adjacent to vehicle crossings or parking bays, and it appears that some may be located in locations with an overly steep gradients, and potentially in locations where the driver sight lines to the tables are restricted by over vertical crest curves.
168. The applicant has proposed Condition 107 which would require traffic calming measures shall be provided at 60m intervals on all local roads. Consistent 60 metre spacing may not be achievable in all local roads due to other site constraints like the positions of intersections, vehicle crossings, parking bays, etc. I recommend that the condition be amended as follows to allow more flexibility in spacing;

“107. Traffic calming measures shall be provided at 60m intervals on all local roads, or in other such locations as approved by Auckland Council, and in accordance with Auckland Council Code of Practice for Subdivision and Development Chapter 3 Transport.”
169. Auckland Transport's Practice Note 2: Use of raised devices on the AT Network and Engineering Design Code Traffic Calming contains detailed engineering guidance on the use of traffic calming devices which the applicant should refer to when preparing the detailed design for engineering plan approval.

Disclaimer / Important note:

The views and comments expressed by PTM Consultants within this memorandum are made without prejudice, on the applicant's proposal. Specialists have not conducted a specific review for design and standards compliance. We reserve the right to add to our comments in the future should there be any further changes or information presented. This memorandum has been compiled for the use of Auckland Transport, Auckland Council, and the expert panel only and is not to be amended, used, forwarded or circulated without the written permission of PTM Consultants. It is an express condition of the supply of this information that the recipient is responsible for verifying its content, correctness, and completeness. PTM Consultants accepts no liability or responsibility for any error, loss or damage suffered by the recipient arising out of, or in connection with, the use or misuse of this information.

Nadine Perera (AT)

From: Craig Richards <Craig.Richards@beca.com>
Sent: Wednesday, 22 April 2026 15:35
To: Nadine Perera (AT); Paul Schischka
Cc: Rob Mason
Subject: Re: Delmore

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Hi Nadine,

Here are my comments from a review of the additional information. I have focussed on external transport impacts and mitigation, there may be some cross over with Paul's comments.

Condition 91 Active Modes Link Access Interchange and Along Grand Drive.

The applicant does not agree with including a condition on this matter. In the Commute ITA the trip rate used in traffic modelling assumes "there are future viable active mode routes between the site and these attractions" i.e. that the ped/cycle connection across the Motorway is delivered. On this basis I consider a condition is appropriate in that if the connection is not provided the traffic effects will be more significant than currently planned for. Therefore I support the condition wording as proposed by Paul, it doesn't need to say that it will be delivered by Delmore only that it needs to be in place.

Intersection Design - Russel Road / Upper Orewa Road Intersection

The applicant has suggested line marking which improves the sight distance issue here. It may be worth considering shifting the flush island marking even further north to maximise visibility and whether a raised island would be more effective? Some additional signage on the Upper Orewa Road approach could also help to manage speeds.

Widening of Shoulders on Upper Orewa Road and Wainui Road

Condition 100.(b) now includes the requested widening.

However the advice note below condition 100 would need to be reworded. The note states that the upgrades would not be required if the NoR6 road has been constructed or if upgrades have been undertaken by another party. The NoR6 upgrade would not deliver the road widening on Wainui Road, so this would still need to be delivered by the applicant.

Condition 98

The condition simply states that 'access to the site is constructed and operational', this is too limited and needs to be specific to delivering the NoR6 design of the Grand Drive extension which caters for all modes of travel and can be retained in perpetuity, i.e. does not need to be upgraded to the NoR6 design at a later stage. I do not support a temporary arrangement. I understand the applicant is relying on AT to purchase land that enables construction of this extension to the NoR6 design, as AT has no plan to purchase this land in the short to medium term, I do not see how suitable access can be achieved. As the Grand Drive access will be the primary access, and only access for Stage 1 this needs to be in place prior to occupation of dwellings and it needs to deliver the intended multimodal access function that supports the trip rates assumed in the ITA.

Condition 101

The response states that the applicant is currently reviewing this condition and will provide an update in due course. As far as I am aware this update has not been received. I support the amendments suggested by Paul in his memo.

Let me know if there is anything else you were expecting me to comment on.

Cheers
Craig

Nadine Perera (AT)

From: Rob Mason <Rob.Mason@supportinggrowth.nz>
Sent: Wednesday, 22 April 2026 12:23
To: Nadine Perera (AT)
Subject: RE: Delmore Fast Track #2 - EPA Panel Formal Request for Comment

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Hi Nadine. I've had a look through the amended information provided and set out some comments below. Not a lot of change to my earlier comments

Grand Drive Interchange Connection

1. The Road design and access plans show a direct connection through the Te Ara Hills development as per the SGA alignment as well as an alternative alignment. The direct connection is preferred for the following reasons:
 - a. Better horizontal alignment
 - b. Avoids future disruption to traffic during construction
 - c. The proposed retaining wall would need to be removed and a new wall/embankment constructed, resulting in cost.
 - d. Proposed cross section is narrow with berm widths of 1.8m and 3.0m

Southern Tie-in to Upper Orewa Road

2. South of chainage 340m the NoR6 arterial road is in a fill embankment. The bottom of the vertical sag curve is at ch320 where the road alignment starts to rise to head up to Upper Orewa Road. It's unclear how the termination of the NoR6 arterial will integrate with the proposed Lots 606 and 609 given the road is about 4-5m higher than the existing ground. A
3. Condition 112 requires a turning head to be constructed at the end of the NoR6 arterial. Given the difference in levels at this location, it is unclear how this will integrate with the adjacent lots and accommodate the future connection to the south. The proposed levels need to align with the future NoR 6 arterial connection.
4. Stage 2 – Lots 606 and 609 are positioned immediately alongside the future arterial alignment. This corresponds to the position of the future bridge to connect the arterial to Upper Orewa Road. If these sites are to be developed, the applicant would need to show how the development can integrate with the future levels of the road and the bridge abutments. Design cross-sections would need to be provided to demonstrate that development of these lots will not preclude the construction of the NoR6 alignment to Upper Orewa Road. This needs to allow for sufficient construction area to be able to build the adjacent bridge and abutments.
5. I have not commented on the suitability of the vertical alignment as this will be a decision for Auckland Transport.

Cheers,
Rob

Rob Mason | Technical Engineering Specialist
Te Tupu Ngatahi – Supporting Growth



Nadine Perera (AT)

From: Kang Han (AT)
Sent: Tuesday, 21 April 2026 14:18
To: Nadine Perera (AT)
Cc: Traffic Engineering NorthWest (AT); Jun Park (AT); Jatin Sharma (AT); Antony Hing (AT)
Subject: RE: Delmore Fast Track #2 - EPA Panel Formal Request for Comment

Hi Nadine

Thank you for the updates.

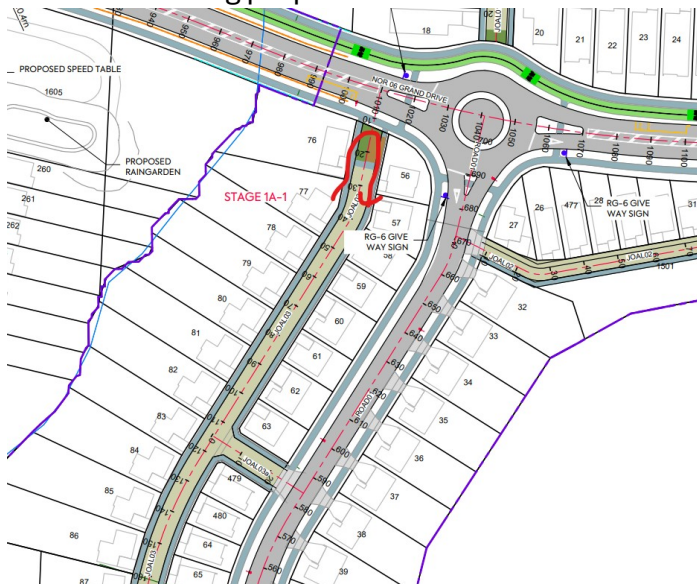
I found some of TE concerns were not addressed in the new drawings, please see the comments below:

1. Speed table placement (previously raised concern):

The current plan shows a significant number of speed tables across the network; however, several appear to be in inappropriate locations. Some are positioned adjacent to driveways and indented parking bays, where speed tables should generally be avoided. In addition, visibility constraints due to steep grades remain a concern and will need to be reassessed once the speed tables are relocated.

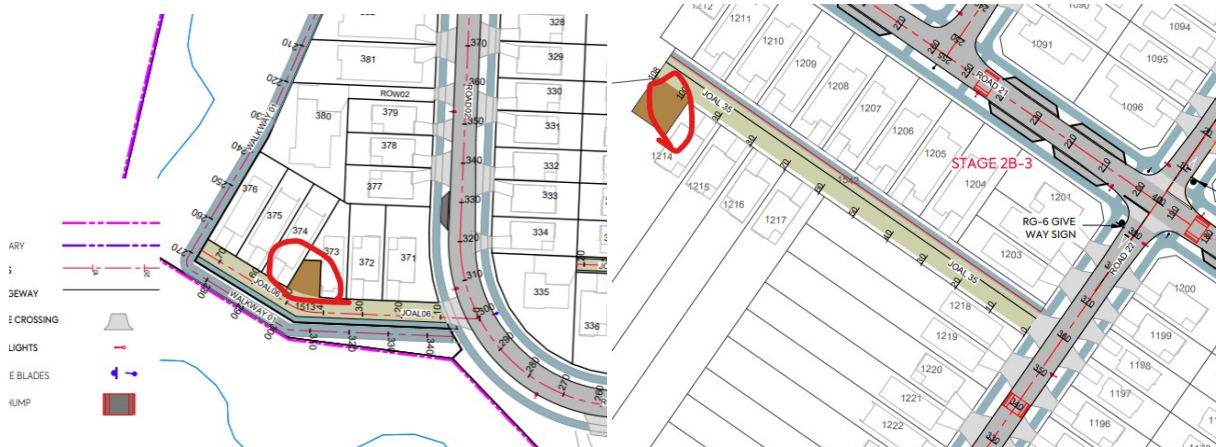
2. JOAL 03 connection to Grand Drive:

The connection to Grand Drive appears to be closed, resulting in JOAL 03 operating as a cul-de-sac. There are several similar cases across the layout, which suggests that some JOAL road classifications may have changed. Could tracking be reviewed to confirm that adequate space is provided for U-turn movements at the ends of these roads, particularly for rubbish trucks accessing properties for bin collection?



3. Missing legend of brown colour area:

It is unclear whether the new brown-coloured areas are intended to represent? please confirm.



4. Paul's comments:

Please also ensure that all of Paul's comments are fully addressed.

Thank you

Kang Han | Transportation Engineer
Traffic Operations | Customer & Network Performance
 Auckland Transport



From: Nadine Perera (AT) <Nadine.Perera@at.govt.nz>

Sent: Tuesday, 21 April 2026 10:52 am

To: Andy Irwin (AT) <Andy.Irwin@at.govt.nz>; Traffic Engineering (AT) <TrafficEngineering@at.govt.nz>; Rob.Mason@supportinggrowth.nz; Bethany Park (AT) <Bethany.Park@at.govt.nz>; Putri Kusumawardhani (AT) <Putri.Kusumawardhani@at.govt.nz>; Katherine Dorofaeff (AT) <Katherine.Dorofaeff@at.govt.nz>; Steve Wrenn (AT) <Steve.Wrenn@at.govt.nz>; Andrew McGill (AT) <Andrew.McGill@at.govt.nz>; Paul Schischka <Paul.Schischka@ptmconsultants.co.nz>; Jimin Hong (AT) <Jimin.Hong@at.govt.nz>; Jubin Gautam (AT) <Jubin.Gautam@at.govt.nz>; Craig Richards <craig.richards@beca.com>; Sean Pearce <sean.pearce@awa.kiwi>; Irene Tulloch (AT) <Irene.Tulloch@at.govt.nz>; Tania Steen (AT) <Tania.Steen@at.govt.nz>; Alayna Fiatau (AT) <Alayna.Fiatau@at.govt.nz>; Kang Han (AT) <Kang.Han@at.govt.nz>; Traffic Engineering NorthWest (AT) <TrafficEngineeringNorthWest@at.govt.nz>; Adrian Grant (AT) <Adrian.Grant@at.govt.nz>; Saul Vingrys (AT) <Saulius.Vingrys@at.govt.nz>

Cc: Tessa Craig (AT) <Tessa.Craig@at.govt.nz>; Hedre Dednam (AT) <Hedre.Dednam@at.govt.nz>

Subject: RE: Delmore Fast Track #2 - EPA Panel Formal Request for Comment

Good morning,

Updated drawings have been provided by the applicant. Please refer the following link emailed separately (attached).

Please note comment is needed by Friday 24 April

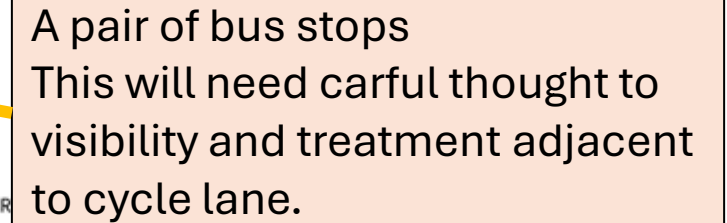
Kind Regards,

Delmore Bus Requirements

17th March 2026

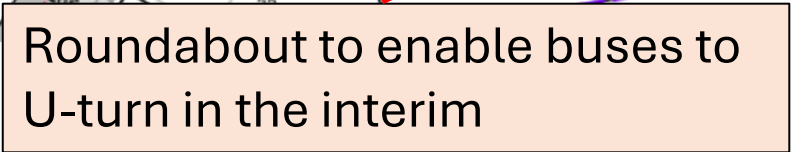
Stage 1

Location	Approx Chainage	Intervention	Notes
Intersection of NOR 6/ Road 5 / Road 6	510	Make roundabout big enough for buses to U-turn using NOR 6	
NOR 6	About 580	A pair of bus stops	Visibility checks Will need pedestrian refuge Cycle lanes – safe for bus passengers
Intersection of NOR 6 (1040) / Road 1	1040	Make roundabout big enough for buses to U-turn using NOR 6	
NOR 6	1100	A pair of bus stops near roundabout - ideally downstream of Roundabout 990 & 1100	Bike lane
Road 1	about 350 southbound about 380 northbound	Design for a pair of bus stops. (not build)	Visibility checks Will need pedestrian refuge Cycle lanes – safe for bus passengers
Russell Road / Road 1 (000)		Ensure that the future intersection can be made suitable for buses. Road 1 to Russell Rd and vice-a-versa	



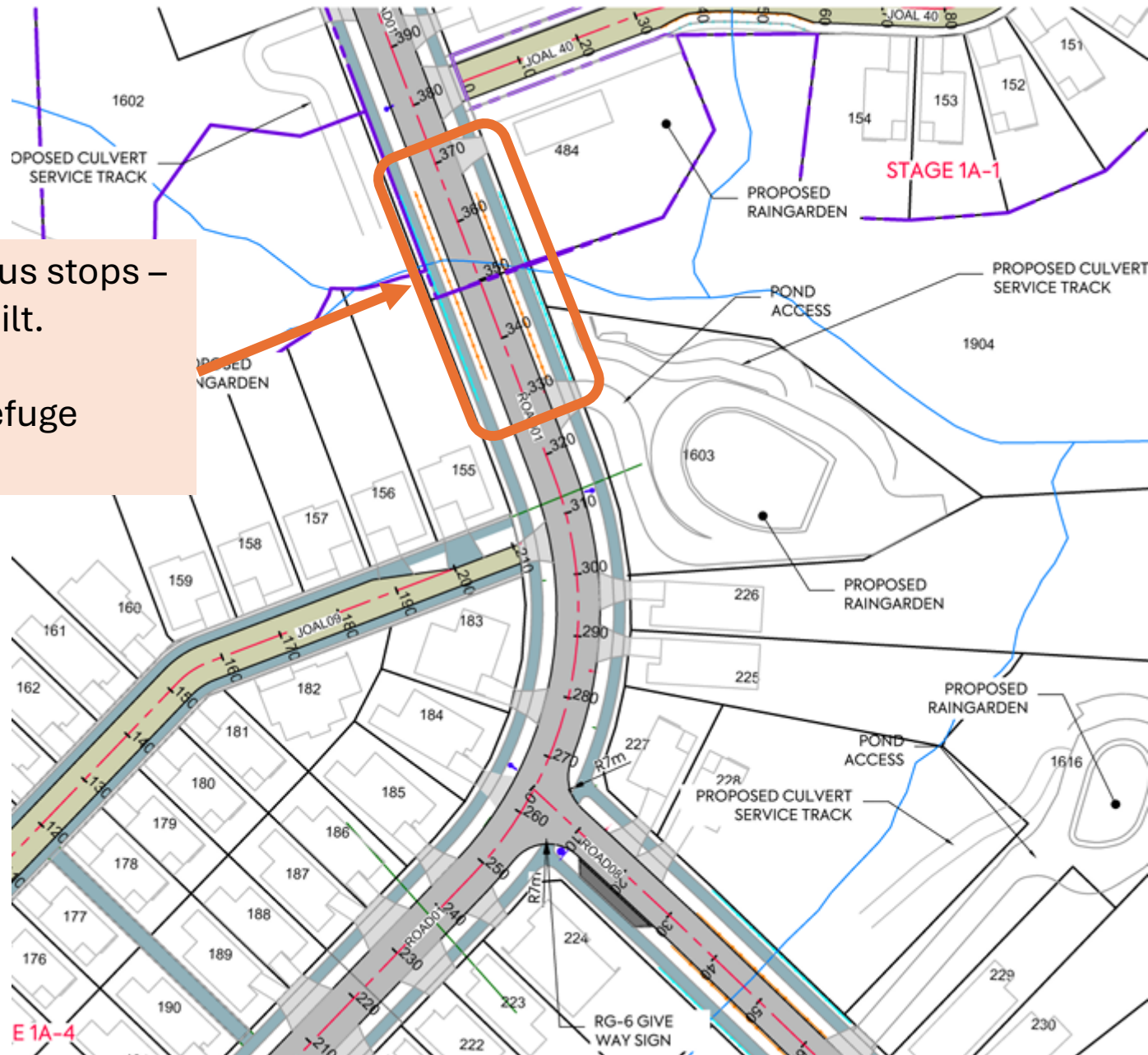
- Roundabout needs to be designed to enable buses to U-turn in the interim until roads are connected through to Upper Orewa Rd

Bus stops



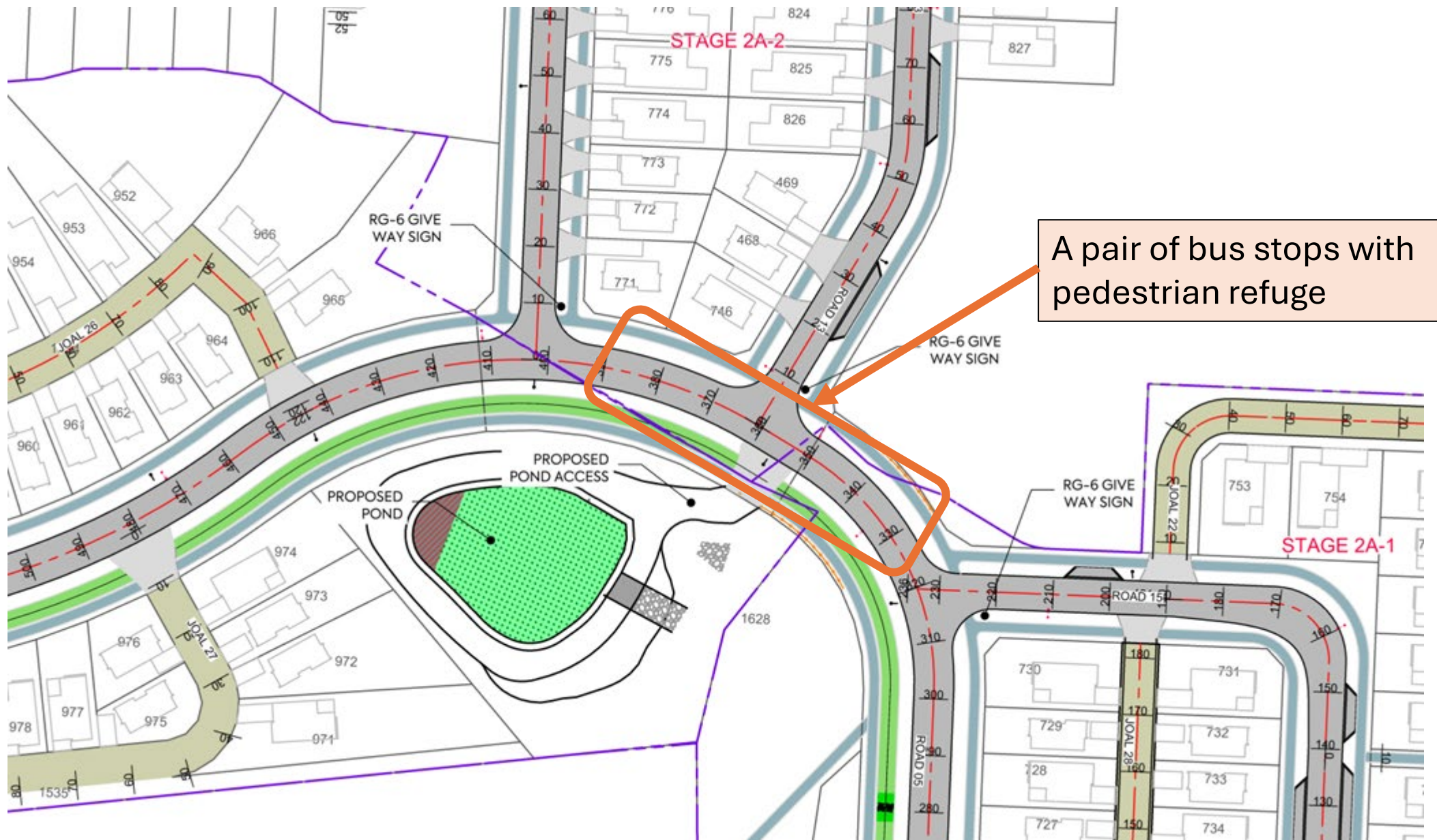
Design for bus future bus stops –
does not need to be built.

However, pedestrian refuge
should be built.



Stage 2

Location	Chainage	Intervention	Notes
Road 5 Sheet 3 - DRW # 3725-2-3003	About 340 (eastward) About 390 (westbound)	A pair of bus stops – Tail to tail with pedestrian refuge	Not cycleway
Either Road 5 or Road 17	About 570 on Road 5 or 750 on Road 17	A pair of bus stops - eastbound on Road 5, southbound on Road 17 As close to junction as possible	Not cycleway
Road 5 / Road 17 roundabout		Ensure roundabout is suitable for bus movements. Road 5 to Road 17 and vice-a- versa	
Road 17 – roads 25	Northbound 290 Southbound 240	A pair of bus stops – Tail to tail with pedestrian refuge	Not cycleway

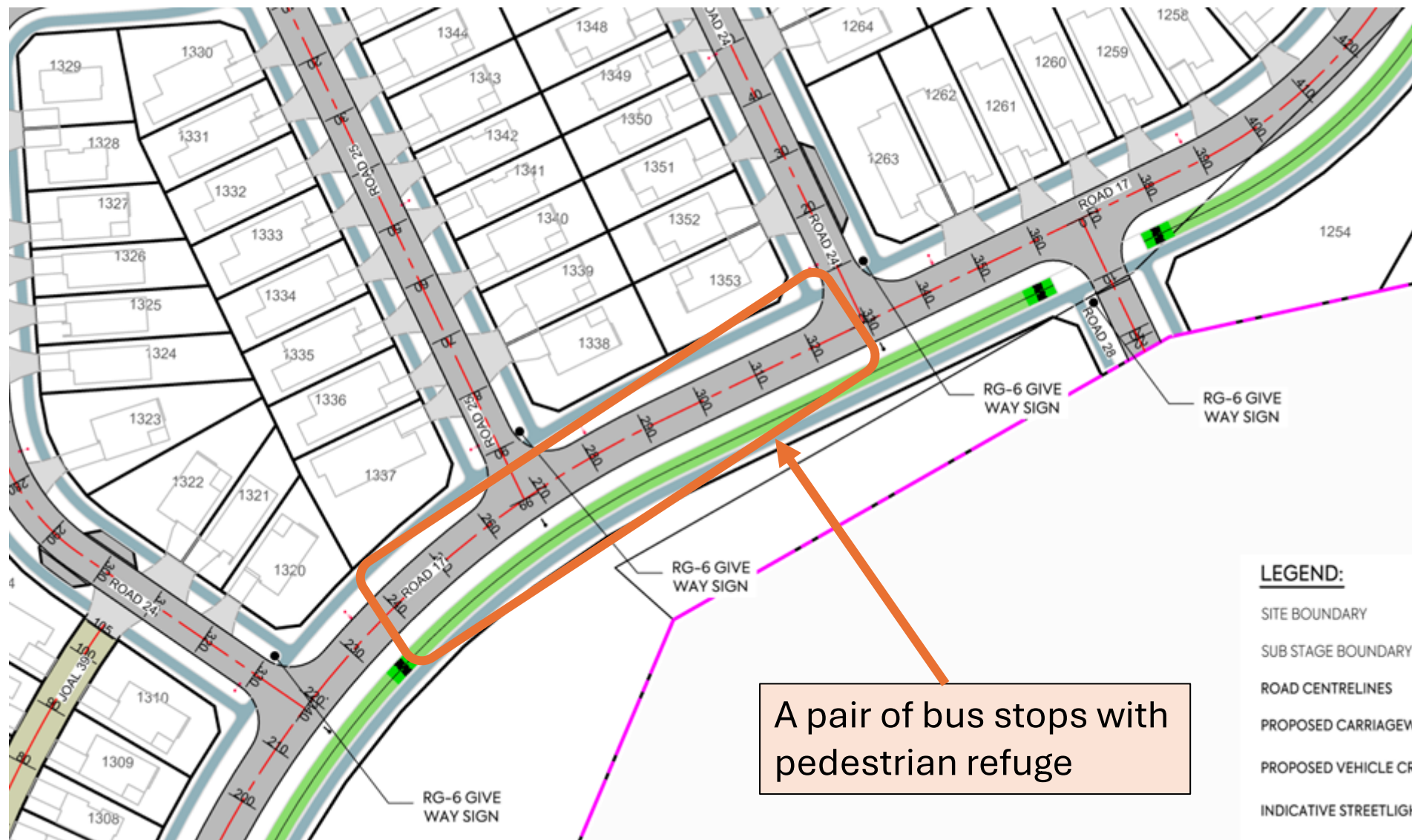




Bus stops

LEGEND:

- SITE BOUNDARY
- SUB STAGE BOUNDARY
- ROAD CENTRELINES
- PROPOSED CARRIAGEWAY
- PROPOSED VEHICLE CROSSING
- INDICATIVE STREETLIGHTS
- ROAD SIGNS / NAME BLADES
- PROPOSED SPEED TABLE
- ROAD BARRIER



Nadine Perera (AT)

From: Steve Wrenn (AT)
Sent: Tuesday, 17 March 2026 09:25
To: Nadine Perera (AT)
Cc: Adrian Grant (AT)
Subject: RE: Delmore Fast Track #2 - Lodged Documents Availability
Attachments: Delmore - Bus Requirements.pptx

Hi Nadine,

Thanks for the links.

Adrain and I discussed bus stop locations and other requirements for public transport. Please note the requirements in the attached are slightly different than previously suggested. There is one less pair of bus stops on Road 17. This is due to getting plans with chainage.

Key Matter:

- Enabling buses to U-turn at the roundabout on NOR 6
- All bus stops need to be design for bus shelters – platforms for shelters but not the shelters.
- For establishing bus stops key aspects are that they should be tail to tail with pedestrian refuge. There will be a need to check for visibility and design for safe pedestrian movement for bus passengers through the cycle lanes.

I note that in Road Drawing for Road 1 (stage 1 - DWG 3725-1-3600) and Roads 5 & 17 (not shown stage 2 – DWG 3725-1-3600) the typical cross-section does not reflect what is shown on the plans. The plans show a cycle lane but this is not reflected in the typical cross-section.

Steve Wrenn – Principal Planner
Network Development – Public Transport Development

Auckland Transport
Level 4, 20 Viaduct Harbour Avenue
Auckland Central, 1010
Steve.wrenn@at.govt.nz

From: Nadine Perera (AT) <Nadine.Perera@at.govt.nz>
Sent: Monday, 16 March 2026 2:35 pm
To: Steve Wrenn (AT) <Steve.Wrenn@at.govt.nz>
Cc: Adrian Grant (AT) <Adrian.Grant@at.govt.nz>
Subject: RE: Delmore Fast Track #2 - Lodged Documents Availability

fasttrack.govt.nz/_data/assets/pdf_file/0032/19787/Appendix-26_-Roading-Drawings-Stage-1.pdf
fasttrack.govt.nz/_data/assets/pdf_file/0033/19788/Appendix-26_Roading-Drawings-Stage-2.pdf

Kind Regards,

Nadine Perera | Principal Planner

Nadine Perera (AT)

From: Irene Tulloch (AT)
Sent: Thursday, 23 April 2026 08:43
To: Nadine Perera (AT)
Cc: Tania Steen (AT)
Subject: RE: Delmore Fast Track #2 - comments on road layout related to proposed road stopping

Hi Nadine

Thank you for the updated plans, Appendix 26a for Stage 1 and Stage 2.

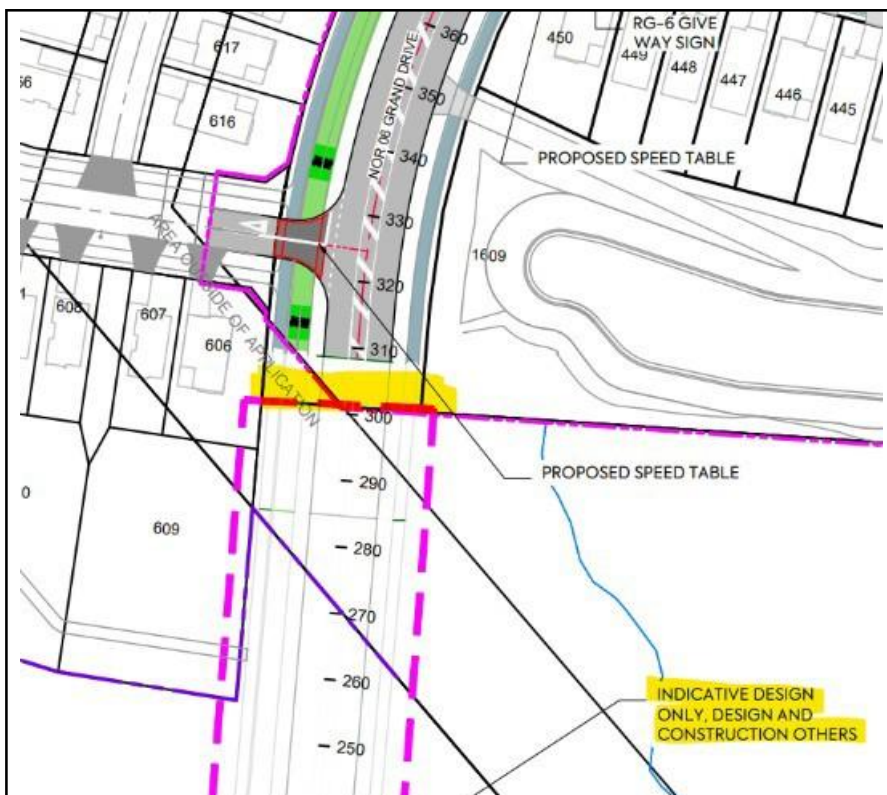
In our recent discussions with Delmore on road stopping actions and stages of the development, we understood they were making a Stage 1A or 2A or similar, to isolate the impacted sections of the unformed road that are proposed to be stopped and become future lots or JOALs.

Also to vest legal road connection in stage 1 to enable progression of road stopping. The folder with new plans does not appear to have made that accommodation.

Stage 1

- Sheet 1 details some road formation on part of paper road for NOR 6 road. We had noted to Delmore previously that formation works will required CAR.
- Sheet 2 details Joal13 being formed up to boundary of paper road.

Nothing in Stage 1 details any road stopping requirement.



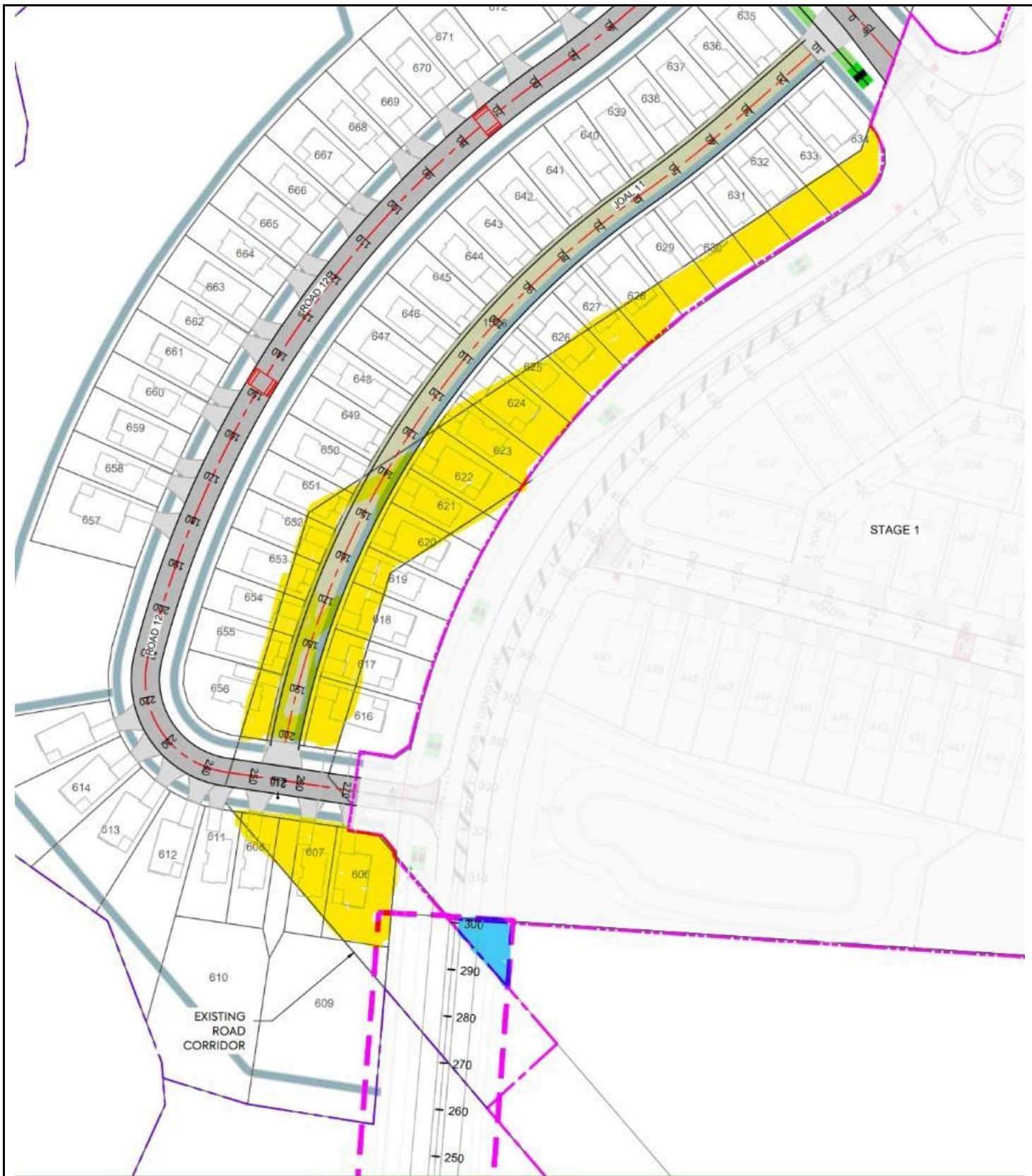
Stage 2

- Sheet 1 – the yellow highlighted area details subdivision lots on the paper road. From our last discussion with Delmore we understood they were putting in a stage 1A or 2A?
To deal with road stopping requirements once the NOR 6 is vested then stopping of the yellow section of paper road to progress

The highlighted triangle area below was raised previously to Delmore. Prior plans noted this was section of land in NOR was to be acquired by others?

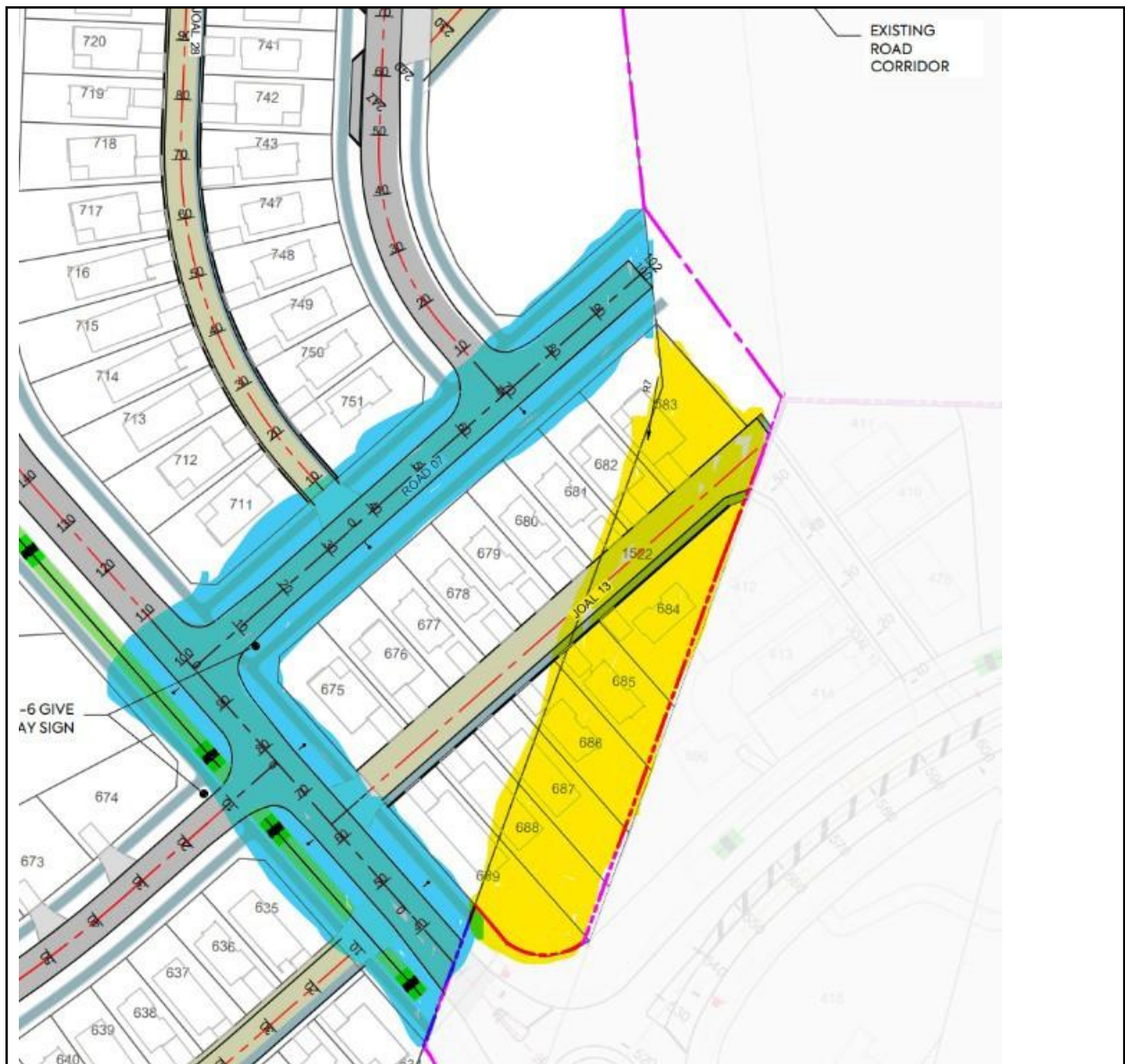
Without the highlighted triangle area as road, it creates a pinch point in the existing paper road and new NOR. This is likely to impact the proposed road stopping for the yellow sections if a full width road is not provided/remaining.

Stage 2 - Sheet 1



- Sheet 2 - the yellow highlighted area details subdivision lots on the paper road. From our last discussion with Delmore we understood they were putting in a stage 1A or 2A?
- The blue highlighted section of new road needs to be vested prior to the yellow section being stopped.

Stage 2 – sheet 2



Ngā mihi | Kind regards Irene

Irene Tulloch | Principal Technical Property Specialist
Property Services | Property, Planning and Place Group

Memo



Project Number	A40080.00
Project	Wainui North School
Date	16 April 2026
Author	Chris Horne
Subject	Review of publicly available information

Incite
PO Box 3082
Auckland 1140
Tel 09 369 1465

To: Gemma Hayes

We have been asked to review publicly available information of the proposed school campus (primary and secondary schools) at Upper Orewa Road, Wainui. The Ministry of Education (Ministry has acquired two of the three sites it required for this school and has been negotiating on the third title). A notice of requirement has not yet been submitted.

Fulton Hogan Private Plan Change and Fast Track Application for Milldale North

The Ministry has been involved in ongoing discussions with Fulton Hogan in regard to its own school plans and potential to cross land currently owned by Fulton Hogan on the north side of Wainui Road since 2022, and as a consequence Fulton Hogan has identified the location of the future school campus in its proposed structure plan to support its private plan change for Milldale North and its Fast-Track referral application on the Fast-Track website that has now been accepted for fast-track.

A comprehensive analysis of the wider environment's qualities, features and characteristics informed the identification of appropriate opportunities and constraints for future development of the Milldale North area which indicated key structural elements of movement and land use as well as specific road cross sections, open space and other place making recommendations. The draft concept structure plan was then used as part of wider stakeholder and public engagement, including with Auckland Council.

Feedback received on the draft concept structure plan was generally supportive. Key aspects of relevance to future development in the area included:

- Take advantage of the opportunity presented by the Orewa River in terms of stormwater, ecological and amenity functions;
- A preference to utilise streets to front major open spaces and esplanade reserves;
- Ensure adequate connections to and from the future education campus and Milldale local centre;
- A need to future proof the ability for buses to utilise a range of street corridors to provide flexibility for future public transport routes; and
- A need to provide separated corridors for walking and cycling that are well-connected to existing parks in Milldale.

The analysis of the site and surrounds, combined with feedback received from a range of stakeholders and technical experts, has informed the development of the Milldale Structure Plan which has formed the basis of a Private Plan Change request. This Structure Plan spatially identifies key structural elements of movement and land use, densities, open space and ecology that are considered important in supporting development and has been used to inform a Masterplan.

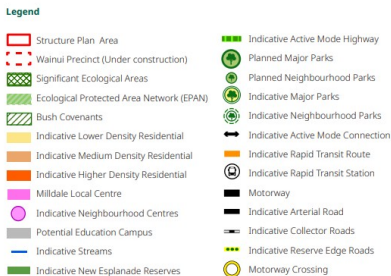


Figure 3: Proposed Wainui Structure Plan

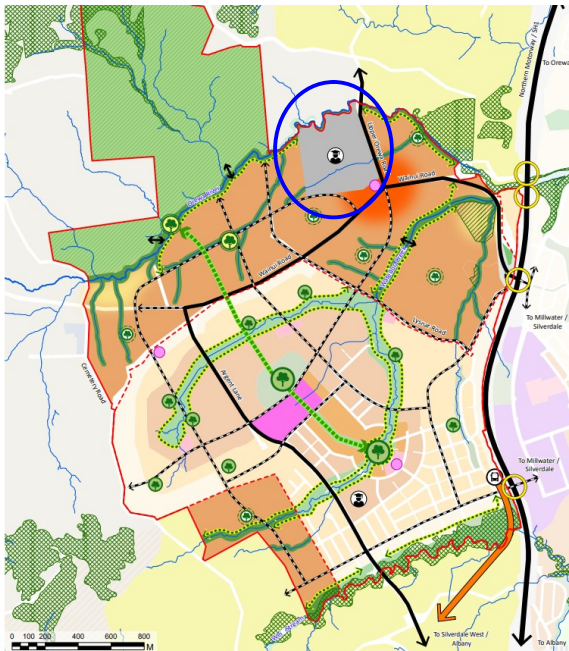


Figure 1: Fulton Hogan Proposed Wainui Structure Plan

The private plan change has been lodged with Auckland Council but is yet to be notified. However, the proposed structure plan appears in the Fast-Track referral application (publicly available on the Fast-Track website)

Supporting Growth North Transport Projects

The proposed school precinct/campus location appears to be widely known in the community and key stakeholders in the area and appears in submissions on the Auckland Transport Notices of Requirement (NoR) for the Supporting Growth North Project, and notably:

- NoR 6 New connection between Milldale and Grand Drive (including Upper Orewa Road) – now Designation 14108
- NoR 10 Wainui Road Upgrade – now Designation 14109

The proposed school location is identified in the s42A report for the NoRs still publicly available on the Auckland Council website given the location was clearly identified in the submission on the NoRs by the Ministry of Education (copy attached).

Submissions

Matters raised by submissions specifically related to the urban design of NOR 10 included:

- Submitter Genevieve A Rush-Munro, Frant A Clendon, Genrus Family Trust (#5) are concerned with the lack of integration within the NOR of Fulton Hogan's structure plan, noting that their property is proposed to be a local centre adjacent to the school and intersection.

"Concepts include the development of the Submitter's land for a new neighbourhood centre to service Milldale North, shown in Figure 3."



Figure 22. Excerpt of Fulton Hogan plan from submission #5

"The Submitter believes key local community opportunities have not been identified and addressed, and in particular future land use options for its property."

This submission is addressed by earlier comments on the need for integration with future urban development at 1.4.1.

Figure 2: Extract form s42A report (Urban Design Comments) on NoR 10 Wainui Road Upgrade, including the Fulton Hogan proposed structure plan and school camps location

Delmore Fast-Track Applications

The school location is also specifically identified in a proposed structure plans in withdrawn and relodged Delmore Fast-Track Applications included on the Fast-Track website:

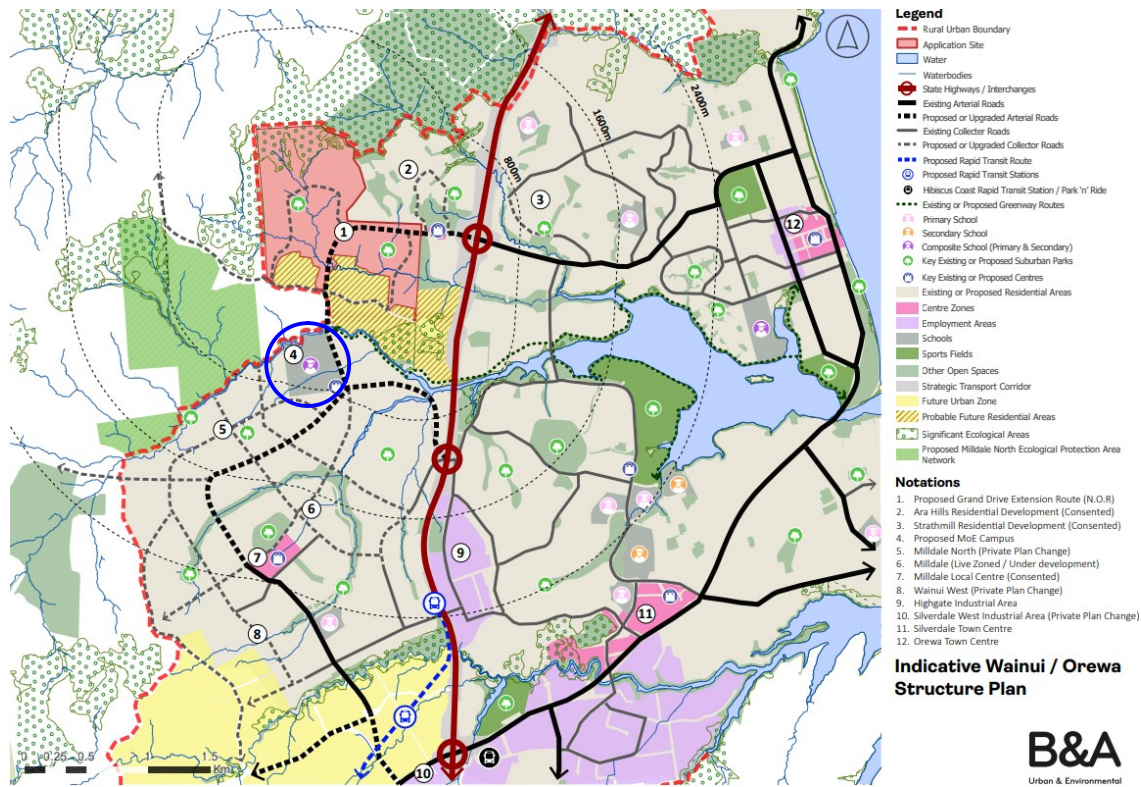


Figure 3: Appendix 13 to withdrawn Delmore Fast-Track Application

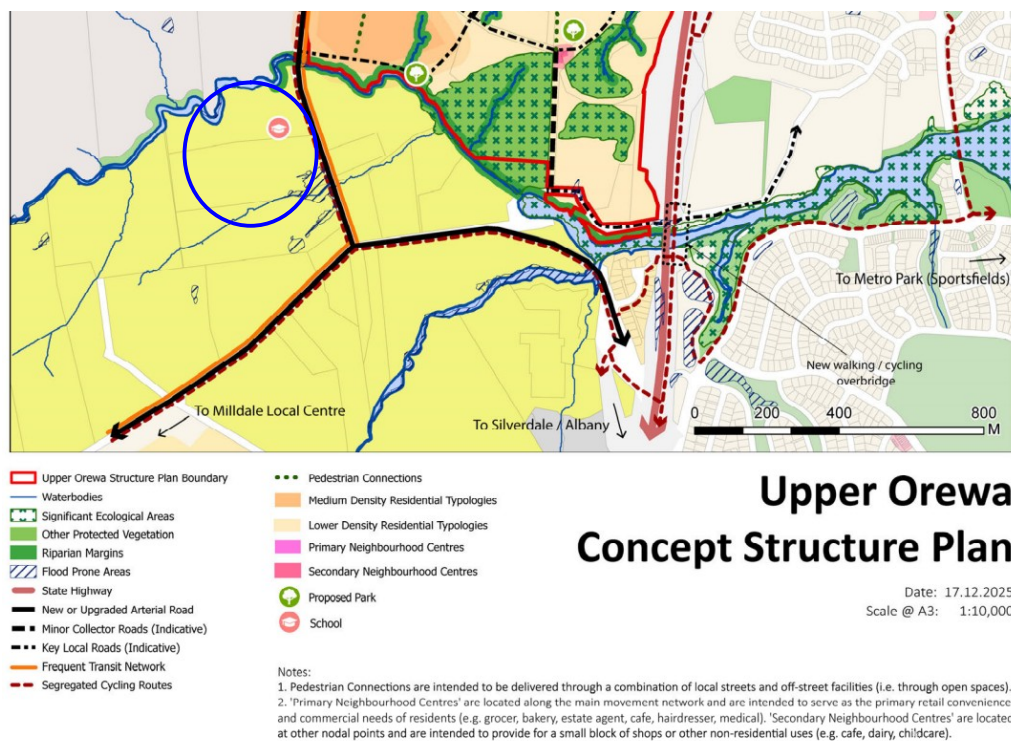


Figure 4: Appendix 14 to 2026 resubmitted Delmore Fast-Track Application

National Education Growth Plan 2023

The National Education Growth Plan 2030 (NEGP) released in 2019 and the subsequent update in 2021 refer to the need to acquire land for a secondary school in Wainui, but no locations is shown.

Online and Official Information Act (OIA) Search

These sources did not include any specific references to a location for a new secondary school in Wainui.

Summary

The Minister is yet to lodge a Notice of Requirement for the proposed Wainui school campus. However, its location is identified on publicly available information including the Wainui North and Delmore Fast-Track application documents and submissions reports on the SGA North Auckland Transport Notices of Requirement (now designations). Delmore themselves have identified the location and referred to it in their Fast-Track applications.

Attachments:

- A: Extracts from SGA North Project s42A report, Milldale North Fast Track Application and Delmore Fast-Track Applications (public information)
- B: Milldale North Masterplan – Fast-Track Referral Application (Attachment E)
- C: Indicative Wainui Orewa Structure Plan – Withdrawn Delmore Fast-Track Application (Appendix 13)
- D: Concept Structure Plan – Relodged Delmore Fast Track Application (Appendix 14).
- E: Ministry of Education submission on SGA North Project Notices of Requirement

Delmore: Proposed Consent Conditions

- 1.0 General
- 2.0 Land Use (s9)
- 3.0 Subdivision (s11)
- 4.0 Streamworks Conditions (s13)
- 5.0 Water Permit for Dewatering/Diversion of Groundwater (s14)
- 6.0 Stormwater Discharge Permit (s15)
- 7.0 Wastewater Discharge Permit (s15)
- 8.0 Air Discharge Permit (s15)
- 9.0 Archaeological Authority

The following consent conditions are proposed for the Delmore substantive application under the Fast-track Approvals Act 2024.

1.0 General

1.1.1 Activity in accordance with application

1. The consent holder must undertake the works in general accordance with the application formally received by the Environmental Protection Authority on the 23 December 2025, and the following documents. In the event that any of the provisions of the following documents conflict with the requirements of these conditions of consent, these conditions of consent must prevail.
 - Application form and Assessment of Environmental Effects and Statutory Analysis prepared by Barker & Associates Ltd titled “*Delmore – 88, 130, 132 Upper Ōrewa Road and 53A, 53B and 55 Russell Road, Ōrewa*” and dated December 2025; and
 - The following reports, plans and further responses listed at **Attachment 1**.

1.1.2 Consent Lapse

2. Under section 125 of the RMA, these consents lapse eight years after the date they are granted, unless:
 - (a) The consents are given effect to; or
 - (b) The council extends the period after which the consents lapse.

1.1.3 Consent Duration

3. Resource consents for streamworks, groundwater diversion/dewatering, stormwater discharge, wastewater discharge and discharge to air expire 35 years from the date the consent is granted, unless it has lapsed, been surrendered, or cancelled at an earlier date pursuant to the RMA.
4. Resource consents for bulk earthworks expire 15 years from the date the consent is granted, unless it has lapsed, been surrendered, or cancelled at an earlier date pursuant to the RMA.

1.1.4 Monitoring Deposit

5. The consent holder must pay the Auckland Council an initial consent compliance monitoring charge of \$3,000 (inclusive of GST), plus any further monitoring charge or charges to recover the actual and reasonable costs incurred to ensure compliance with the conditions attached to these consents.

Advice Note: The initial monitoring deposit is to cover the cost of inspecting the site, carrying out tests, reviewing conditions, updating files, etc., all being work to ensure compliance with the resource consents. In order to recover actual and reasonable costs, monitoring of conditions, in excess of those covered by the deposit, these will be charged at the relevant hourly rate applicable at the time. The consent holder will be advised of the further monitoring charge. Only after all conditions of the resource consents have been met, will Auckland Council issue a letter confirming compliance on request of the consent holder.

Pre-commencement conditions

1.1.5 Construction Management Plans

6. At least 20 working days prior to the commencement of activity for any stage or sub-stage of the development, the management plans required under the following conditions must be submitted to Council for certification.

- (a) A Construction Management Plan (CMP) – see Condition 2.1.2 of land use consent;
- (b) An Erosion and Sediment Control Plan (ESCP) – see Condition 15 of land use consent;
- (c) A Construction Air Quality Management Plan (CAQMP) – see Condition 18 of land use consent;
- (d) A Construction Traffic Management Plan (CTMP) – see Condition 17 of land use consent;
- (e) A Construction Noise and Vibration Management Plan (CNVMP) – see Condition 19 of land use consent;
- (f) A Chemical Treatment Plan (ChTMP) – see Condition 20 of land use consent;
- (g) A Tree Management Plan (TMP) – see Condition ~~3027~~ of land use consent;
- (h) A Fauna Management Plan (FMP) – see Condition ~~3128~~ of land use consent;
- (i) An Adaptive Management Plan (AMP) – see Condition 21 of land use consent; and
- (j) A Settlement Monitoring Plan (SeMP) – see Condition ~~4744~~ of land use consent; and
- (k) A Stream Works Management Plan (SWMP) – see Condition ~~191466~~ of the stream works consent.

Advice note: Management Plans shall be sent to monitoring@aucklandcouncil.govt.nz.

7. The management plans required by Condition 6 may be separate documents or may form part of the CMP. Management plans may be submitted in parts or in sub-stages to reflect the staged implementation of the project. Each stage must be certified by Council.
8. A copy of the CMP, SWMP and the ESCP (and any updates to these documents) shall be provided to Ngāti Manuhiri, Te Kāwarau ā Maki, te Runanga o Ngāti Whātua, and Ngaati Whanaunga at the same time as they are provided to Auckland Council.

Commented [CM1]: Response to DOC feedback from previous application.

1.1.6 Pre-start Meeting

9. For each of Stage 1 and Stage 2, prior to the commencement of any works within the area covered by that Stage (or sub-stage), the consent holder must hold a pre-start meeting that:
- (a) Is located on the subject site;
 - (b) Is scheduled not less than five (5) days before the anticipated commencement of any enabling works, construction and/or earthworks;
 - (c) Includes the relevant Auckland Council representative(s);
 - (d) Includes representation from the contractors who will undertake the works and any Suitably Qualified and Experienced Professionals (SQEPs) if required by other conditions; and
 - (e) Includes the archaeologist approved to oversee the project works covered by the Archaeological Authority obtained for the project works.
10. The meeting must discuss the erosion and sediment control measures and must ensure all relevant parties are aware of and familiar with the necessary conditions of this consent. The following information must be made available at the pre-start meeting:
- (a) Timeframes for key stages of the works authorised under this consent;
 - (b) Resource consent conditions;
 - (c) The finalised Erosion and Sediment Control Plan required by Condition 15; and
 - (d) The Chemical Treatment Management Plan required by Condition 20.
11. The consent holder will invite Ngāti Manuhiri, Te Kāwarau ā Maki, te Runanga o Ngāti Whātua, and Ngaati Whanaunga to attend the pre-start meeting no less than 10 working days before the scheduled meeting. The purpose of the meeting is to discuss cultural induction and monitoring, archaeological monitoring, the erosion and sediment control measures, earthworks methodologies, stormwater management, relevant management plans, timeframes for the work and to ensure all relevant parties are aware of and familiar with the necessary conditions of this consent. The following information must be made available at the pre-start meeting:
- Timeframes for key stages of the works authorised under this consent;
 - Name and contact details for key contractors and SQEPs (as required);
 - Resource consent conditions;
 - Final or draft copies of the management plans listed in Condition 6;
 - Any cultural induction and monitoring material supplied to the consent holder by or on behalf of Ngāti Manuhiri, Te Kāwarau ā Maki, te Runanga o Ngāti Whātua, and Ngaati Whanaunga before the meeting;
 - A copy of the Archaeological Authority obtained for the works; and
 - Confirmation from the consultant acting for consent holder that the contractor's Public Liability cover, and Health & Safety Plan / policy have been viewed and found satisfactory.

Advice Note: To arrange the pre-construction meeting please contact Auckland Council to arrange this meeting on email at monitoring@aucklandcouncil.govt.nz.

1.1.7 Cultural Monitoring

12. The consent holder must invite Ngāti Manuhiri, Te Kāwarau ā Maki, te Runanga o Ngāti Whātua, and Ngaati Whanaunga to attend each of the following activities at least 10 working days before the activity begins specifically to carry out cultural monitoring and observation:
- (a) Commencement of Stage 2 topsoil strip;
 - (b) Commencement of Stage 2 topsoil strip;
 - (c) Commencement of works within the area covered by consent notice 10576706.2; and
 - (d) If any archaeological sites or artefacts are discovered per Condition [6259](#).

Ngāti Manuhiri, Te Kāwarau ā Maki, te Runanga o Ngāti Whātua, and Ngaati Whanaunga shall be notified no later than 15 working days after the completion of each of the activities set out in Condition 12(a)-(c).

2.0 Land Use (s9)

2.1.1 Consent Holder

13. The land use consent is to attach to the consent holder, Vineway Limited. The consent holder may transfer the whole or part of its interest in the consent to any other person and must provide written notice of the transfer to Auckland Council.

Advice Note: This purpose of this condition is to expressly provide for the land-use consent to attach to the applicant, in accordance with Section 134 of the Resource Management Act.

2.1.2 Construction Management Plan

14. At least 20 working days prior to the commencement of activity for any stage or sub-stage of the development, the consent holder must prepare and submit to Auckland Council for certification, a Construction Management Plan (CMP). The purpose of the CMP is to detail the management procedures and construction methods to be undertaken to avoid, remedy or mitigate potential adverse effects on the environment arising from earthworks and construction works. The CMP must include the following as applicable to the project or project stage.

- (a) Details of the site manager, including their contact details;
- (b) The location of a notice board that clearly identifies the name, telephone number and address for service of the site manager;
- (c) Construction methodology;
- (d) An outline construction programme of the works;
- (e) Measures to be adopted to maintain the land in a tidy condition in terms of disposal/storage of rubbish, storage and unloading of building materials and similar construction activities;
- (f) Measures to ensure that no rubbish, fuel, solvents, concrete wash-down material or other related materials enter the freshwater environment;
- (g) Location of workers' offices, conveniences and parking;
- (h) Procedures for avoiding the deposit of soil debris on public roads, and procedures for the removal of soil debris and demolition and construction materials from public roads and places;
- (i) Location and layout of construction yards, including associated buildings, fencing and site access;
- (j) Means of maintaining safety of the general public;
- (k) Any cultural induction and/or monitoring material provided in accordance with Condition 11 and 12, which must be appended to the CMP.

2.1.3 Erosion Sediment Control Plan

15. At least 20 working days prior to the commencement of bulk earthworks for any stage or sub-stage of the development, the consent holder must prepare and submit to Auckland Council for certification, a final Erosion and Sediment Control Plan (ESCP). The ESCP(s) must be prepared in accordance with the draft ESCP submitted with the application, and in accordance with *Auckland Council Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Incorporating Amendment 2* any amendments to this document (GD05). The ESCP must contain sufficient details to

address the following matters:

- (a) Specific erosion and sediment control measures for the earthworks (location dimensions, capacity), including the location of any sediment retention ponds (SRPs), decanting earth bunds, super silt fences, silt fence clean and dirty water diversion bunds and stabilized construction entrances;
- (b) Supporting calculations and design drawings as necessary, including confirmation ~~of 2% vs 3% SRPs where required;~~ that all SRPs are to be constructed based on a 3% criteria;
- (c) Details of construction methods;
- (d) Monitoring, maintenance and inspection requirements;
- (e) Catchment boundaries and contour information as necessary;
- (f) Identify location of stabilised construction entrances; and
- (g) Details relating to the management of exposed areas (e.g. grassing, mulching).

Commented [CM2]: Updated to address comments from AC earthworks team.

Advice note: The above ESCP requirement relates to bulk earthworks stages. Additional ESCPs are required at subdivision stage for civil works.

16. Within 10 working days following implementation and completion of the specific erosion and sediment controls required by the ESCP (referred to in Condition 15) and prior to the commencement of the earthworks activity, the consent holder must provide to Auckland Council written certification prepared by a SQEP confirming that the erosion and sediment control measures have been constructed in accordance with GD05.

Advice Notes: Certification of the sediment and erosion control structure should contain sufficient details to address the following matters:

- *Details on the contributing catchment area;*
- *Retention volume of structure (dead storage and live storage measured to the top of the primary spillway);*
- *Dimensions and shape of structure;*
- *Position of inlets/outlets; and*
- *Details regarding the stabilisation of the structure.*

2.1.4 Construction Traffic Management Plan

17. At least 20 working days prior to the commencement of activity for any stage or sub-stage of the development, the consent holder must prepare and submit to Council for certification a Construction Traffic Management Plan (CTMP) in accordance with the Auckland Council's requirements for CTMPs and the New Zealand Transport Agency's Code of Practice for Temporary Traffic Management. The purpose of the CTMP is to ensure that during construction the surrounding road network (including the footpaths) operates safely and efficiently for all road users including existing residents and pedestrians, and that internal construction traffic movements operate safely and efficiently. The CTMP plan must contain sufficient details to address the following matters:

- (a) Construction dates and hours of operation including any specific hours for traffic

congestion/noise outside the construction hours in Condition [4441](#);

- (b) Truck route diagrams both internal to the site and external to the local road network;
- (c) Temporary road closure and traffic management signage/details for both pedestrians and vehicles to appropriately manage the interaction of these road users with heavy construction traffic;
- (d) Details of site access/egress over the entire construction period. Noting that all egress points to be positioned so that they achieve appropriate site distance as per the Land Transport Safety Authority "Guidelines for visibility at driveways" RTS-6 document;
- (e) Details of staging areas / work area;
- (f) Details of vehicle cleaning facilities within the site to avoid mud and other material being dropped on the road; and
- (g) Location of construction vehicle parking onsite.

2.1.5 Construction Air Quality Management Plan

18. At least 20 working days prior to the commencement of activity for any stage or sub-stage of the development, the consent holder must prepare and submit to Council for certification a Construction Air Quality Management Plan (CAQMP). The objective of the CAQMP is to avoid as far as practicable, offensive or objectionable dust, arising from construction activities beyond the boundary of the project site. The CAQMP must address the following matters as a minimum:

- (a) Description of the works, anticipated equipment/processes, and durations.
- (b) Periods of time when emissions of dust might arise from construction activities.
- (c) Identification of sensitive land uses likely to be adversely affected by emissions of dust from construction activities.
- (d) Methods for mitigating dust that may arise from the construction site, potentially including but not limited to:
 - Controlling vehicle speeds
 - The use of vacuum sweeping (hard paved areas)
 - Water suppression
 - Restabilising ground cover on exposed earth by way of revegetation or geotechnical cloth (or similar) and wheel washes for vehicles at exit points.
- (e) Methods for undertaking and reporting on the results of daily inspections of construction activities that might give rise to dust.
- (f) Procedures for maintaining contact with stakeholders, notification of proposed construction activities and handling complaints about dust or other air quality matters.
- (g) Identification of contingency measures to address verified effects on neighbouring property in the event of a process malfunction or accidental dust discharge.
- (h) Contact numbers for key construction staff responsible for managing air quality during construction.

2.1.6 Construction Noise and Vibration Management Plan

19. At least 20 working days prior to the commencement of activity for any stage or sub-stage of the development, the consent holder must prepare and submit to Council for certification a Construction Noise and Vibration Management Plan (CNVMP). The objective of the CNVMP is to identify and implement the best practicable option to minimise adverse construction noise and vibration effects. The CNVMP must be prepared with reference to Annex E of NZS 6803:1999 Acoustics – Construction Noise and must address the following matters as a minimum:

- (a) Applicable site noise and vibration criteria, including the criteria in Condition [4542](#);
- (b) Programme of works and hours of operation;
- (c) Identification of surrounding noise and/or vibration sensitive receivers;
- (d) Details of the specific **monitoring** management and mitigation measures required to comply with the relevant noise and vibration criteria;
- (e) The requirement to provide written communication to occupants of all immediately neighbouring buildings prior to the commencement of activities on site. The written communication shall set out:
 - A brief overview of the construction works;
 - The working hours and expected duration;
 - All mitigation measures to be implemented;
 - The procedure for recording concerns/complaints regarding noise and vibration;
 - The procedure for noise and vibration monitoring where concerns are raised by receivers; and
 - Contact details for site personnel for any concerns regarding noise and vibration.

Commented [CM3]: Added in response to AC - noise and vibration

2.1.7 Chemical Treatment Plan

20. At least 20 working days prior to the commencement of activity for any stage or sub-stage of the development, the consent holder must prepare and submit to Council for certification a Chemical Treatment Management Plan (ChTMP). The ChTMP must be prepared in general accordance with Auckland Council Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Incorporating Amendment 2 (GD05). The ChTMP must include as a minimum:

- (a) Specific design details of a chemical treatment system based on a rainfall activated methodology for the site's sediment retention ponds, decanting earth bunds, or any other approved impoundment devices;
- (b) Monitoring, maintenance (including post storm) and contingency programme (including a record sheet);
- (c) Details of optimum dosage (including assumptions);
- (d) Results of initial chemical treatment trial;
- (e) A spill contingency plan; and
- (f) Details of the person or bodies that will hold responsibility for long term operation and maintenance of the chemical treatment system and the organisational structure which will support this system.

21. All sediment retention ponds and any other impoundment devices, must be chemically treated in accordance with the ChTMP required by Condition 20. All measures required by the ChTMP must be put in place prior to commencement of the earthworks activity and be maintained for the duration of the earthworks activity.

2.1.8 Adaptive Management Plan

- ~~22. At least 20 working days prior to the commencement of~~At least 20 working days prior to the commencement of earthworks for any stage or sub-stage of the development, the consent holder must prepare and submit to Council for certification a final Adaptive Management Plan (AMP) for all earthworks which are to be undertaken throughout the full duration of consent. The AMP must be in general accordance with the draft AMP submitted with the application and referenced under Condition 1, and must be prepared in general accordance with Auckland Council's guideline document "Erosion and Sediment Control Adaptive Management Plan Discussion Document", July 2020. The AMP must address monitoring requirements and changes to management procedures in response to the results of monitoring.

23. All monitoring and management procedures as detailed within the certified Adaptive Management Plan required by condition 22, and any subsequent revisions, must be implemented on an ongoing basis throughout the duration of all earthworks activities on site.

Advice Note: The AMP is a live document, and updates are expected to address unforeseen circumstances or changes in the earthworks methodology as the site responds though its adaptive monitoring regime, to ensure sediment discharges are minimised and the potential for significant adverse effects are avoided.

24. An earthworks area which has been stabilised as a result of a trigger level exceedance or a management response as defined and required by the certified Adaptive Management Plan (required under condition 22) and any subsequent revisions approved by the Council, can only be re-opened for earthworks on the written approval of the Council.

25. As a result of observed inefficiencies upon site inspection or identified within the site reporting, Council may request that the Adaptive Management Plan be updated to address those inefficiencies. If such a request is made by the Council, the revised plan must be submitted to the Council within 5 working days of the request. The updated AMP must not be implemented without the Council's approval.

- ~~22. activity for any stage or sub-stage of the development, the consent holder must prepare and submit to Council for certification, an Adaptive Management Plan (AMP) for all earthworks which are to be undertaken throughout the full duration of consent. The AMP must address monitoring requirements and changes to management procedures in response to the results of monitoring, and must include but is not limited to, the following details:~~

- ~~(a) Pre construction Baseline monitoring containing the in stream results for turbidity and /or total suspended solids (TSS) within the receiving environment;~~
- ~~(b) Baseline monitoring results from an appropriate location;~~
- ~~(c) Weather forecasting and monitoring;~~
- ~~(d) Trigger levels for water quality and rainfall events (actual and forecasted events);~~
- ~~(e) Ongoing monitoring and sampling regime for the receiving environment, including turbidity and~~

Commented [CM4]: Updated in response to AC earthworks. Draft AMP has now been prepared.

~~/or TSS monitoring downstream within the receiving environment; and~~

~~(f) Management responses when a trigger level is exceeded.~~

2.1.9 Culvert Management and Monitoring Plan

~~23-26.~~ At least 20 working days prior to the commencement of any vegetation clearance within the site, the consent holder must prepare and submit to Council for certification an Culvert Management and Monitoring Plan to manage the risk of blockage of the NZTA culvert from residual slash, debris, or sediment during construction activities.

~~24-27.~~ The certified Culvert Management and Monitoring Plan must be implemented for the duration of construction works and shall remain in effect until the development is fully built out and the site has been stabilised to the satisfaction of Council.

~~25-28.~~ Should the Culvert Management and Monitoring Plan identify that accelerated scour or erosion has been observed, the consent holder must consult with NZTA to determine whether further mitigation is necessary for the culvert. This may be through the installation of a relief inlet riser (consistent with NZTA P46 standard design) and/or additional embankment interface reinforcement/resilience measures.

2.1.10 Geotechnical Earthworks Review

~~26-29.~~ At least 10 working days prior to the commencement of works for any stage or sub-stage of the development, the consent holder must provide a detailed construction methodology endorsed by a chartered geo-professional who must provide written confirmation of the review. The methodology must include earthworks, boundary works and installation of slope protection measures in accordance with the recommendations provided within the Geotechnical Report, referenced in Condition 1 and submitted to Auckland Council. No bulk earthworks onsite are permitted prior to written confirmation that the detailed construction methodology has been reviewed and accepted by the Council.

Advice note: The ~~earthworks-detailed~~ construction methodology is required to ensure stability is maintained throughout the civil works stage of the development.

Commented [CM5]: Updated in response to AC geotechnical

2.1.11 Tree Management Plan

~~30.~~ At least 20 working days prior to the commencement of any vegetation clearance works for any stage or sub-stage of the development, the consent holder must prepare and submit to Council a final Tree Management Plan (TMP) for certification. Council must respond to the request within 20 working days, or the TMP is deemed to be certified. The purpose of the TMP is to manage arboricultural effects on vegetation identified within the Arboricultural Report and to specify procedures for restricting the spread of kauri dieback. Measures for kauri dieback management must include:

- (a) Identification and mapping of all kauri trees within or adjacent to the works area and establishment of a Kauri Contamination Zone;
- (b) Implementation of vehicle, machinery, equipment and footwear hygiene procedures for any works undertaken within the Kauri Contamination Zone to prevent the spread of contaminated soil and organic material;
- (c) Installation and use of wash-down or cleaning facilities for vehicles, machinery and equipment entering or leaving the Kauri Contamination Zone;
- (d) Management of earthworks to ensure that soil and organic material disturbed within the Kauri

Contamination Zone is not transported beyond that area, unless it is disposed of at an approved landfill; and

~~(a)(e)~~ Adoption of best practice kauri dieback management protocols, including those relating to tree removal, pruning, and machinery hygiene.

2.1.12 Fauna Management Plan (FMP)

~~27-31.~~ At least 20 working days prior to the commencement of works for any stage or sub-stage of the development, the consent holder must prepare and submit to Council for certification a final FMP. The FMP must be in general accordance with the draft FMP submitted to Council and approved under Condition 1 and must include the measures as outlined in Condition ~~3128~~ (a) – (d).

Advice note: The FMP may be prepared in parts to align with the development staging.

Long tail bats

(a) The FMP must include the following measures relating to long tail bats:

- Measures to minimise as far as practicable, disturbance from construction activities within 50m of any active long tail bat roosts that are discovered through survey until such roosts are confirmed to be vacant of bats;
- Timing of any construction works within 50m of any active maternity long tail bat roosts. Those construction works shall be undertaken outside the bat maternity period (between December and March) where reasonably practicable; and
- Details of areas where vegetation is to be retained and where additional planting is proposed to be provided and maintained for the purposes of the connectivity of long tail bat habitats.

Native Avifauna (Birds) (excluding wetland birds)

(b) The FMP must include the following measures relating to native avifauna (birds):

- Timing of any construction works which may have adverse effects on native avifauna (birds) (excluding wetland birds). Those construction works shall be undertaken outside of the bird breeding season (~~1~~ September to ~~February~~ 31 March inclusive) where practicable; and
- Where works are required during the bird breeding season, methods to minimise adverse effects on native avifauna (birds), including a survey to identify if and/or where native bird nesting behaviour is occurring and measures by which to deter dotterels from establishing nests within or adjacent construction areas (as per Table 1 of the draft FMP); and
- ~~• Where works are required during the bird breeding season, methods to minimise adverse effects on native avifauna (birds);~~

Native Wetland Birds

(c) The FMP must include the following measures relating to native wetland birds:

- Details of any nesting bird surveys of native wetland birds. Nesting bird surveys shall be undertaken within any wetland where works are proposed, including a 50m radius from the wetland. Surveys shall be undertaken prior to any such works taking place and repeated at the beginning of each wetland bird breeding season until the completion of construction; and

Commented [CM6]: Updated as a response to DOC feedback, where they wanted specific measures included for kauri dieback. Note this is already included within the TMP so no further changes to the TMP are required.

Condition also updated to remove deemed certification in response to AC arborist and DOC.

Commented [CM7]: FMP updated in response to AC - ecology

- Timing of any construction works which may have adverse effects on native wetland birds. Those construction works shall be undertaken outside of the bird breeding season (1 September to ~~February~~31 March inclusive) where practicable; and
- Where works are required during the bird breeding season, methods to minimise adverse effects on native wetland birds; and
- Details of what protection and buffer measures are proposed to manage effects on nesting native wetland birds. Proposed measures shall address:
 - The type, intensity and duration of construction activity;
 - The likely sensitivity of the nesting bird species to the construction activity; and
 - Any environmental features (e.g. vegetation and contour) that could influence the extent of potential adverse effects on the native wetland birds.

Native Lizards

(d) The FMP must include the following measures relating to native lizards:

- Credentials and contact details of the ecologist/herpetologist who will implement the plan;
- Timing of the implementation of the FMP;
- A description of methodology for survey, trapping and relocation of lizards rescued including but not limited to: salvage protocols, relocation protocols (including method used to identify suitable relocation site(s)), nocturnal and diurnal capture protocols, supervised habitat clearance/transfer protocols, artificial cover object protocols, and opportunistic relocation protocols;
- The location andA description of the proposed relocation site; including ~~discussion of:~~
 - Provision for additional refugia, if required e.g. depositing salvaged logs, wood or debris for newly released ~~skinks-lizards~~ that have been rescued;
 - Any protection mechanisms (if required) to ensure the relocation site is maintained (e.g.) covenants, consent notices etc;
 - ~~WAny~~ weed and pest animal management measures to ensure the relocation site is maintained as appropriate habitat.

Advice note: It is recommended that the lizard rescue plan is undertaken in conjunction with the vegetation clearance operations (and contractor) for an integrated approach (on the same day), to enable the physical search for gecko's following felling of trees and shrubs, and to rescue any skinks from ground cover vegetation and terrestrial retreats.

28-32. All construction works undertaken on site must comply with the certified FMP.

29-33. A suitably qualified and experienced ecologist/herpetologist approved to oversee the implementation of the lizard management measures outlined in Condition 31-28 must certify that the lizard related works have been carried out according to the certified FMP within two weeks of completion of the vegetation clearance works.

30-34. A copy of the FMP (and any updates to these documents) shall be provided to Ngāti Manuhiri, Te

Kawarau ā Maki, te Runanga o Ngāti Whātua, and Ngaati Whanaunga at the same time as they are provided to Auckland Council.

2.1.13 Wetland and Stream Delineation

~~31-35.~~ Within each of Stage 1 and Stage 2, and prior to the commencement of any works authorised by this consent within that Stage area, the consent holder must delineate and establish with an exclusion fence at least a 10 metre setback from the natural wetlands and streams. The purpose of the exclusion fence is to exclude construction machinery or spoil from accidental incursion to the natural wetlands and streams and to protect them from the effects of earthworks.

Advice Note: A day-glow barrier mesh or pigtail fence/wire or rope would be sufficient for this purpose. Streams shall be classified as per the AUP(OP) intermittent and permanent definitions (Chapter J), and wetlands in accordance with Ministry for the Environment (MfE) wetland delineation protocols.

~~32-36.~~ No work (other than as authorised by this consent) is permitted to be carried out within the area surrounded by the exclusion fence required under Condition ~~3532~~, and no building or fill materials must be stored or placed within that area, either on a temporary or permanent basis.

2.1.14 Wetland Offset Plan

~~33-37.~~ At least 20 working days pPrior to the commencement of earthworks on-site, the consent holder must prepare and submit to Council for certification, a final Wetland Offset Plan. The Wetland Offset Plan must be prepared with input from a suitably qualified ecologist, hydrologist and stormwater engineer. The objective of the Wetland Offset Plan is to attain a no net loss of natural wetland areas. The Wetland Offset Plan must be in general accordance with the following documents approved under Condition 1:

- (a) The Landscape Plans prepared by Greenwood Associates, dated December 2025; and
- (b) The report prepared by WWLA, titled “Wetland and Culvert Assessment”, dated December 2025; and
- (c) The report prepared by Viridis, titled “Delmore Fast Track Application – Ecological Impact Assessment”, dated December 2025.

The Wetland Offset Plan must include the following minimum details:

- (a) Calculated accountability for unavoidable wetland reclamation in accordance with the AUP(OP) Appendix 8;
- (b) The location of the area(s) proposed for wetland creation;
- (c) Works to ensure → wetland hydrology is created and maintained;
- (d) Planting schedule, including species, density and grade;
- (e) Legal protection (e.g., consent notice);
- (f) A five-year maintenance and monitoring plan to ensure the wetland(s) and associated planting is successfully established; and
- (g) Measures to be undertaken if the wetland(s) or planting(s) is not successful.

Advice note: The Wetland Offset Plan may be submitted in stages or sub-stages to align with the development staging.

Commented [CM8]: Updated in response to DOC feedback

~~34-38.~~ The consent holder must implement the Wetland Offset Plan approved under Condition ~~3734~~. All wetland planting and landscaping must be implemented within the first planting season following completion of earthworks and wetland formation works in the relevant area, unless otherwise agreed in writing by Council.

Advice note: The wetlands will be completed in stages or sub-stages to align with the development staging.

~~35-39.~~ Within three months following completion of the wetland creation and planting works, the consent holder must submit to Council written certification confirming that the wetlands have been constructed and planted in accordance with the certified Wetland Offset Plan.

~~36-40.~~ The consent holder must maintain and monitor the wetland(s) and associated planting for a period of five years following completion of planting. *Monitoring methods shall include, but not be limited to, vegetation plots to stay in place during the five year monitoring period and photopoints.* Annual monitoring reports must be prepared by a SQEP and submitted to Council within three (3) months of each monitoring anniversary. Each report must, as a minimum:

- (a) Assess wetland hydrology, vegetation establishment, species composition and weed and pest presence;
- (b) Evaluate performance against the success criteria specified in the certified Wetland Offset Plan; and
- (c) Identify any remedial actions required.

2.1.15 Engineering Plan Approvals

~~37-41.~~ All new public assets including roads, vehicle crossings, footpaths and street furniture must be designed to Auckland Transport's relevant Engineering Standards; or be in accordance with this consent and the reports and plans approved under Condition 1; or be in accordance with departures approved under the Standards at a later date.

~~38-42.~~ Prior to the commencement of works for any relevant stage or sub-stage (excluding vegetation removal and/or earthworks) the consent holder shall submit complete engineering plans for all infrastructure proposed to be vested to Council for engineering plan approval.

Advice note: Landscaping associated with public roads will be considered for engineering plan approval when the lots are created and land is to be vested at the time of subdivision. It is advisable that any landscaping as part of the land use be designed in accordance with Auckland Council standards and in particular "The Auckland Code of Practice for Land Development and Subdivision Chapter 7: Landscape."

Commented [CM9]: Updated in response to AC - terrestrial ecology

Commented [CM10]: Auckland Council Parks addition

During Construction Conditions

~~39-43.~~ The consent holder must maintain and implement the Construction Management Plan (CMP), Construction Traffic Management Plan (CTMP), Construction Air Quality Management Plan (CAQMP), Construction Noise and Vibration Management Plan (CNVMP), Chemical Treatment Management Plan (ChTMP), Erosion and Sediment Control Plan (ESCP), the Tree Management Plan (TMP), and the Fauna Management Plan (FMP), throughout the entire earthworks and construction period within the Stage to which they relate. Any changes to a CMP, CTMP, CAQMP, TMP, ChTMP, CNVMP, FMP or ESCP must be submitted to Council for certification.

~~40-44.~~ All earthworks and construction works associated with the implementation of this resource consent shall be carried out:

- (a) Between the hours of 7:30am and 18:00pm, Monday to Saturday; and
- (b) Shall not occur on Sunday's and public holidays; but

The restriction on hours of works shall not apply to low noise generating activities, such as site set up or staff meetings, which may occur outside of these hours.

2.1.16 Construction Noise and Vibration

~~41-45.~~ Noise arising from earthworks and construction works on-site shall not exceed the following limits when measured or assessed at any building on any other site that is occupied during the works in accordance with the requirements of NZS6803:1999, where affected party approval has not been obtained.

Address	Activity	
	<i>Earthworks during Stage 1E</i>	<i>All other times</i>
59 Russell Road	75 dB LAeq	Noise limits in Standard E25.6.27
All other properties	Noise limits in Standard E25.6.27	Noise limits in Standard E25.6.27

~~42-46.~~ If vibration levels from earthworks or construction works exceeding 2mm/s are predicted or measured, in any axis when measured in the corner of the floor of the storey of interest for multi-storey buildings (if applicable), or within 500mm of ground level at the foundation of a single storey building, the consent holder must ensure the vibration will not exceed 5 mm/s and must consult with the relevant occupants to:

- (a) Discuss the nature of the work and the anticipated days and hours when the exceedances are likely to occur;
- (b) Determine whether the exceedances could be timed or managed to reduce the effects on the receiver; and
- (c) Provide in writing, no less than 3 days before to the work begins, details of the location and duration of the works, a phone number for complaints and the name of the site manager.

2.1.17 Geotechnical

~~43-47.~~ At least 20 working days prior to the commencement of bulk earthworks for any stage or sub-stage of the development, a Settlement Monitoring Plan (SeMP) prepared by a ~~— chartered geo-professional~~~~SQEP~~, must be submitted to Council for certification. Any later proposed amendment of the SeMP must also be submitted to Council for certification.

~~44-48.~~ The purpose of the SeMP is to set out the practices and procedures to be adopted to ensure compliance with the consent conditions regarding earthworks fill settlement monitoring and ~~must~~~~shall~~ include, at a minimum, the following information:

- (a) A monitoring location plan, showing the location and type and construction detail of all settlement monitoring points;
- (b) Details of the monitoring frequency;
- (c) All monitoring data, the identification of services susceptible to damage and all building/service condition surveys undertaken to date; and
- (d) Details of criteria to confirm that fill induced settlements have sufficiently attenuated.

Commented [CM11]: Updated in response to AC geotechnical

Commented [CM12]: Updated in response to AC geotechnical

Settlement monitoring results must be presented in the Geotechnical Completion Report (refer Condition [4946](#) and Condition [5047](#)).

~~45-49.~~ The placement and compaction of fill material, construction of geogrid reinforced slopes, [shear piles](#), retaining [and palisade walls](#), [soil nails](#), [shear keys](#), [counterfort drains](#) and subsoil drainage works must be supervised by a ~~chartered geo-professional~~[SQEP](#). In supervising the works, the ~~chartered geo-professional~~[SQEP](#) must ensure that they are constructed and otherwise completed in accordance with the recommendations contained within the Geotechnical Report approved under Condition 1, relevant engineering code of practice, and the detailed plans forming part of the application and approved under Condition 1.

Commented [CM13]: Updated in response to AC geotechnical

~~46-50.~~ Within 20 working days from the completion of earthworks, subsoil drainage and slope protection structures, a Geotechnical Completion Report (GCR) signed by the chartered geo-professional must be provided to the Council. The GCR must include (but not to be limited to):

[\(a\)](#) Earthworks operations (e.g. fill compaction, testing, inspections etc.);

~~(a)(b)~~ [Site inspections, observations, recommendations and photo evidence;](#)

~~(b)(c)~~ [Results of settlement monitoring;](#)

~~(c)(d)~~ [Statement of professional opinion \(as per schedule 2A of NZS4404:2010\); and](#)

~~(d)(e)~~ [Certified as-built plans for the implemented earthworks including but not limited to earthworks cut and fill, shear keys, reinforced earth batter slopes, soil nails, retaining and palisade walls, counterfort drains and subsoil drainage.](#)

Commented [CM14]: Updated in response to AC geotechnical

~~47-51.~~ The GCR must ~~also~~ provide justification on soil expansivity, subsoil site class, foundation requirements, ~~geotechnical input of erosion protection measures for dispersal devices on each lot and~~ confirming that the works have been completed in accordance with the approved construction methodology as required by Condition [2926](#) and evidence of settlement monitoring as required by Condition [5047](#) have been met. The GCR must include results of settlement monitoring and demonstration that sufficient settlement attenuation has occurred and be provided to the satisfaction of the Council.

Commented [CM15]: Updated in response to AC geotechnical

~~48-52.~~ All earthworks must be managed to ensure that they do not lead to any uncontrolled instability or collapse either affecting the site or adversely affecting any neighbouring properties. In the event that such collapse or instability does occur, ~~the consent holder~~[it](#) must immediately ~~be rectified~~[rectify the damage](#).

Commented [CM16]: Updated in response to AC geotechnical

2.1.18 Earthworks

~~49-53.~~ No earthworks on the site can be undertaken between 01 May and 30 September in any year, without a 'Request for winter works' approved by Council. All requests must be renewed annually prior to the approval expiring. All winter works will be re-assessed by the consent holder, as required to ensure that adverse effects are not occurring in the receiving environment and approval may be revoked by Council upon written notice to the consent holder.

~~50-54.~~ No storage of machinery, hazardous substances, rubbish, construction stockpiling, or any refilling activity shall occur within the area demarcated in accordance with Condition [3532](#), unless authorised by this consent.

~~51-55.~~ The maximum area of exposed earth at any one time throughout the duration of the project when exercising this consent must be no greater than 30 hectares.

Advice note: The 30ha limit applies to “bulk” earthworks only and not to “post construction” subdivision earthworks.

52-56. Earthworks at the site must be progressively stabilised against erosion throughout the earthworks phases of the project and must be sequenced to minimise the discharge of contaminants to surface water in accordance with the certified ESCP.

Advice Note: Stabilisation measures may include:

- *The use of waterproof covers, geotextiles, or mulching;*
- *Top-soiling and grassing of otherwise bare areas of earth;*
- *Aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.*

53-57. The operational effectiveness and efficiency of all erosion and sediment control measures shown on the Erosion and Sediment Control Plans required under Condition 15, must be maintained throughout the duration of earthworks activity, or until the site is permanently stabilised against erosion. A record of any maintenance work must be kept and be supplied to the Council on request.

54-58. Earthworks must be managed to avoid deposition of earth, mud, dirt or other debris on any public road or footpath resulting from earthworks activity on the subject site. In the event that such deposition does occur, it must immediately be removed. In no instance must roads or footpaths be washed down with water without appropriate erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses or receiving waters.

Advice Note: In order to prevent sediment laden water entering waterways from the road, the following methods may be adopted to prevent or address discharges should they occur:

- *Provision of a stabilised entry and exit(s) point for vehicles*
- *Provision of wheel wash facilities*
- *Ceasing of vehicle movement until materials are removed*
- *Cleaning of road surfaces using street-sweepers*
- *Silt and sediment traps*
- *Catchpit protection*

55-59. Immediately upon abandonment or completion of earthworks on the subject site all areas of bare earth associated with the works must be permanently stabilised against erosion to the satisfaction of the Council.

Advice Note: Should any earthworks be completed or abandoned, bare areas of earth associated with the works must be permanently stabilised against erosion. Measures may include:

- *The use of mulching or natural fibre matting.*
- *Top-soiling, grassing and mulching of otherwise bare areas of earth.*
- *Aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.*

2.1.19 Contaminated Soils

56-60. Following demolition and removal of the existing dwellings and other buildings (garages, sheds, barns etc.) existing within the site as at the date of grant of consent, surficial soil and debris (to the lesser of 300mm depth or top of natural insitu soils) across the footprint of each former structure, and a halo 2 metres wide on all sides around it, shall be either:

- (a) Excavated and disposed offsite to a consented Class 1 landfill if physically/geotechnically unsuitable for reuse; or
- (b) Tested by a suitably qualified and experienced contaminated land professional, as defined in the Users' Guide to the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, 2012, to confirm its suitability for reuse onsite or disposal to alternative offsite facilities. All sampling and testing must be undertaken in accordance with the Contaminated Land Management Guidelines No.5: Site Investigation and Analysis of Soils (Ministry for the Environment, revised 2021).

61. In the event of the accidental discovery of contamination during earthworks which has not been previously identified, including asbestos material, the consent holder must immediately cease the works within a 2-metre halo of the contamination, notify Auckland Council, and engage a suitably qualified and experienced contaminated land professional to assess the situation (including possible sampling and testing) and decide on the best option for managing the material.

Advice Note: Asbestos Containing Materials

If you are demolishing any building that may have asbestos containing materials (ACM) in it:

- You have obligations under the relevant regulations for the management and removal of asbestos, including the need to engage a Competent Asbestos Surveyor to confirm the presence or absence of any ACM.
- Work may have to be carried out under the control of a person holding a WorkSafe NZ Certificate of Competence (CoC) for restricted works.
- If any ACM is found, removal or demolition will have to meet the Health and Safety at Work (Asbestos) Regulations 2016.
- Information on asbestos containing materials and your obligations can be found at www.worksafe.govt.nz.

If ACM is found on site following the demolition or removal of the existing buildings you may be required to remediate the site and carry out validation sampling. Dependent on the amount of soil disturbance a further consent application may be required.

Commented [CM17]: Advice note added as per recommendation from AC contaminated land

2.1.20 Archaeology

57-62. Should any Māori archaeological sites be encountered during earthworks and construction works, Te Kāwarau a Māki, Ngāti Manuhiri, Ngāti Whanaunga, te Runanga o Ngāti Whatua must be contacted by the consent holder no later than 15 working days after the discovery.

2.1.21 On-Site Wastewater Servicing

Advice Note: The on-site wastewater servicing conditions (~~63-64~~ - ~~75~~) are not applicable if the development connects to the public wastewater network.

~~58-63.~~ The consent holder must prepare a Wastewater Management Plan (WMP). The WMP must be submitted to Council for certification at least 20 working days prior to the commissioning of the wastewater system. The purpose of the WMP is to manage and reduce risks to the natural environment and to people from hazardous substances stored for wastewater purposes. The WMP must be in general accordance with the draft WMP approved under Condition 1. It must include, but not be limited to:

- (a) Identification of the specific activities conducted on the site;
- (b) Identification of potential contaminants associated with these activities, including a Hazardous Substance Inventory and associated Material Safety Data Sheets;
- (c) Methods used to contain identified contaminants and prevent them contacting stormwater runoff as far as practicable, and methods to manage environmental risks from site activities;
- (d) A Spill Response Plan (which includes the provision that all spills over 20 litres, or any spill or environmentally hazardous substances that has entered the stormwater system, a waterbody or has contacted unsealed ground, must be reported immediately to the Auckland Council's 24-Hour Pollution Hotline (09-377-3107)). If untreated wastewater is to be taken off-site, the Spill Response Plan must include management measures to disinfect small spills or drops that may occur during filling (such as the use of sodium hypochlorite spray);
- (e) Accurate site drainage plan(s) showing the location of all site catchpits, containment systems, treatment devices and the discharge point(s) of the site stormwater system;
- (f) An appropriate auditing programme to ensure site performance with all components of the WMP;
- (g) Methods for providing and recording staff training; and
- (h) An Operation and Maintenance Plan for the WWTP.

~~59-64.~~ The consent holder must construct the proposed turning head and wastewater filling station in accordance with the roading drawings prepared by McKenzie & Co, titled "Wastewater Treated Disposal & Truck Access" as referenced under Condition 1.

~~60-65.~~ An acoustic fence must be constructed along the southern boundary of Lot 203 in accordance with the noise assessment titled "Noise Assessment - Delmore Residential Development, Wainui" prepared by SLR and dated December 2025.

The purpose of the acoustic fence is to ensure compliance from the wastewater filling station with the applicable noise standards under the Auckland Unitary Plan, as referenced below.

Time Period	Noise Level
Monday to Saturday (7:00am to 10:00pm)	50dB LA _{eq}
Sunday (9:00am to 6:00pm)	
All other times	40dB LA _{eq}
	75dB LAF _{MAX}

~~61-66.~~ The WWTP and pump station must be designed to comply with the applicable noise standards under the Auckland Unitary Plan as referenced in Condition ~~65-62~~.

~~62-67.~~ The load out area for the wastewater filling station must be designed to drain to a single catchpit. The area must be designed to either pump out or drain the catchpit back to the sewer network, or empty it via vacuum truck, if it becomes contaminated by a spill.

~~63-68.~~ The consent holder must undertake regular visual inspections of the unsealed section of Russell Road between the proposed turning head and Upper Orewa Road. If it is identified that a high proportion of fine (dust-generating) material is present, the consent holder must replenish the surface layer with gravel.

Advice note: The purpose of this condition is to manage dust effects as a result of the additional truck movements on Russell Road.

~~64-69.~~ The consent holder must monitor the proposed turning head off Russell Road for soil tracking and must undertake remedial action to remove soil if required.

~~65-70.~~ The consent holder must implement the landscape design at the Water and Wastewater Treatment Lot (Lot 5002) in general accordance with the landscaping plans approved under Condition 1.

~~66.~~ In the event that an eventual connection is able to be made to the public wastewater network, disposal of untreated wastewater by way of off-site tankering can be undertaken. At least 20 working days prior to any off-site tankering of untreated wastewater occurring, the consent holder must submit a Wastewater Tankering Management Plan to Council. At a minimum, the Wastewater Tankering Management Plan shall include the following:

- ~~(a) The number of dwellings that the tankering will service;~~
- ~~(b) The expected duration that the dwellings will be serviced by off-site tankering;~~
- ~~(c) The number and volume of on-site tanks required to accommodate the necessary wastewater volumes;~~
- ~~(d) A maintenance plan for the on-site tanks and any other associated on-site plant;~~
- ~~(e) An odour management plan; and~~

~~71.~~ A traffic management plan for tanker movements associated with removing untreated wastewater from site. The traffic management plan must also include measures to minimise dust from the increase of trucks on Russell Road. At least 20 working days prior to the commencement of any tankering of treated or untreated wastewater from the site, the consent holder shall submit to Council for certification an Off-site Wastewater Disposal Management Plan. That plan should identify:

- ~~(a) the circumstances in which wastewater may be removed from the site;~~
- ~~(b) whether the wastewater is treated wastewater, untreated wastewater, or sludge;~~
- ~~(c) the approved receiving facility or facilities;~~
- ~~(d) maximum daily volumes to be removed;~~
- ~~(e) temporary storage arrangements on site;~~
- ~~(f) truck loading procedures;~~
- ~~(g) hours of operation;~~
- ~~(h) spill prevention and spill response measures;~~

- (i) contingency measures in the event the nominated receiving facility is unavailable; and
- (j) record-keeping and reporting requirements. This is justified because the application material contemplates both treated and untreated wastewater being removed off site, and identifies third-party disposal pathways rather than a single permanent receiving point.

72. No wastewater shall be tankered from the site except to a lawfully authorised receiving facility that is identified in the certified management plan and has confirmed capacity and acceptance criteria. The consent holder shall maintain current written confirmation of acceptance from each receiving facility.

73. All wastewater removed from the site shall be transported only by operators holding all required approvals, licences and codes of compliance for wastewater transport.

74. The consent holder shall keep a record of every tanker load removed from the site, including:

- (a) date and time of collection;
- (b) tanker operator;
- (c) wastewater type;
- (d) load volume;
- (e) destination facility; and
- (f) evidence of receipt / disposal.

A summary of all off-site wastewater removed from the site shall be provided to Council every three months.

~~67-75.~~ If an approved receiving facility cannot accept wastewater, tankering from the site shall cease unless and until wastewater can be directed to another approved facility identified in the certified management plan. The consent holder shall maintain contingency storage and alternative disposal arrangements sufficient to avoid any unauthorised discharge.

Commented [CM18]: Added in response to AC wastewater

2.1.22 On-site Water Treatment

Advice Note: The on-site water treatment condition (~~7669~~) is not applicable if the development connects to the public wastewater network.

~~68-76.~~ The consent holder must construct the on-site water treatment infrastructure in general accordance with the "Delmore Water and Wastewater Treatment Plant Design Report" prepared by Apex and approved under Condition 1.

~~69-77.~~ Groundwater for domestic supply shall be taken and treated in accordance with the relevant conditions of the groundwater take consent referenced under consent number WAT60456696.

2.1.23 Stormwater

~~70-78.~~ Prior to the occupation of dwellings, the consent holder must design and install the private on-site stormwater management devices for all residential lots and JOALs in accordance with Council's standards. These must ensure that the stormwater runoff from the site is managed to meet SMAF1 requirements.

~~71-79.~~ The stormwater management device or system must be installed or built generally in accordance with the design specifications provided in the documents referred to in Condition 1 by a suitably qualified

service provider.

~~72-80.~~ Within three months of the practical completion of the works for the related dwelling, the consent holder must provide the following to the council:

- (a) Written evidence in the form of a validation report that the stormwater management device or system was installed or built generally in accordance with the design specifications provided in the documents referred to in Condition 1, and by a suitably qualified service provider; and
- (b) As-built plans of the stormwater management device or system, certified (signed) by a suitably qualified service provider as a true record of the stormwater management system.

2.1.24 Landscape Plans

~~73-81.~~ Prior to the completion of earthworks onsite, the consent holder must prepare a finalised set of detailed landscape design drawings and supporting written documentation which have been prepared by a landscape architect or SQEP in relation to landscape matters associated with the roads to vest and drainage reserves. This information must be submitted to Council for certification.

~~74-82.~~ The submitted information must be consistent with the consented landscape concept plan(s) referenced in Condition 1 and, at a minimum, must include:

- (a) Landscape design drawings, specifications and maintenance requirements including annotated planting plans, plant schedule, pavement plan, furniture plan, as applicable to the final design; and
- (b) Evidence that Te Kāwarau ā Maki, Ngāti Whānaunga, Ngāti Manuhiri, and te Runanga o Ngāti Whātua have been consulted regarding provision of cultural markers or similar within a road or drainage reserves, and details of any agreed marker.

Advice note: The information may be submitted in a staged manner as relevant to the concurrently authorised subdivision staging (refer to Condition [9082](#)).

~~75-83.~~ Any fencing, hedging or planting along boundaries or within 2 metres of boundaries of neighbourhood parks must be low height (1.2m) and at least 50% visually permeable.

~~84.~~ Any fencing, hedging or planting along boundaries or within 2 metres of boundaries of any drainage reserves must be either low height (1.2m) or at least 50% visually permeable (maximum height 1.8m). If located above a retaining wall, a maximum 1.2m fence with 50% visual permeability must be provided. Landscape planting may be implemented on the private lot and must be maintained to ensure 50% visual permeability.

~~85.~~ Any retaining wall(s) and ancillary and supporting structures must be entirely located within the residential lots and/or JOALs and must be clear of the boundaries of the recreational reserves. Retaining walls must be no higher than:

- (a) 1m above existing ground level adjacent to Lot 5020; and
- (b) 1.5m above existing ground level adjacent to Lot 1800.

A certificate from a licensed cadastral surveyor must be provided certifying compliance with this requirement at the lodgement of the survey plan for approval.

2.1.25 Implementation and Maintenance Plan

~~76-86.~~ The consent holder must prepare and submit to Council for certification, a final Implementation and

Commented [CM19]: Added in response to AC - parks

Commented [CM20]: Note that these planting conditions are currently being updated to respond to landscape and ecology comments

Maintenance Plan for proposed Lots 1901, 1904, 1905, 1908, 1910, 1920 and 1922, as well as all existing protected consent notice areas on private residential lots. The Plan must include as a minimum:

- (a) The details and timing of when re-vegetation planting will be undertaken for Lots 1901, 1904, 1905, 1908, 1910, 1920 and 1922 and protected consent notice areas on private residential lots;
- (b) A programme and specification for ongoing eradication of pest plants and control of pest animals;
- (c) Methods for ensuring maintenance in perpetuity;
- (d) Delegation of responsibilities between the consent holder and the Residential Society, as follows:
 - The consent holder is responsible for the establishment and maintenance of all new planting as detailed within the Landscape Plans referenced under Condition 1. until 80% canopy closure has occurred and a minimum survival rate of the plants being 90% of the original density through the entire planting area(s) has been achieved over a minimum 5 year defects liability period commencing on the date that the section 224(c) certificate is issued.
 - Once all new planting is established, the Residential Society is responsible for the ongoing maintenance and ongoing eradication of pest plants and animals.

Advice note: Pest plant eradication means, that there are no mature, fruiting and / or flowering individuals of weed species present within the covenant area and any weed species present are dead. In addition, there must be no areas where weed species are smothering and / or out competing native vegetation including suppressing the natural regeneration processes. Pest animal control means meeting Council's minimum requirements and national standard best practice methods for control of these species to an acceptable level.

~~77-87.~~ The consent holder must submit an annual monitoring report to Council for all new revegetation areas on Lots 1901, 1904, 1905, 1908, 1910, 1920 and 1922, and for all existing bush covenant areas on private residential lots, to demonstrate compliance with the certified Implementation and Maintenance Plan. The Monitoring Report must include but is not limited to the following information:

- (a) Identification of pest plant and pest animal presence, a description of weed suppression outcomes, and confirmation of control measures undertaken;
- (b) Photographic records from fixed monitoring points demonstrating vegetation establishment and progression over time and a description of canopy development and species survival rates;
- (c) Recommendations for remedial planting or maintenance actions where performance criteria are not being met and/or where alternative weed control measures are required; ~~and~~
- (d) An assessment of whether ≥20% drought-related mortality of any species has occurred with the year that is the subject of the Monitoring Report. If this has occurred for any species the consent holder must review the suitability of the species for planting within the site. Where a species is found not to be suitable, any replacement species must be WF11-consistent and selected by a suitability qualified ecologist and/or landscape architect and implemented within the next planting year; and
- ~~(d)~~(e) An assessment of whether the required minimum 90% plant survival rate and progression toward 80% canopy closure has been achieved.

The monitoring report is no longer required when it can be demonstrated that the planting has successfully established in accordance with Condition ~~8779~~(ed).

Commented [CM21]: Updated as a response to DOC feedback.

2.1.26 Implementation and Maintenance of Landscaping and Fencing

~~78-88.~~ Prior to occupation of the respective dwellings, the consent holder must implement the on-lot landscape design in general accordance with the landscape plans approved under Condition 1.

3.0 Subdivision (s11)

3.1 General subdivision conditions applying to all stages

Under sections 108, 108AA and 220 of the RMA, this consent is subject to the following conditions:

3.1.1 Consent Holder

~~79-89.~~ This subdivision consent shall attach to Vineway Limited as the consent holder. The consent holder may transfer the whole or part of its interest in the consent to any other party, and must provide written notice of the transfer to Auckland Council.

Advice Note: This purpose of this condition is to expressly provide for the subdivision consent to attach to the applicant, in accordance with Section 134 of the Resource Management Act.

3.1.2 Staging of Subdivision

~~89-90.~~ The subdivision shall be undertaken in general accordance with the staging plans referenced in Condition 1.

Details relating to the stages are as follows:

Stage 1A

- Stage 1A-1: Lot 2000 (road to vest), Lot 1600-1601 (drainage reserve), Lot 1605 (utility reserve), Lots 1500-1503 (JOAL), Lot 5000-5004 (balance allotments) and Lot 1-18, 20-119, 470, 472-474 and 477-481 (residential allotments);
- Stage 1A-3: Lot 1504 (JOAL), Lot 1901 (balance allotment), and Lot 130-154 (residential allotments);
- Stage 1A-4: Lot 2001 (road to vest), Lot 1604 and 1616 (drainage reserves), Lot 1904 and 1905 (balance allotments), Lot 1505 – 1507 (JOAL), Lot 155-256 (residential allotments);
- Stage 1A-2: Lot 1508 (JOAL), Lot 120 – 129 (residential allotments), Lot 2002 (road to vest), and Lot 1602 (drainage reserve);

Stage 1B

- Stage 1B-1: Lot 2003 - 2004 (road to vest), Lot 1605-1606 (drainage reserve), Lot 1508, 1509, 1515 (JOAL), Lot 5005-5007 (balance allotments), Lot 257 – 299 and 471 (residential allotments);
- Stage 1B-2: Lot 2005-2006 (road to vest), Lot 1510, 1511 and 1513 (JOAL), Lot 1607-1608 (drainage reserve), Lot 1800 (land in lieu of reserve for the purpose of recreation), Lot 5008 (balance allotment), Lot 300 – 358, 371 - 409 (residential allotments);
- Stage 1B-3: Lot 2008 (road to vest) Lot 1514 and 1515 (JOAL), Lot 1609 (drainage reserve), Lot 1908 (balance allotment), Lot 410-467, 600-605 (residential allotments), Lot 5009 (balance allotment);

Stage 2

- Stage 2A-1: Lot 2100 (road to vest), Lot 1522, 1523, 1525 (JOALS), Lot 1621 and 1628 (drainage reserve), Lot 5010-5012 (balance allotment), Lot 606-769 (residential allotments);

- Stage 2C: Lot 2106, (road to vest), Lot 1627, 1629 (drainage reserve,) Lot 1543-1544 (JOAL), Lot 1239-1310, 1320-1353 (residential allotments);
- Stage 2B-3: Lot 2104 (road to vest), Lot 1622-1624 (drainage reserve), Lot 1537-1542 (JOAL), Lot Lot 6000 (commercial superlot), Lot 5015- 5017 and 5500 (balance allotments), Lot 5020 (land in lieu of reserve for the purpose of recreation), Lot 1031-1238 (residential allotments);
- Stage 2B-2: Lot 2105 (road to vest), 1920 (balance allotment), Lot 982-1023 (residential allotments);
- Stage 2B-1: Lot 2103 (road to vest), Lot 1621 (drainage reserve), Lot 1534-1535 (JOAL), Lot 950-981 (residential allotments), Lot 5014 (balance allotment); and
- Stage 2A-2: Lot 2102 (road to vest), Lot 1620 and 1621 (drainage reserve), Lot 1527-1533 (JOAL), Lot 3000 and 1910 (balance lot containing protected vegetation), Lot 468-469, 771-951 (residential allotments).

Advice note: Stage 1A-2 involves subdivision of the WWTP lot (Lot 5002). This subdivision stage will not occur until such time that a connection can be made to the public wastewater system and the WWTP is not required.

~~81-91.~~ Amendments to the subdivision staging identified in Condition ~~9082~~ may be undertaken, provided that all necessary infrastructure required to service a stage (including roads, wastewater, water supply, stormwater, electricity and telecommunications) have been implemented.

Advice note: Amendments may involve completing the subdivision staging in a different sequence or may involve amendments to the size of the stage.

~~82-92.~~ Where variations to staging in accordance with Condition ~~9183~~ are proposed, the consent holder shall submit amended staging plans showing the variations to Auckland Council for certification. The consent holder shall also provide evidence that the stages can be serviced with all necessary infrastructure in accordance with Condition ~~9183~~.

3.1.3 Public Roads

~~83-93.~~ The consent holder must construct all new public roads in accordance with the requirements of Auckland Transport as approved via engineering plan approval.

~~84-94.~~ All roading ancillary facilities to be vested in Auckland Council must be constructed in accordance with the approved engineering plans.

~~85-95.~~ All landscaping within the road reserve and drainage reserves must be implemented in accordance with the approved landscaping plans under Condition 1 and to comply with Auckland Council's latest specifications or relevant Code of Practice for green assets and landscaping.

~~86-96.~~ An Engineering Completion Certificate certifying that all proposed roads and the ancillary structures on the roads to be vested in Auckland Council have been constructed in accordance with the approved engineering plans, must be provided in support of the section 224(c) application.

3.1.4 Road Naming

~~87-97.~~ The consent holder must provide and install road naming signs in accordance with Auckland Council standards for both public and private roads that serve six or more lots within the subdivision. The names

must be approved by Auckland Council.

Advice Note: The road naming approval must be obtained from the Local Board prior to the submission of the survey plan pursuant to Section 223 of the RMA. The road naming application should provide suggested street names (one preferred plus two alternative names) and must include evidence of consultation with Te Kawarau ā Maki, Ngaati Whanaunga, Ngāti Manuhiri, and te Runanga o Ngāti Whātua).

3.1.5 Transport

Infrastructure Pre-requisites

~~88-98.~~ Prior to section 224(c) certification for the first stage of the subdivision that is developed, the consent holder must provide evidence to Council that access to the site has been constructed and is operational.

~~89-99.~~ Prior to the occupation of more than 1,325 dwellings across the Delmore site and Ara Hills sites, the intersection of Road 17 and Upper Orewa Road must be constructed as a single-lane roundabout and designed to achieve sight distances in accordance with Austroads Guide to Road Design Part 4B: Roundabouts Park 4B for 60km/h operating speeds.

~~90-100.~~ Prior to the opening of the roundabout at Road 17 and Upper Orewa Road, as required by Condition ~~9991~~, the consent holder must:

- (a) Upgrade Upper Orewa Road between Road 17 and Wainui Road to provide minimum 1m sealed shoulders on both sides of the road.
- (b) Upgrade the Upper Orewa Road / Wainui Road intersection to provide a right turn bay on Wainui Road and a left turn lane on Upper Orewa Road. This includes the widening of Wainui Road to provide minimum 1m sealed shoulders on both sides of the road to the Waterloo Creek bridge.-
- (c) Construct a temporary off-road footpath (minimum 1.8m in width and an all-weather surface) along Upper Orewa Road and Russell Road between the Road 17 / Upper Orewa Road intersection and the eastern boundary of the Delmore site.
- ~~(d)~~ Upgrade the intersection of Russell Road / Upper Orewa Road to provide additional road markings in accordance with the Commute drawing titled "Russell Road / Upper Orewa Road upgrade" and dated 15 April 2026.

Advice note: Condition 10092(b) upgrades would not be required if the NoR6 road has been constructed through this intersection, or if upgrades have been undertaken by another party.

~~91-101.~~ Once development reaches 1,425 dwellings, and prior to the occupation of more than 1,450 dwellings within the Delmore and Ara Hills sites, the consent holder must:

- (a) Provide a written report to Council, prepared by a suitably qualified traffic engineer, setting out the following:
 - Results of a survey outlining the level of traffic generated from the Delmore site using the Grand Drive interchange.
 - Results of a survey outlining the level of traffic generated from the Delmore site using the Upper Orewa access (from Road 17).
 - Survey and assessment of performance of the Grand Drive / SH1 interchange. This is to determine if the Level of Service (LOS) has reached "E" for any approach.

Commented [CM22]: Request from Auckland Transport

- If the performance level in Condition [10193](#)(a)(iii) is reached at the time of monitoring, an assessment of traffic effects must be provided, setting out the mitigation options, including physical changes at the Grand Drive interchange, travel and traffic demand management options.

- (b) Construct the mitigation options as outlined in Condition [10193](#)(a)(iv), if recommended by the written report.

Transport

[92-102.](#) The consent holder must provide new vehicle crossings to serve all residential lots. Vehicle crossings are to be constructed as per the Auckland Transport Standard GD017A-1B or (VX0103 as per the TDM working draft, 14/02/20).

[93-103.](#) Concrete pedestrian footpaths with a gradient steeper than 8% must provide high-friction surfacing.

[94-104.](#) A pedestrian visibility splay of 2m x 2.5m (2m along the property boundary) must be provided on both sides of all the proposed vehicle crossings. Any obstructions including boundary fencing and/or landscaping within the visibility splay areas must not exceed 900mm in height. If fencing is provided above the 900mm height stipulation, it must be at least 80% visually permeable. Landscaping in the visibility splay area must be trimmed and maintained in perpetuity to comply with the stipulated height by the consent holder.

[95-105.](#) All vehicle crossings must be located to ensure a 2m separation distance is achieved between each crossing, or alternatively a combined driveway (6m wide) may be provided.

[96-106.](#) Prior to wastewater removal being required on Russell Road, the consent holder must widen Russell Road as per tracking plans to accommodate wastewater collection vehicles.

[107.](#) Traffic calming measures shall be provided at 60m intervals on all local roads.

[97-108.](#) Speed management devices (eg. speed bumps) must be provided on all JOALS greater than 50m in length, with one device 10m from the road boundary and additionally at each 30m spacing.

Commented [CM23]: Transport request

[98-109.](#) Shared accessways (JOALS) shall be designed as either one-way routes or with turning heads to enable waste and delivery vehicle to service all lots. This must be detailed on the roading plans at Engineering Plan Approval stage.

[99-110.](#) The following additional details must be provided on the roading plans at Engineering Plan Approval stage:

- Detail around the traffic measures proposed for cyclist crossings and pram crossings on side road intersections;
- Location and design of bus stops for any future bus routes;
- Vehicle tracking diagrams to demonstrate that the road layout, intersections, turning heads, cul-de-sacs, and vehicle crossings are designed to accommodate the appropriate design vehicles in accordance with Auckland Council's Code of Practice and the Transport Design Manual (TDM); and
- Evidence that Approach Sight Distance (ASD) and Safe Intersection Sight Distance (SISD) is

achieved at all intersections and at roundabouts the three sight distance criterion laid out in Section 3.2 of Austroads Guide to Road Design Part 4B is achieved. is achieved at all intersections.

Commented [CM24]: Auckland Transport request

(e) Evidence that K-values of roads achieve the Austroads requirements.

111. A temporary turning head must be constructed at the termination point of the AT designation 14108 arterial road within Stage 1 of the site in accordance with Auckland Transport's Code of practice.

Commented [CM25]: Response to Auckland Transport request in relation to turning head.

Advice Note: This should be in a form of a temporary asphalt turning head for vehicles only.

112. Emergency access to Russell Road via Road 1 is to be controlled by an automatic lifting arm installed to restrict general traffic associated with the temporary wastewater off-take. In the event of an incident, closure, or significant congestion at the Grand Drive Interchange, this access is to be made available as an alternative route for Stage 1 traffic. The use of this access during incident scenarios is to be managed in coordination with emergency services and the road controlling authority, with appropriate traffic management measures implemented to ensure safety and maintain network function.

This access arrangement applies until the secondary access is opened at Upper Orewa Road.

Commented [CM26]: Request from Auckland Transport in relation to emergency vehicle access

- ~~100-113.~~ Sufficient carriageway space is to be provided to ensure vehicle tracking in compliance with the Auckland Code of Practice for Land Development and Subdivision Chapter 3 Transport without the footpath or berm widths going below the minimums in the Code.

Commented [CM27]: Request from Auckland Transport

3.1.6 Lighting Plan

- ~~101-114.~~ Prior to the issue of a s224(c) certificate for a subdivision stage (or sub-stage), the consent holder must submit a Lighting Plan for the JOALs servicing 10 or more dwellings and roads to vest, prepared by a suitably qualified Lighting Engineer, to Auckland Council. The purpose of this condition is to provide adequate lighting for the safety of people. The Lighting Plan must:

- (a) Demonstrate compliance with the relevant standards in E24.6.1 Lighting of the Auckland Unitary Plan (Operative in Part); and
- (b) Include proposed locations, lux levels and types of lighting (i.e. manufacturer's specifications once a lighting style has been determined) and any light support structures.

Advice Note: Light pole locations shall be reviewed by the Council traffic engineer.

Commented [CM28]: Added from Ac traffic

115. Prior to the issue of a s224(c) certificate for a subdivision stage (or sub-stage), the consent holder must submit a Lighting Plan for dwellings within 20m from riparian corridors and the Nukumea Scenic Reserve (SEA). The lighting plan must include the following measures to minimise light spill and intensity, particularly relevant given the known sensitivity of bats and other native fauna to artificial light at night (ALAN):

- (a) Use directional, low-intensity, warm-spectrum LED lighting, selecting luminaires with temperatures of 2,700 Kelvins;
- (b) Ensuring light levels are attenuated to below 0.3 lux (horizontal and vertical) when measured at the external boundary of forested areas;
- (c) Limiting street lights along subdivision roads;
- (d) Directing external light fittings away from forested areas and fitting bulbs that have minimal light spill and emit no upwards light; and

(e) Mounting light fixtures as low as practical.

Commented [CM29]: Updated in response to AC ecology

~~102-116.~~ The Lighting Plans must be implemented as part of the subdivision. The JOAL lighting must be maintained by the Residential Society required to be established under Condition ~~126-113~~ thereafter.

3.1.7 Geotechnical

~~103-117.~~ The consent holder must construct the earthworks, geogrid-reinforced earth batters, soils slopes, shear piles, retaining and palisade walls, soil nails, shear keys, counterfort drains and subsoil drainage in accordance with the recommendations of the Riley Consultants Ltd Geotechnical Investigation Report approved under Condition 1 to ensure the site is stable and suitable for development.

Commented [CM30]: Updated in response to AC - geotechnical

~~104-118.~~ A Geotechnical Completion Report (GCR) from a suitably qualified and experienced chartered geo-professional must be prepared and submitted to Council to confirm that all residential and commercial lots are stable and suitable for development when applying for a certificate under section 224(c) for a subdivision stage (or sub-stage). The GCR must include a Building Restriction Zone plan that identifies specific design zones and no-build zones. Development must be undertaken in accordance with the recommendations of the GCR.

The preceding paragraph must be registered as a consent notice on the records of title for all residential and commercial lots to ensure that it is complied with on a continuing basis. ~~The specific name and date of the GCR provided must be referenced in the consent notice.~~

Advice note: The specific name and date of the GCR provided must be referenced in the consent notice. Refer to Auckland Council Code of Practice 2023 (Chapter 2) which details expectations of a geotechnical completion report.

Commented [CM31]: Updated in response to AC - Geotechnical

~~105-119.~~ Certified as-built details of installed counterfort drains shall must be included within the Geotechnical Completion Report, together with records of counterfort drain commissioning observations and flushing.

Advice Note: The drain commissioning information will provide baseline data for the counterfort drain operation and maintenance plan. The as-built drawings should also include locations of the flushing ports and outlet structures.

Commented [CM32]: Updated in response to AC - geotechnical

~~120.~~ Where counterfort drains are installed within a stage of the development, a Counterfort Drain Operation and Maintenance Plan (CDOMP) must shall be provided as an attachment to the Geotechnical Completion Report to the Council for certification, incorporating a staged maintenance approach. This shall must include the observations to be made, their frequency and any associated actions to ensure their serviceability. Any subsequent revision of the CDOMP must also be submitted to the Council for certification. The consent holder must meet the costs of the production, certification, monitoring and review of the CDOMP.

Advice Note:

- The council acknowledges that the CDOMP is intended to provide flexibility both for the consent holder and the council for the management of the counterfort drainage and slope stability. Accordingly, the CDOMP may need to be reviewed over time. Any reviews should be in accordance with the stated objectives of the management plan and limited to the scope of this consent.*

- *Certification of the CDOMP by the council relates only to those aspects of the management plan that are relevant under the Resource Management Act 1991. The certification does not amount to an approval or acceptance of suitability by the council of any elements of the management plan that relate to other legislation, for example, but not limited to, the Building Act 2004, the Heritage New Zealand Pouhere Taonga Act 2014, or the Health and Safety in Employment Act 1992.*

Commented [CM33]: Updated in response to AC - geotechnical

3.1.8 Flood Level Report

~~106~~121. Prior to the issue of a s224(c) certificate for a subdivision stage (or sub-stage), the consent holder shall submit a Flood Report prepared by a SQEP to Auckland Council for certification. The report shall:

- Identify any residential lots that are affected by the 1 in 100-year overland flow path and any adjacent lots situated within 500mm vertical distance of the surface of the 1 in 100-year overland flow path; and
- Recommend minimum finished floor levels for any future habitable buildings on the affected lots, with an appropriate freeboard allowance above the predicted flood level.

Advice note: If the required FFL is inconsistent with the FFLs included within the Architectural Drawings, the FFL under Condition ~~121~~108 will take precedence.

3.1.9 Private Stormwater Infrastructure

~~107~~122. Prior to the issue of a s224(c) certificate for a subdivision stage (or sub-stage), the consent holder shall prepare an Operation and Maintenance Plan for all residential lots that include on-lot stormwater infrastructure, including raingardens and stormwater roof tanks.

~~108~~123. The Operation and Maintenance Plan must be prepared and submitted to Auckland Council for certification. The Plan shall include but not be limited to:

- A description of the on-lot stormwater infrastructure, including its location, size, and function; and
- Procedures and frequency for inspection, maintenance, and cleaning of the stormwater infrastructure and associated components to ensure continued performance.

3.1.10 Waste

~~109~~124. Prior to the issue of a s224(c) certificate for a subdivision stage (or sub-stage), the consent holder shall prepare a Waste Management Plan for all residential lots that ~~will may~~ not receive public kerbside collection services and ~~will may~~ instead rely on ~~private on-site~~ waste collection.

~~110~~. The Waste Management Plan shall be submitted to Auckland Council for certification and shall:

~~111-125~~. ~~Identify the private waste collection service(s) to be used;~~

- Detail how waste and recycling will be stored on-site in a manner that is safe, sanitary, and does not create a nuisance; and
- Identify the proposed waste collection point(s) and demonstrate that they are accessible, safe, and do not adversely affect traffic, pedestrian access, or neighbouring properties.

The certified Waste Management Plan must be implemented prior to the occupation of any residential dwelling on the lots and maintained thereafter by the Residential Society.

Commented [CM34]: Updated as recommended by AC waste

3.1.11 Residential Society

412-126. Prior to the issue of a s224(c) certificate for the first subdivision stage, the consent holder must prepare the necessary documentation to create a society, body corporate, association or other body acceptable to the Council (hereafter referred to as the “Residential Society”) for management of the Common Infrastructure identified below.

Commented [CM35]: Residential society conditions are currently under review and an update will be provided to council as soon as possible.

Stage 1

Common Infrastructure	Ownership and Management Responsibilities	Lots that must pay a levy to the Common Infrastructure
JOALs	JOALs are to be owned and managed in equal shares by all residential lots that access the JOAL, as identified within the approved Scheme Plan under Condition 1. This shall be a sub-group within the Residential Society. The carriageway, lighting and all other infrastructure (e.g., any required stormwater devices) within the JOAL shall be operated, maintained and, when required, renewed by the relevant JOAL sub-group. All costs shall be borne by that JOAL sub-group. Where rubbish collection is to be via “private service” the JOAL responsibilities shall also include the ongoing retention of the private service contact.	• JOAL 1500: Lots 1 – 25, 472, 474 • JOAL 1501: Lots 26 – 31, 470, 477, 478 • JOAL 1502: Lots 56 – 96, 479 – 481 • JOAL 1503: Lots 97 – 119 • JOAL 1504: Lots 130 – 154 • JOAL 1505: Lots 243 – 256 • JOAL 1506: Lots 155 – 195 • JOAL 1507: Lots 204 – 209 • JOAL 1508: Lots 127 – 129 • JOAL 1508: Lots 277 – 279 and 471 • JOAL 1509: 280 – 299 • JOAL 1510: Lots 309 – 320 • JOAL 1511: Lots 335 – 337 • JOAL 1513: Lots 371 – 376 • JOAL 1514: Lots 451 – 467, 600 – 605 • JOAL 1515: Lots 257 – 259 • JOAL 1515: Lots 410 – 414, 475, 690 •
Wastewater Treatment Plant (5002)	Lot 5002 shall be owned by the consent holder (or its subsidiary) and leased to the Residential Society, until an alternative wastewater solution is available. The WWTP shall be operated, maintained and when required, renewed by the Residential Society. All costs shall be borne by the Residential Society.	All residential lots within Stage 1.
Lot 5001 (Wastewater disposal field and existing consent notice area)	Lot 5001 shall be transferred to the Residential Society at the completion of Stage 1 of the development. The Residential Society must ensure the long-term protection of the ecological values of the bush area in	All residential lots within Stage 1.

	accordance with the consent notice obligations. The Residential Society must monitor the wastewater irrigation lines in accordance with the consent conditions.	
Lot 1901, 1904, 1905 and 1908.	Lots 1901, 1904, 1905 and 1908 are to be transferred to the Residential Society at the completion of Stage 1 of the development. The Residential Society must ensure the long-term protection of the ecological values of the bush areas in accordance with the consent notice obligations. All maintenance must be undertaken in accordance with the Implementation and Maintenance Plan approved under Condition 1.	All residential lots within Stage 1.
Bush covenant areas: Lots 14-17, 76-86, 106-127, 155-167, 204-209, 211-226, 228, 251-256, 243-254, 251-254, 260-268, 277-279, 303-307, 315-318, 352-359, and 471	The Residential Society must ensure the long-term protection of the ecological values of the bush areas in accordance with the consent notice obligations. The Residential Society must ensure the long-term protection of the ecological values of the bush areas in accordance with the consent notice obligations. All maintenance must be undertaken in accordance with the Implementation and Maintenance Plan approved under Condition 1.	All residential lots within Stage 1.

Stage 2

Common Infrastructure	Ownership and Management Responsibilities	Lots that must pay a levy to the Common Infrastructure
JOALs	JOALs are to be owned and managed in equal shares by all residential lots that access the JOAL, as identified within the approved Scheme Plan under Condition 1. This shall be a sub-group within the Residential Society. The carriageway, lighting and all	• JOAL 1522: Lots 675 – 689 • JOAL 1523: Lots 711 – 751 • JOAL 1525: Lots 755, 756 and 764 – 769 • JOAL 1526: Lots 616 – 656 • JOAL 1529: Lots 853 – 858 • JOAL 1530: Lots 867 – 869 • JOAL 1531: Lots 888 – 892 • JOAL 1532: Lots 919 – 931 and 970

	other infrastructure (e.g., any required stormwater devices) within the JOAL shall be operated, maintained and, when required, renewed by the relevant JOAL sub-group. All costs shall be borne by that JOAL sub-group. Where rubbish collection is to be via “private service” the JOAL responsibilities shall also include the ongoing retention of the private service contact.	• JOAL 1533: Lots 948 – 951 • JOAL 1534: Lots 952 – 966 • JOAL 1535: Lots 971 – 981 • JOAL 1537: Lots 1060 – 1069 • JOAL 1538: Lots 1081 – 1086 • JOAL 1539: Lots 1097 – 1102 • JOAL 1540: Lots 1128 – 1137 • JOAL 1541: Lots 1161 – 1165 • JOAL 1542: Lots 1204 – 1211 and 1214 – 1217 • JOAL 1543: Lots 1278 – 1283 • JOAL 1544: Lots 1294 – 1300 and 1304 – 1310 • JOAL 1550: Lots 609, 610
Lot 1922, 1920 and 1910	Lots 1922, 1920 and 1910 are to be transferred to the Residential Society at the completion of Stage 2 of the development. The Residential Society must ensure the long-term protection of the ecological values of the bush areas in accordance with the consent notice obligations. All maintenance must be undertaken in accordance with the Implementation and Maintenance Plan approved under Condition 1.	All residential lots within Stage 2.
Bush covenant areas: Lots 610-615, 931-948, 952-958, 999-1023, 1031-1047, 1052-1055, 1057, 1058, 1060, 1069, 1070, 1215, 1216, 1218-1238, 1246-1250, 1401, 1270-1272 and 1274-1278	The Residential Society must ensure the long-term protection of the ecological values of the bush areas in accordance with the consent notice obligations. The Residential Society must ensure the long-term protection of the ecological values of the bush areas in accordance with the consent notice obligations. All maintenance must be undertaken in accordance with the Implementation and Maintenance Plan approved under Condition 1.	All residential lots within Stage 2.
Wastewater Treatment Plant (5002)	Lot 5002 shall be owned by the consent holder (or its subsidiary) and leased to the Residential Society, until an alternative wastewater solution is available. The WWTP shall be operated,	All residential lots within Stage 1 and Stage 2.

	maintained and when required, renewed by the Residential Society. All costs shall be borne by the Residential Society.	
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~~113~~127. Membership of the Residential Society shall be compulsory for all owners of lots within the development. This obligation shall be secured on the record title of each residential lot by way of consent notice and covenant in gross in favour of the Residential Society.

~~114~~128. The consent holder shall provide written evidence to Council that the Residential Society includes the following items:

- (a) The ownership and management responsibilities of the Residential Society, including the operation, maintenance, repair and renewal of the Common Infrastructure within the development;
- (b) Mechanisms for the raising of funds from members to adequately finance the operation, maintenance, repair and renewal of the Common Infrastructure; and
- (c) Decision making and dispute resolution requirements.

3.1.12 Infrastructure Servicing

Advice note: Conditions ~~129~~116 and ~~130~~117 are only applicable if a connection can be made to the public water and wastewater systems.

~~115~~129. The consent holder must make provision for a wastewater connection to be made to the public wastewater reticulation network to serve all residential lots in accordance with the requirements of the wastewater utility service provider. Certification from the utility provider that works have been satisfactorily undertaken must be provided when applying for a certificate under section 224(c).

~~116~~130. The consent holder must make provision for a water connection to be made to the public water reticulation network to serve all residential lots in accordance with the requirements of the water supply utility service provider. Certification from the utility provider that works have been satisfactorily undertaken must be provided when applying for a certificate under section 224(c).

~~117~~131. The consent holder must design and construct connections to the ~~public-reticulated~~ stormwater ~~reticulation~~ network to serve all ~~residential~~ lots in accordance with the McKenzie and Co Stormwater Report and Drawings approved under Condition 1. ~~Where connection to a public stormwater network is proposed, the connection must be designed and constructed to and meeting~~ the requirements of the stormwater utility service provider. Certification from the utility provider that ~~any approved public stormwater connections~~~~works~~ have been satisfactorily undertaken must be provided when applying for a certificate under section 224(c).

~~118~~132. The consent holder must design and construct a stormwater outfall structure as a disposal point for stormwater runoff for all allotments that do not have a connection to the public stormwater reticulation system, generally in accordance with the McKenzie & Co Stormwater Report approved under Condition 1. Certification that works have been satisfactorily undertaken must be provided when applying for a certificate under section 224(c).

~~119~~133. The consent holder must make provision for telecommunications and electricity supply to all residential lots in accordance with the requirements of the respective utility operators. Certification from the utility operator that works have been satisfactorily undertaken must be provided when applying for a certificate under section 224(c).

Commented [CM36]: Updated in response to Healthy Waters request

~~120-134.~~ Prior to the occupation of any dwellings with Stage 2 of the development, the consent holder must provide evidence that suitable provision has been made for the disposal of wastewater.

Advice note: Condition ~~134124~~ is not applicable if a connection can be made to the public wastewater system.

135. Prior to the issue of section 224c certification, a legal agreement must be prepared and executed between the Consent Holder (or nominated entity) and Auckland Transport to document the terms and conditions that provides the basis for the Consent Holder to reticulate, own and maintain private reticulation pipes that sit within the vested road reserve.

Advice note: This condition only applies where private infrastructure is required to be located within the vested road reserve.

Commented [CM37]: Response to AT feedback

3.1.13 Erosion and Sediment Control

~~121-136.~~ Prior to the commencement of any Civil-Construction or Subdivision earthworks at the site, an Erosion and Sediment Control Plan, specific to that stage of subdivision, must be prepared in accordance with Auckland Council Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Incorporating Amendment 3 (GD05), and submitted to the Council for written certification. Earthworks activity on that stage of the site must not commence until the Council has certified that the ESCP satisfactorily meets the requirements of GD05. The plan must contain sufficient details to address the following matters:

- (a) Specific erosion and sediment control measures for the earthworks (location, dimensions, capacity) including the location of any sediment retention ponds, decanting earth bunds, super silt fences, silt fences, clean and dirty water diversion bunds and stabilised construction entrances, in accordance with GD05;
- (b) Supporting calculations and design drawings, as necessary;
- (c) Details of construction methods;
- (d) Monitoring and maintenance requirements;
- (e) Catchment boundaries and contour information as necessary; and
- (f) Details relating to the management of exposed areas (e.g. grassing, mulching).

3.1.14 Landscaping

137. Prior to the issue of the section 223 application under the RMA (at Engineering Plan Approval stage), the consent holder must submit a detailed streetscape landscaping plan(s) for rain gardens/ street trees/ street gardens for approval by the Manager Parks Planning. In particular, the plans must:

- (a) Be prepared by a suitably qualified landscape architect.
- (b) Be in general accordance with the Landscape Plans, prepared by Greenwood Associates, and referenced under Condition 1.
- (c) Show all planting including details of intended species, location, plant sizes at time of planting and likely heights on maturity, tree pit specifications, the overall material palette, location of streetlights and other service access points.
- (d) Ensure that selected species can maintain appropriate separation distances from paths, roads,

Commented [CM38]: New conditions added on request from Auckland Council - parks

street lights and vehicle crossings in accordance with the Auckland Transport Code of Practice.

(e) The provision of root barrier solutions for any encumbered street tree locations.

(f) Include planting methodology.

(g) Comply with the Auckland Code of Practice for Land Development and Subdivision: Chapter 7: Landscape.

Advice note: Plans approved under Resource Consent do not constitute an Engineering Plan Approval and should not be used for the purposes of constructing public works in the absence of that approval.

138. Prior to the issue of the section 223 application under the RMA At (at Engineering Plan Approval stage), the consent holder must submit a detailed landscaping plan(s) for stormwater ponds and drainage reserves for approval by the Manager Parks Planning. The plans must:

(a) Be prepared by a suitably qualified landscape architect.

(b) Be in general accordance with the Landscape Plans, prepared by Greenwood Associates, and referenced under Condition 1.

(c) Show all planting including details of intended species, location, plant sizes at time of planting and likely heights on maturity, tree pit specifications, and the overall material palette.

(d) Include planting methodology.

(e) Demonstrate a topographic overlay to illustrate proposed gradient levels within the reserve.

(f) Demonstrate a flood overlay identifying flood-prone areas within the reserve.

(g) Demonstrate all outfalls and retaining walls, including visual assessments within the reserve.

(h) An annotated pavement plan and related specifications, detailing proposed site levels and the materiality and colour of all proposed hard surfacing.

(i) Comply with the Auckland Code of Practice for Land Development and Subdivision: Chapter 7: Landscape.

Advice note: Plans approved under Resource Consent do not constitute an Engineering Plan Approval and should not be used for the purposes of constructing public works in the absence of that approval.

139. Prior to issue of section 224(c) certification, all street landscaping must be implemented in accordance with the approved streetscape plans and to the satisfaction of the Manager Parks Planning and landscaped in accordance with the Auckland Code of Practice for Land Development and Subdivision Chapter 7: Landscape, and in particular the following:

(a) The street must be cleared of any construction material, rubbish and surplus soil, and must be maintained in a neat and tidy condition.

(b) Should site factors preclude compliance with any of these conditions, the Manager Parks Planning must be advised in writing as soon as practicable and, in any case, prior to planting, and an alternative soil improvement methodology proposed by the consent holder to the satisfaction of Manager Parks Planning.

(c) Grassing must only be undertaken when the weather is suitable i.e. mild, dull and moist, and when the ground is moist and workable. Where delays occur in the agreed programme which prevents areas being planted, the consent holder must inform the Manager Parks Planning immediately.

140. Prior to the issue of the 224(c) certificate, the consent holder will provide to the Development Engineer and Manager Parks Planning as-built plans for landscape works (hard and soft) within all proposed

parks, reserves and streets to be vested in the following format:

- (a) For vested assets from a new development, as-built plans must be provided in digital format (DWG, DXF or GIS shape files on CD or via e-mail) as well as a pdf copy of the signed as-built plan(s).
- (b) The following requirements apply to digital formats:
 - (i) All dimensions are to be in millimetres, and all levels and lengths in metres.
 - (ii) All locational data must be plotted in New Zealand Transverse Mercator 2000 (NZTM 2000) coordinates in terms of New Zealand Geodetic Datum 2000 (NZGD 2000) datum as approved by Land Information New Zealand (LINZ).
- (c) All graphical data to be located/plotted to the following accuracy:
 - (i) X & Y coordinates +/-100mm
 - (ii) Z coordinates +/-50mm (e.g. lid level) in terms of the NZTM 2000 coordinates
 - (iii) Invert levels +/- 20mm.
 - (iv) Digital plans must show all required information, including specific asset information shown in the Legend of the as-built files. If external reference files, overlay or non-standard font shape files are required for this, then these should also be provided.
- (d) The as-built plan (generated from the digital format) and structural drawings must include a signed certification statement by a Licenced Cadastral Surveyor or a Registered Surveyor responsible for the as-built.
- (e) The as-built plans must be submitted on standard ISO metric plan sheets, drawn at scales 1:100, 200, 250, 500 or 1:1000 as appropriate or as specified by the Council. The information should fit on one sheet where possible. If this is not possible at A3 size, multiple plan sheets must be submitted with an index sheet. On agreement with Auckland Council, hard copy plans may be saved and submitted in portable document format (pdf) for ease of transmission.
- (f) Existing assets must be validated by providing asset information demonstrating appropriate dimensions of the existing known assets via sketch, aerial photo, and location of the assets.
- (g) Existing assets and assets to be removed or abandoned must be shown on as-built plans.
- (h) Copies of the following documents are required, where these assets will be maintained by Auckland Council.
 - (i) All assets | Operation and maintenance manuals or asset owner manuals, and any other documentation provided by a supplier for use by an asset owner, e.g. warranty, guarantee.
 - (ii) Additional documentation will be required for project records. These will be specified in project contract documents or Auckland Council project management manuals.

141. Prior to the issue of the section 224(c), the consent holder must provide for the approval of the Manager Parks Planning a Maintenance Plan, for all planting and landscaping to be established in the road reserve. The Maintenance Plan must include:

- (a) Vegetation maintenance policies for the proposed planting, in particular, details of maintenance methodology and dates / frequencies.
- (b) Details of watering, weeding, trimming, cultivation, pest and disease control, checking of stakes and ties, pruning and other accepted horticultural operations to ensure normal and healthy plant

establishment and growth; and

(c) Vandalism eradication policies.

142. The consent holder must undertake maintenance for all planting and landscaping within the road reserve in accordance with the approved Maintenance Plan for a two-year period commencing on the date that the section 224(c) certificate is issued. Any maintenance issues deemed unsuitable by the Manager Parks Planning during this period must be remedied by the consent holder at their expense. If any damage/theft to the planting occurs during the maintenance period, the consent holder must replace damaged/stolen plants with the same species and height.

143. Following the issue of the completion certificate under s224(c), the consent holder must submit a Monitoring Report to the Manager Parks Planning, for approval every 3 months for the duration of the two-year maintenance period. The Monitoring Report must include but is not to be limited to the following information in respect of all planting and landscaping established in the road reserve:

(a) Success rates, including growth rates and number of plants lost (including an analysis of the distribution of losses);

(b) State of protection barriers where required;

(c) Canopy maturity, beginnings of natural ecological processes - natural regeneration in understorey, use by native birds, etc;

(d) A running record of fertilisation, animal and weed pest control and replacement of dead plants;

(e) Details on the condition of, and recommendations for maintenance of, the fencing and

(f) Recommendations for replacement of dead plants and implementation of these recommendations (remediation work);

Any recommended remediation work must include a start date for replanting.

The first measure of the survival rate of plants must not be measured any sooner than 12 months following planting.

Advice Note: This condition requires monitoring reports to be submitted for two years following planting. This condition will be deemed satisfied upon a satisfactory final inspection after the maintenance period and subsequent bond release.

144. Prior to section 224(c) for the relevant stage, the consent holder must form the recreation reserves (Lot 1800 and Lot 5020) to a mowable grassed surface, including final shaping, topsoiling, grassing, and removal of weeds and rubbish.

Advice Note: No planting, park furniture, fixtures, structures, shared paths, or other hard or soft landscape works are required as part of this consent.

3.2 Stage 1A

3.2.1 Survey Plan Approval (s223) Condition – Stage 1A

122,145. The consent holder must submit a survey plan in general accordance with the approved ~~resource consent~~ subdivision scheme plan approved under Condition 1 for Stage 1A. The survey plan must show all lots to vest to Auckland Council (including roads and reserves), all easements and

amalgamation conditions, required by this subdivision consent.

Advice note: The survey plan may be for the whole subdivision stage, or a sub-stage.

[123-146.](#) The rights of way and all services easements labelled on the proposed scheme plans approved under Condition 1 must be included in a memorandum of easements endorsed on the survey plan and must be created, granted or reserved as necessary. The consent holder must meet the costs for the preparation, review, and registration of the easement instruments on the relevant records of title.

[124-147.](#) The survey plan must include easements in favour of Auckland Council for all overland flow paths that traverse private lots, in accordance with the requirements of the Stormwater Code of Practice (SW CoP).

[125-148.](#) The survey plan must include an easement in favour of Auckland Council for the public pathway on Lot 1905 to ensure public access is maintained in perpetuity.

[126-149.](#) Lots 2000 - 2002 on the scheme plans approved under Condition 1 must be vested to Auckland Council as a public road. The consent holder must meet all costs associated with the [vesting-5010](#) of the road.

[127-150.](#) Lots 1601-1604 and 1616 on the scheme plans approved under Condition 1 must be vested to Auckland Council as land in lieu of reserve – for drainage purposes.

3.2.2 Consent Notices

[128-151.](#) Pursuant to section 221 of the RMA, the following consent notices must be registered against the relevant records of title on a continuing basis. The consent notice must be prepared by Auckland Council's solicitor and registered at the consent holders' expense.

Bush covenant lots

[129-152.](#) Lots 14-17, 76-86, 106-127, 155-167, 204-209, 211-226, 228, 251-256, 243-254, 251-254 contain vegetation and freshwater features that are required to be maintained and protected in perpetuity. This comprises the area to be protected as labelled 'bush covenant' on the approved scheme plans under Condition 1.

- No person must cut, damage, fell, willfully injure or destroy any part (including the roots) of any native vegetation present within this area, or conduct any excavation, earthworks, construction, or storage of material or debris within the canopy span of such vegetation without the prior written approval of Auckland Council.
- No person may do anything that would prejudice the health or ecological value of the area to be protected, their long-term viability and/or sustainability.
- The owners must ensure the vegetation and freshwater features are maintained in accordance with the Implementation and Maintenance Plan. This includes the eradication of all pest plants and the control of all pest animals within the areas protected.
- No person may place any building and/or structure within the covenant area.

Geotechnical Stability

[130-153.](#) Development on all residential lots must be undertaken in accordance with the

recommendations of the Geotechnical Completion Report required by Condition ~~118~~¹⁴⁵.

Advice Note: The specific name and date of the Geotechnical Completion Report provided must be referenced in the consent notice.

Operation and Maintenance of Stormwater Infrastructure

~~131~~¹⁵⁴. The owners of all residential lots must comply with the certified Operation and Maintenance Plan relating to on-lot stormwater infrastructure, required by Condition ~~122~~¹⁴⁹.

Minimum Finished Floor Levels

~~132~~¹⁵⁵. For development on residential lots that are affected by the 1 in 100-year overland flow path, the means of conveying unobstructed overland flow must be provided and maintained. There must be no obstruction of the overland flow with any fencing, object, impermeable landscaping, building, or structure.

~~133~~¹⁵⁶. Development on residential lots that are affected by the 1 in 100-year overland flow path and any adjacent lots situated within 500mm vertical distance of the surface of the 1 in 100-year overland flow path must be undertaken in accordance with the recommendations of the Flood Level Report required by Condition ~~121~~¹⁴⁸.

Certification from a SQEP shall be provided to Council, prior to the issue of a Code Compliance Certificate, confirming that the finished floor level complies with this condition.

Residential Society

~~134~~¹⁵⁷. The owners of all residential lots must belong to the Residential Society and shall abide by its constitution (or similar incorporation documentation) and shall pay all monies levied by the Residential Society for the Common Infrastructure.

3.3 Stage 1B

3.3.1 Survey Plan Approval (s223) Condition – Stage 1B

~~135~~¹⁵⁸. The consent holder must submit a survey plan in general accordance with the approved ~~resource consent~~ subdivision scheme plan approved under Condition 1 for Stage 1B. The survey plan must show all lots to vest to Auckland Council (including roads and reserves), all easements and amalgamation conditions, required by this subdivision consent.

Advice note: The survey plan may be for the whole subdivision stage, or a sub-stage.

~~136~~¹⁵⁹. The rights of way and all services easements labelled on the proposed scheme plans approved under Condition 1 must be included in a memorandum of easements endorsed on the survey plan and must be created, granted or reserved as necessary. The consent holder must meet the costs for the preparation, review, and registration of the easement instruments on the relevant records of title.

~~137~~¹⁶⁰. The survey plan must include easements in favour of Auckland Council for all overland flow paths that traverse private lots, in accordance with the requirements of the Stormwater Code of Practice (SW CoP).

~~138~~¹⁶¹. Lots 2003, 2005 and 2008 on the scheme plans approved under Condition 1 must be vested to Auckland Council as a public road. The consent holder must meet all costs associated with the vesting of the road.

~~139,162.~~ Lots 1605, 1606 and 1609 on the scheme plans approved under Condition 1 must be vested to Auckland Council as land in lieu of reserve – for drainage purposes.

~~140,163.~~ Lot 1800 shall be transferred to Auckland Council as land in lieu of reserve (for the purpose of recreation) if by the time of application for the survey plan for Stage 1B to be approved under section 223 the consent holder has entered into an agreement with Auckland Council for the sale and purchase of Lot 1800.

~~141,164.~~ If no agreement is in place in accordance with Condition ~~163,141~~ by the time of application for the survey plan for Stage 1B-2 to be approved under section 223, then Lot 1800 shall be developed into residential lots in accordance with the following plans:

- Scheme plan titled “Alternative Plan for Lots 359 – 370, 1512 Being Subdivision of Lot 1800 DP XXXXX Stage 1B-1”, dated 18 December 2025.
- Architectural plans prepared by Terra Studio titled “A-S1-1-87, A-S1-1-88, A-S1-1-89, A-S1-1-90”

~~142,165.~~ Lot 1800 must be free of easements and encumbrances and with no utility devices or structures on the land or on any of its road frontages or berms, unless agreed in writing with Auckland Council.

3.3.2 Consent Notices

~~143,166.~~ Pursuant to section 221 of the RMA, the following consent notices must be registered against the relevant records of title on a continuing basis. The consent notice must be prepared by Auckland Council’s solicitor and registered at the consent holders’ expense.

~~144,167.~~ If additional lots are included as a result of Condition ~~164,142~~, the consent holder must register the below consent notices on the record of title, where relevant.

~~145,168.~~ Pursuant to section 221 of the RMA, the following consent notices must be registered against the relevant records of title on a continuing basis. The consent notice must be prepared by Auckland Council’s solicitor and registered at the consent holders’ expense.

Bush covenant lots

~~146,169.~~ Lots 260-268, 277-279, 303-307, 315-318, 352-359, and 471 contain vegetation and freshwater features that are required to be maintained and protected in perpetuity. This comprises the area to be protected as labelled ‘bush covenant’ on the approved scheme plans under Condition 1.

- No person must cut, damage, fell, willfully injure or destroy any part (including the roots) of any native vegetation present within this area, or conduct any excavation, earthworks, construction, or storage of material or debris within the canopy span of such vegetation without the prior written approval of Auckland Council.
- No person may do anything that would prejudice the health or ecological value of the area to be protected, their long-term viability and/or sustainability.
- The owners must ensure the vegetation and freshwater features are maintained in accordance with the Implementation and Maintenance Plan. This includes the eradication of all pest plants and the control of all pest animals within the areas protected.
- No person may place any building and/or structure within the covenant area.

Geotechnical Stability

~~147,170.~~ Development on all residential lots must be undertaken in accordance with the recommendations of the Geotechnical Completion Report required by Condition ~~118105~~ above.

Advice Note: The specific name and date of the Geotechnical Completion Report provided must be referenced in the consent notice.

Operation and Maintenance of Stormwater Infrastructure

~~148,171.~~ The owners of all residential lots must comply with the certified Operation and Maintenance Plan relating to on-lot stormwater infrastructure.

Minimum Finished Floor Levels

~~149,172.~~ Development on lots that contain or are located adjacent to Overland Flow Paths (as identified on the survey plan) must be undertaken in accordance with the recommendations of the Flood Level Report required by Condition ~~121408~~.

Certification from a SQEP shall be provided to Council, prior to the issue of a Code Compliance Certificate, confirming that the finished floor level complies with this condition.

Residential Society

~~173.~~ The owners of all residential lots must belong to the Residential Society and shall abide by its constitution (or similar incorporation documentation) and shall pay all monies levied by the Residential Society for the Common Infrastructure.

Reserves

~~174.~~ Residential lots adjoining Lot 1800 (recreation reserve) must ensure that retaining walls and ancillary supporting structures are located entirely within the residential lot and clear of the boundary of the recreation reserve. The retaining wall must be no higher than 1.5m above existing ground level adjacent to Lot 1800. Any fencing, hedging or planting along boundaries or within 2m of boundaries of Lot 1800 must be either low height (1.2m) and at least 50% visually permeable. Council is exempt from sharing costs.

Advice Notes:

- Landowner approvals: All works in X Reserve/Park will require Landowner Approval prior to any works being undertaken. Approval requests can be sent to landadvisors@aucklandcouncil.govt.nz
- Tree asset owner approvals: Any tree removals or works affecting vegetation on X Reserve/Park land or existing street trees will require Tree Asset Owner Approval from the Community Facilities Urban Forest Specialist Team. Approval requests can be sent to treemanager@aucklandcouncil.govt.nz.

Commented [CM39]: Request from Auckland Council - parks

3.4 Stage 2

3.4.1 Survey Plan Approval (s223) Condition – Stage 2

~~150,175.~~ The consent holder must submit a survey plan in general accordance with the approved ~~resource consent~~ subdivision scheme plan approved under Condition 1 for Stage 2. The survey plan must show all lots to vest to Auckland Council (including roads and reserves), all easements and

amalgamation conditions, required by this subdivision consent.

Advice note: The survey plan may be for the whole subdivision stage, or a sub-stage.

~~151-176.~~ The rights of way and all services easements labelled on the proposed scheme plans approved under Condition 1 must be included in a memorandum of easements endorsed on the survey plan and must be created, granted or reserved as necessary. The consent holder must meet the costs for the preparation, review, and registration of the easement instruments on the relevant records of title.

~~152-177.~~ The survey plan must include easements in favour of Auckland Council for all overland flow paths that traverse private lots, in accordance with the requirements of the Stormwater Code of Practice (SW CoP).

~~153-178.~~ The final survey plan for Stage 2 must include an easement in favour of Auckland Council for the public pathways identified on Lot 3000 to ensure public access is maintained in perpetuity.

~~154-179.~~ Lot 5020 shall be transferred to Auckland Council as land in lieu of reserve (for recreation purposes) if by the time of application for the survey plan for Stage 2B-3 to be approved under section 223 the consent holder has entered into an agreement with Auckland Council for sale and purchase of Lot 5020.

180. If no agreement is in place in accordance with Condition ~~179-170-156~~ by the time of application for the survey plan for Stage 2B-3 to be approved under section 223, then Lot 5020 will remain as a balance Lot for the purposes of a neighbourhood park to meet the need for open space to the community it is located within and have registered a consent notice for that purpose.

Advice Note: If a sale and purchase agreement is not entered into, the intended outcome for park and open green space, will still be achieved by the consent holder through the provision of a privately owned and managed open space made available for public use via a common entity.

~~155.~~ will transfer to the Residential Society and the management and maintenance of the reserve shall be included as part of the Residential Society obligations as outlined in 113.

Commented [CM40]: Request from Auckland Council - parks

~~156-181.~~ Lots 2100, 2102-2106 on the scheme plans approved under Condition 1 must be vested to Auckland Council as a public road. The consent holder must meet all costs associated with the vesting of the road.

~~157-182.~~ Lots 161-620, 1621, 1623, 1624, 1627 and 1629 on the scheme plans approved under Condition 1 must be vested to Auckland Council as land in lieu of reserve – for drainage purposes.

3.4.2 Consent Notices

~~158-183.~~ Pursuant to section 221 of the RMA, the following consent notices must be registered against the relevant records of title on a continuing basis. The consent notice must be prepared by Auckland Council's solicitor and registered at the consent holders' expense.

Bush covenant lots

~~159-184.~~ Lots 610-615, 931-948, 952-958, 999-1023, 1031-1047, 1052-1055, 1057, 1058, 1060, 1069, 1070, 1215, 1216, 1218-1238, 1246-1250, 1401, 1270-1272 and 1274-1278 contain vegetation and freshwater features that are required to be maintained and protected in perpetuity. This comprises the area to be protected as labelled 'bush covenant' on the approved scheme plans under Condition 1.

- No person must cut, damage, fell, willfully injure or destroy any part (including the roots) of any native vegetation present within this area, or conduct any excavation, earthworks, construction, or storage of material or debris within the canopy span of such vegetation without the prior written approval of Auckland Council.
- No person may do anything that would prejudice the health or ecological value of the area to be protected, their long-term viability and/or sustainability.
- The owners must ensure the vegetation and freshwater features are maintained in accordance with the Implementation and Maintenance Plan. This includes the eradication of all pest plants and the control of all pest animals within the areas protected.
- No person may place any building and/or structure within the covenant area.

Geotechnical Stability

~~160-185.~~ Development on all residential lots must be undertaken in accordance with the recommendations of the Geotechnical Completion Report required by Condition ~~118~~¹⁰⁵.

Advice Note: The specific name and date of the Geotechnical Completion Report provided must be referenced in the consent notice.

Operation and Maintenance of Stormwater Infrastructure

~~161-186.~~ The owners of all residential lots must comply with the certified Operation and Maintenance Plan relating to on-lot stormwater infrastructure, required by Condition ~~122~~¹⁰⁹.

Minimum Finished Floor Levels

~~162-187.~~ Development on lots that contain or are located adjacent to Overland Flow Paths (as identified on the survey plan) must be undertaken in accordance with the recommendations of the Flood Level Report required by Condition ~~121~~¹⁰⁸.

Certification from a SQEP shall be provided to Council, prior to the issue of a Code Compliance Certificate, confirming that the finished floor level complies with this condition.

Residential Society

~~188.~~ The owners of all residential lots shall belong to the Residential Society and shall abide by its constitution (or similar incorporation documentation) and shall pay all monies levied by the Residential Society for the Common Infrastructure.

Domestic Pets

~~189.~~ The owners and/or occupiers of lots within Stage 2 of the development must not keep any mustelids, rodents, or cats on the lot at any time.

Reserves

~~190.~~ Residential and commercial lots adjoining Lot 5020 (recreation reserve) must ensure that retaining walls and ancillary supporting structures are located entirely within the residential lot and clear of the boundary of the recreation reserve. The retaining wall must be no higher than 1m above existing ground level adjacent to Lot 5020. Any fencing, hedging or planting along boundaries or within 2m of boundaries of Lot 5020 must be either low height (1.2m) and at least 50% visually permeable. Council

Commented [CM41]: Response to DOC feedback to address cat ban in stage 2 of the development.

is exempt from sharing costs.

Commented [CM42]: Request from Auckland Council - parks

Advice Notes:

- Landowner approvals: All works in X Reserve/Park will require Landowner Approval prior to any works being undertaken. Approval requests can be sent to landadvisors@aucklandcouncil.govt.nz
- Tree asset owner approvals: Any tree removals or works affecting vegetation on X Reserve/Park land or existing street trees will require Tree Asset Owner Approval from the Community Facilities Urban Forest Specialist Team. Approval requests can be sent to treemanager@aucklandcouncil.govt.nz.

4.0 Streamworks Conditions (s13)

Pre-commencement

4.1.1 Streamworks Management Plan to be Provided

~~163-191.~~ At least 20 working days prior to the commencement of any works within wetlands or streams, a Stream Works Management Plan (SWMP), must be submitted to Auckland Council for certification. The purpose of the SWMP is to provide a finalised streamworks methodology and management measures that enable effects of streamworks to be managed during construction in accordance with best practice.

The SWMP must include as a minimum but is not limited to:

- (a) A plan showing the specific areas where streamworks are to occur;
- (b) Management measures to demonstrate how erosion and sediment controls will avoid sediment or sediment laden water entering the stream in accordance with best practice;
- (c) Management of contaminants to water (e.g. hydrocarbons, construction materials);
- (d) An explanation of how and measures to ensure maintenance of fish passage during and after the streamworks is achieved;
- (e) Methodology for diverting upstream flows during the streamworks, including how sufficient flow will be maintained at all times below the site of the works to maintain in-stream biota, and the location and nature of any temporary diversion structures;
- (f) A detailed methodology for the installation of permanent structure(s); and
- (g) Details of final streambed remediation or stabilisation upon completion of stream works.

~~164-192.~~ Any changes to the SWMP must be submitted to Auckland Council for re-certification with supporting information demonstrating that the changes to the SWMP meet Condition 191-166, incorporate best practice methodologies for managing effects from the streamworks and that the adverse effects from the streamworks remain the same or less.

Commented [CM43]: Response to DOC feedback

~~193.~~ The methodology for the installation of the short-term surface water diversions must be in general accordance with the memorandum "Delmore – Methodology for Culvert Works within Stream", Appendix D, Earthworks Report, McKenzie & Co dated 15 December 2025.

Commented [CM44]: Added as per recommendation from AC temporary surface water diversion

~~165-194.~~ Earthworks Report prepared by McKenzie & Co referenced under Condition 1 and dated December 2025.

~~166-195.~~ Prior to the commencement of any streamworks (including reclamation of ponds), a Native Fish Capture and Relocation Plan (NFCRP) must be submitted to the Council for certification. The NFCRP must be prepared by a suitably qualified and experienced Freshwater Ecologist and must include the following detail;

- (a) Methodologies to capture fish within the impact stream, or justification there is no habitat for native fish present at the time of construction;
- (b) Hand search of the base sediments of the stream bed and banks for native fish that may have burrowed into the soils;
- (c) Fishing effort;

- (d) Details of the relocation site;
- (e) Storage and transport measures including prevention of predation and death during capture;
- (f) Euthanasia methods for diseased or pest species;
- (g) Confirmation on the habitat availability of the relocation site to support fish at the time of streamworks; and
- (h) An accidental discovery protocol for aquatic fauna which require specialised handling and relocation effort that is not otherwise covered in the standard methodologies (i.e. regionally threatened species as per the Conservation Status of Freshwater Fishes in Tāmaki Makaurau / Auckland). This includes a protocol to implement the following actions:
 - Immediately cease streamworks (including dewatering) upon accidental discovery of any unexpected aquatic fauna and notify the Council.
 - Ensure aquatic fauna are left in a suitable environment where they will be unharmed while the NFCRP is updated.
 - Update the NFCRP to address handling and relocation of the unexpected aquatic fauna to be submitted to Council for re-certification.
 - Only re-commence the capture and relocation upon re-certification of the NFCRP.

Work in progress conditions

~~167-196.~~ All streamworks must be undertaken in accordance with the certified SWMP required by Condition ~~191466~~. All required control measures and methodologies must be in place prior to the streamworks commencing and be maintained for the duration of the streamworks activity.

Commented [CM45]: Response to DOC feedback

~~168-197.~~ Native fish capture and relocation must be undertaken in accordance with the certified NFCRP, and must only be undertaken by a suitably qualified and experienced freshwater ecologist. The freshwater ecologist must also be onsite during the dewatering process to ensure that any remaining native fish that is not caught during de-fishing are salvaged.

~~169-198.~~ The temporary diversion cut must be designed to provide stable stream bed conditions to avoid scouring and erosion both upstream and downstream of the diversion and any other instability of any land or water body.

~~170-199.~~ During periods of flow greater than the capacity of any stream diversion certified under condition ~~191466~~ above, a stabilised flow path up to the 100-year flood event must be provided to ensure no scour or erosion occurs and so that flows can pass safely around or through the area of works with minimum nuisance and damage and with minimal sediment generation or discharge.

Post-Construction Conditions

~~171-200.~~ Within 20 working days following completion of the installation of the structure, the consent holder must provide certified (signed) as-built plans that confirm that the structure has been constructed in accordance with the approved plans to Auckland Council.

Advice Note: The consent holder must engage at their own expense a suitably qualified professional engineer to prepare and certify these plans.

~~172-201.~~ If any of the routine monitoring or visual inspections identify that provision for fish passage has been reduced, or the culverts are damaged, the consent holder must undertake maintenance, or

remediation works as soon as practicable to remedy the issues identified.

~~173-202.~~ Within 20 working days following completion of works associated with the new road culvert crossings, the consent holder must submit to Council the information required by regulations 62 and 63 of the National Environmental Standard for Freshwater (2020).

~~174-203.~~ Within 20 working days following completion of works associated with the new road culvert crossings, the consent holder must submit to Council a Fish Passage Monitoring and Maintenance Plan (FPMMP). The FPMMP must specify the ongoing maintenance measures of the culvert structures to ensure fish passage is maintained and must include the following:

- (a) Fish passage must be maintained through the culvert structure, and monitoring, maintenance and remediation measures must be undertaken in general accordance with the FPMMP;
- (b) If any monitoring or visual inspections identify that provision for fish passage has been reduced, or the culvert structure is damaged, the Consent Holder must undertake maintenance or remediation works as soon as practicable to remedy the issues identified;
- (c) The consent holder must maintain a record of all monitoring and maintenance works undertaken on the culvert structure including photos and evidence of any maintenance works undertaken. If requested, the consent holder must provide this record to the Council within 10 working days of the date of request.

5.0 Water Permit for Dewatering and Diversion of Groundwater (s14)

Notice of Commencement of Excavation

~~175-204.~~ The Council must be advised in writing at least ten working days prior to the date of the commencement of excavation for the relevant sub-stage of development.

Advice note: For the purpose of compliance with conditions of consent, "the Council" refers to the council monitoring inspector unless otherwise specified. To identify your allocated officer please email monitoring@aucklandcouncil.govt.nz.

Design and Construction

~~176-205.~~ The design and construction of the excavations must be undertaken in accordance with the recommendations and analysis contained within the Geotechnical Report approved under Condition 1.

Damage Avoidance

~~177-206.~~ All excavation, dewatering systems, retaining structures and works associated with the diversion or taking of groundwater, must be designed, constructed and maintained so as to avoid damage to land, buildings, structures and services on the site or adjacent properties, unless otherwise agreed in writing with the asset owner.

~~178-207.~~ At least 20 working days prior to the commencement of bulk earthworks for any stage or sub-stage of the development, a Groundwater and Settlement Monitoring and Contingency Plan (GSMCP) prepared by a SQEP, must be submitted to Council for certification. Any later proposed amendment of the GSMCP must also be submitted to Council for ~~re~~-certification. The purpose of the GSMCP is to set out the practices and procedures to be adopted to ensure compliance with the consent conditions and shall include, at a minimum, the following information:

- (a) A monitoring location plan, showing the location and type of all monitoring stations including groundwater monitoring bores, ground, building, inclinometer and retaining wall deformation pins;
- (b) Details of any buildings/structures that require detailed pre-condition surveys, groundwater and ground surface monitoring frequency (in accordance with Schedule B, Schedule C and Schedule D in Attachment 2 of the conditions);
- (c) All monitoring data, the identification of services susceptible to damage and all building/service condition surveys undertaken to date;
- (d) A bar chart or a schedule, showing the timing and frequency of condition surveys, visual inspections and all other monitoring required by this consent, and a sample monitoring report template (monitoring reports are to be provided at 2-monthly intervals);
- (e) Completed Schedule A for alert and alarm level triggers (refer Attachment 2 of the conditions), including reasons if changes are proposed, for example, as a result of recommendations in the building condition surveys or data obtained from pre-dewatering monitoring; and
- (f) Details of contingency actions to be implemented if alert or alarm levels are exceeded.

~~179-208.~~ All construction, dewatering, monitoring and contingency actions ~~shall~~must be carried out in accordance with the approved GSMCP. No bulk excavation (that may affect groundwater levels) or

other dewatering activities shall commence until the GSMCP is certified by the Council.

~~180-209.~~ All excavation, dewatering, retaining structures and works associated with diversion or taking of groundwater, ~~must~~^{shall} be designed, constructed and maintained so as to avoid damage to buildings, structures and services on the site or adjacent properties, unless otherwise agreed in writing with the asset owner.

Pre-Excavation Services Condition Survey

~~181-210.~~ Prior to the commencement of excavation, a photographic condition survey (recording evidence of existing observable damage) of any structures within the influence zone of the proposed excavation, must be undertaken by a SQEP and a written report must be prepared and reviewed by the SQEP responsible for overseeing the monitoring.

Advice note: This condition does not apply to any service where written evidence is provided to Council that the owner of that service has confirmed they do not require a condition survey.

~~182-211.~~ Prior to the commencement of excavation, a condition survey of the potentially affected stormwater services must be undertaken in consultation with the relevant service provider.

Advice note: This condition does not apply to any service where written evidence is provided to the Council that the owner of that service has confirmed they do not require a condition survey.

External Visual Inspections during Dewatering

~~183-212.~~ External visual inspections of the surrounding ground and neighbouring structures within the influence zone of any excavation must be undertaken for the purpose of detecting any new external damage or deterioration of existing external damage. Inspections must be carried out weekly during active excavation, and then monthly until completion of the dewatering. A photographic record must be kept, including time and date, of each inspection and all observations made during the inspection, and must be of a quality that is fit for purpose. The results of the external visual inspections and an assessment of the results must be reviewed by the SQEP responsible for overseeing the monitoring.

Advice note: This condition does not apply to any land, building or structure where written evidence is provided to the Council confirming that the owner of the land, building or structure does not require visual inspections to be carried out.

Monitoring

~~184-213.~~ Groundwater monitoring must be undertaken as shown in the approved GSMCP. The monitoring frequency may be changed if approved by the Council. Any change must be specified in the GSMCP.

~~185-214.~~ Ground surface and building deformation monitoring stations must be established as required by the GSMCP. The monitoring frequency may be changed, if approved by the Council. The consent holder must request termination of ground surface settlement and building settlement monitoring from Council, supported with a letter of justification for the termination, prepared by a SQEP.

~~186-215.~~ Retaining wall deflection stations and inclinometers (where deemed appropriate) for the measurement of lateral wall movement, must be installed along the top of retaining walls where groundwater is anticipated to be encountered.

~~187-216.~~ Monitoring of the retaining wall deflection stations and inclinometers must be undertaken and recorded in accordance with the GSMCP and must be carried out using precise levelling, or by string lines between markers. The monitoring frequency may be changed, if approved by the Council, through the GSMCP.

Alert and Alarm Level Actions

~~188-217.~~ The activity must not cause any settlement or movement greater than the alarm level thresholds specified in the GSMCP (required by Condition ~~207-181~~).

~~189-218.~~ In the event of any alert level being exceeded, the consent holder must:

- (a) Notify the Council within 24 hours;
- (b) Re-measure all monitoring stations within 50m of the affected monitoring locations to confirm the extent of apparent movement;
- (c) Ensure the data is reviewed, and advice provided, by a SQEP, on the need for mitigation measures or other actions necessary to avoid further deformation. Where mitigation measures or other actions are recommended, those measures must be implemented;
- (d) Submit a written report, prepared by the SQEP responsible for overseeing the monitoring, to the Council within ten working days of alert level exceedance. The report must provide an analysis of all monitoring data (including wall deflection) relating to the exceedance, actions taken to date to address the issue, recommendations for additional monitoring (i.e. the need for increased frequency or repeat condition survey(s) of building or structures), and recommendations for future remedial actions necessary to prevent alarm levels being exceeded.
- (e) Measure and record all monitoring stations within 50m of the location of any alert level exceedance every two days until such time that the written report referred to above has been submitted to the Council.

~~190-219.~~ In the event of any alarm level being exceeded at any ground deformation pin, retaining wall deflection pin or inclinometer, the consent holder must:

- (a) Immediately halt construction activity, including excavation, dewatering, or any other works that may result in increased deformation, unless halting the activity is considered by a SQEP to be likely to be more harmful (in terms of effects on the environment) than continuing to carry out the activity.
- (b) Notify the Council within 24 hours of the alarm level exceedance being detected and provide details of the measurements taken.
- (c) Undertake a condition survey (this could comprise either a detailed condition survey or an external visual inspection at the discretion of the SQEP responsible for overseeing the monitoring) by a SQEP or suitably qualified building surveyor (SQBS) of any building or structure located adjacent to any monitoring station where the alarm level has been exceeded.
- (d) Take advice from the author of the alert level exceedance report (if there was one) on actions required to avoid, remedy or mitigate adverse effects on ground, buildings or structures that may occur as a result of the exceedance.
- (e) Not resume construction activities (or any associated activities), halted in accordance with paragraph (a) above, until any mitigation measures (recommended in accordance with

paragraphs (d) above) have been implemented to the satisfaction of a SQEP.

- (f) Submit a written report, prepared by the SQEP responsible for overseeing the monitoring, to the Council, on the results of the condition survey(s), the mitigation measures implemented and any remedial works and/or agreements with affected parties within 10 working days of commencement of works.

Completion of Dewatering - Building, Structure and Services Condition Surveys

~~191-220.~~ Between six and twelve months after completion of construction phase dewatering, a detailed condition survey of all previously surveyed stormwater services must be undertaken by a SQEP, and a written report must be prepared. The report must be reviewed by the SQEP responsible for overseeing the monitoring and then submitted to Council, within one month of completion of the survey.

The condition survey report must make specific comment on those matters identified in the pre-excavation condition survey. It must also identify any new damage that has occurred since the pre-dewatering condition survey was undertaken and provide an assessment of the likely cause of any such damage.

Advice note: This condition does not apply to any Services where written evidence is provided to Council confirming that the owner of that building, structure, or Service does not require a condition survey to be undertaken.

Additional Surveys

~~192-221.~~ Additional condition surveys of any building, structure, or service within the area defined by the extent of groundwater drawdown or ground movement, must be undertaken, if requested by the Council, for the purpose of investigating any damage potentially caused by ground movement resulting from dewatering or retaining wall deflection. A written report of the results of the survey must be prepared and/or reviewed by the SQEP responsible for overseeing the monitoring. The report must be submitted to the Council.

~~193-222.~~ The requirement for any such additional condition survey will cease six months after the Completion of Dewatering, unless ground settlement is observed during the Dewatering period. In such circumstances the period where additional condition surveys may be required will be extended until monitoring shows that movement has stabilised and the risk of damage to buildings, structures and services as a result of the dewatering is no longer present.

Access to Third Party Property

~~194-223.~~ Where any monitoring, inspection or condition survey in this consent requires access to property/ies owned by a third party, and access is declined or subject to what the consent holder considers to be unreasonable terms, the consent holder must provide a report to the Council prepared by a SQEP identifying an alternative monitoring programme. The report must describe how the monitoring will provide sufficient early detection of deformation to enable measures to be implemented to prevent damage to buildings, structures or services. Written approval from the Council must be obtained before an alternative monitoring option is implemented.

Contingency Actions

~~195-224.~~ If the consent holder becomes aware of any damage to buildings, structures or services potentially caused wholly, or in part, by the exercise of this consent, the consent holder must:

- (a) Notify the Council and the asset owner within two working days of the consent holder becoming

aware of the damage.

- (b) Provide a report prepared by a SQEP (engaged by the Consent Holder at their cost) that describes the damage; identifies the cause of the damage; identifies methods to remedy and/or mitigate the damage that has been caused; identifies the potential for further damage to occur and describes actions that must be taken to avoid further damage.
- (c) Provide a copy of the report prepared under (b) above, to the Council and the asset owner within ten working days of notification under (a) above.

Advice Note: It is anticipated the Consent Holder will seek the permission of the damaged asset to access the property and asset to enable the inspection/investigation. It is understood that if access is denied the report will be of limited extent.

Building, Structure, and Services Surveys and Inspections

~~196-225.~~ A copy of all condition surveys and photographic records required by this consent must be provided to the Council upon request.

Notice of Completion

~~197-226.~~ The Council must be advised in writing within ten working days of when the construction phase dewatering has been completed for the relevant sub-stage of development.

6.0 Stormwater Discharge Permit (s15)

6.1.1 Minor modifications

~~198-227.~~ In the event that any minor modifications to the stormwater management works are required, that will not result in an application under section 127 of the RMA, the following information must be provided:

- (a) Plans and drawings outlining the details of the modifications; and
- (b) Supporting information that details how the proposal does not affect the capacity or performance of the stormwater management system.

All information must be submitted to Auckland Council, prior to implementation.

6.1.2 Raingardens

~~199-228.~~ The detailed design of all proposed raingardens shall be carried out in accordance with Auckland Council's GD01 – Guidance Document for Stormwater Management Devices in the Auckland Region and Auckland Council's Stormwater Code of Practice (Version 4).

~~200-229.~~ The raingardens shall be designed to:

- (a) Provide water quality treatment in accordance with the requirements of GD01;
- (b) Achieve stormwater retention and detention volumes as required to meet the hydrology mitigation requirements for the development; and
- (c) Maintain the design intent as presented in the application, including integration into the streetscape or landscape design where relevant.

Evidence demonstrating compliance with these requirements shall be submitted to and approved by Auckland Council prior to lodgement of Engineering Plan Approval.

6.1.3 Operation and Maintenance ~~Plan~~

~~201-230.~~ An Operation and Maintenance Plan (OMP) for all stormwater management devices proposed to be vested in Council shall be submitted to Auckland Council Healthy Waters Operations Team for certification at the time of Engineering Plan Approval. The OMP must comply with Healthy Waters Operation and Maintenance Plan Template.

6.1.4 Post-Construction Conditions

~~202-231.~~ As-Built certification and plans of the stormwater management works, which are certified (signed) by a chartered professional engineer as a true record of the stormwater management devices, must be provided to Auckland Council within 20 working days of the completion of the stormwater management works.

~~203-232.~~ The As-Built plans must display the entirety of the stormwater management system, and must include:

- (a) The surveyed location (to the nearest 0.1m) and level (to the nearest 0.01m) of the discharge structure, with co-ordinates expressed in terms of NZTM and LINZ datum;
- (b) The location, dimensions and levels of any overland flow paths including cross sections and long

sections;

- (c) Plans and cross sections of all stormwater management devices, including confirmation of the water quality volume, storage volumes and levels of any outflow control structure; and
- (d) documentation of any discrepancies between the design plans and the As-Built plans if modified in accordance with Condition [227-201](#).

7.0 Wastewater Discharge Permit (s15)

Advice Note: The Wastewater Discharge Permit applies to treated wastewater being discharged on the site. They are not applicable if the development connects to the public wastewater network, or untreated wastewater is taken off-site.

~~204-233.~~ The WWTP shall be designed and constructed in general accordance with the “Delmore Wastewater Treatment Plant Design Report” prepared by Apex and approved under Condition 1.

~~205-234.~~ Conditions ~~235-209~~ - ~~276-244~~ must be complied with on a continuing basis whilst the WWTP is in operation.

7.1.1 Wastewater Treatment Plant

~~206-235.~~ The site must be operated and managed in accordance with the Wastewater Management Plan (WMP) approved under Condition 1 while the WWTP is operational. During this period:

- (a) The WMP must be reviewed and updated after 12 months from the date of commissioning of the WWTP, to ensure all components of the WMP are still relevant;
- (b) The WMP must be kept on site and accessible at all times;
- (c) The Hazardous Substance Inventory, associated Material Safety Data Sheets, and Spill Response Plan must be kept up to date and maintained onsite at all times;
- (d) Suitable spill kits must be made available onsite at all times; and
- (e) The consent holder must report all spills over 20 litres, or any discharge of environmentally hazardous substances, including wastewater to the environment, to Auckland Council within 24 hours of the spill occurring.

7.1.2 Monitoring

~~207-236.~~ Prior to the exercise of this wastewater discharge permit, the consent holder shall install a flow meter or flow meters to record the daily volume of wastewater discharged to each of the discharge locations.

~~208-237.~~ A record of the volume of wastewater discharged daily at each of the discharge locations shall be kept by the consent holder at all times. The consent holder shall forward the record for the previous year to Auckland Council upon request.

~~209-238.~~ The land infiltration trench and irrigation fields shall be monitored and maintained by a suitably qualified individual to ensure it continues to perform as intended.

~~210-239.~~ Maintenance of the land infiltration trench and irrigation fields shall be carried out at a minimum of 3 monthly and a record of any maintenance carried out shall be kept on site and available for review upon request by the council. At a minimum, maintenance shall include:

- Flushing of irrigation lines;
- Check that any sequencing valves are operating as intended;
- A walkover of the irrigation fields to check for ponding, runoff, or broken lines;
- Inspection of the land infiltration trench for weeds or other potential sources of blockages; and

- Check for odour.

All maintenance procedures shall be listed in the Wastewater Management Plan and/or Operations and Maintenance Plan.

Receiving Soils Monitoring Plan

240. At least 20 working days prior to discharge commencing, the consent holder shall submit to Council for certification a Receiving Soils Monitoring Plan (RSMP) for all irrigation areas and land treatment areas. The plan shall identify:

- (a) Baseline soil sampling locations and depths;
- (b) Parameters to be monitored, including at least total nitrogen, nitrate-nitrogen, ammonium-nitrogen, Olsen phosphorus or equivalent plant-available phosphorus, pH, electrical conductivity, sodium adsorption ratio or sodicity indicator, organic matter, and soil permeability/infiltration characteristics;
- (c) Sampling frequency;
- (d) Trigger levels for management response; and
- (e) Corrective actions if adverse trends are identified.

Baseline and ongoing soil monitoring

241. The consent holder shall:

- (a) Undertake baseline soil monitoring before the first discharge to each irrigation area; and
- (b) Thereafter undertake soil monitoring at least annually for the first 5 years, and thereafter at a frequency approved by Council based on demonstrated performance.

242. If monitoring identifies nutrient accumulation, declining infiltration, salinity/sodicity effects, or other deterioration in soil condition attributable to the discharge, the consent holder shall investigate and implement remedial action.

Commented [CM46]: Added in response to AC wastewater

~~211.~~

7.1.3 Volume

~~212,243.~~ During the summer period (December to February) the daily average volume of treated wastewater discharged on site must not exceed a total of 101.5m³/day (as a 3 month rolling average from December to February), made up of an average of:

- (a) 38.5m³/day to the land infiltration trench; and
- (b) 63m³/day to land irrigation.

The remainder of the treated wastewater must be trucked off-site to be disposed of at an appropriate facility.

~~213,244.~~ Outside the summer period (March to November), the daily average volume of treated wastewater discharged on site to the irrigation field (or the land infiltration trench, or a combination of both), must not exceed 257m³/day (as a 9 month rolling average from March to November).

7.1.4 Treated Wastewater

~~214-245.~~ Outside of the summer period (March to November), as measured immediately prior to discharge to the land infiltration trench, the treated wastewater discharged to the land infiltration trench must comply with the following daily mass loading limits:

Parameters	12-month median daily equivalent
Total Nitrogen [mg/L]	0.22
Ammoniacal Nitrogen (mg/L)	0.065
cBOD5 [mg/L]	0.44
Total Suspended Solids [mg/L]	0.87
Total Phosphorus [mg/L]	0.015
Escherichia-coli [CFU/100mL]	<4.0
Enterococci [cfu/100mL]	<4.0

Advice note: For the purposes of this condition (March through November), to determine compliance with the consent limits, the daily total volume of treated wastewater discharged to the Land Infiltration Trench shall be taken from a totalised value as provided by the flow meter and as recorded from midnight to midnight in line with the requirements of Condition ~~236~~249.

The concentration of the parameters detailed in the table above used to calculate mass loadings shall be as sampled and tested in accordance with Condition ~~256~~226 by a suitably qualified and experienced person/individual/professional and tested by an IANZ accredited laboratory.

The basis for calculation shall be as follows:

Daily mass loading (kg/d) = (Totalised Daily flow (m³/d) x 1,000) x (Parameter Concentration (mg/L) / 1,000,000)

~~215-246.~~ Inside of the summer period (December to February), as measured immediately prior to discharge to the land infiltration trench, the treated wastewater discharged to the land infiltration trench must comply with the following daily mass loading limits.

Parameters	12-month median daily equivalent
Total Nitrogen [mg/L]	0.038
Ammoniacal Nitrogen (mg/L)	0.012
cBOD5 [mg/L]	0.08
Total Suspended Solids [mg/L]	0.15
Total Phosphorus [mg/L]	0.0027
Escherichia-coli [CFU/100mL]	<4.0
Enterococci [cfu/100mL]	<4.0

Advice note: For the purposes of this condition, to determine compliance with the consent limits, the daily total volume of treated wastewater discharged to the Land Infiltration Trench shall be taken from a totalised value as provided by the flow meter and as recorded from midnight to midnight in line with the requirements of Condition [236240](#).

The concentration of the parameters detailed in the table above used to calculate mass loadings shall be as sampled and tested in accordance with Condition [256226](#) by a suitably qualified and experienced person/individual/professional and tested by an IANZ accredited laboratory.

The basis for calculation shall be as follows:

Daily mass loading (kg/d) = (Totalised Daily flow (m³/d) x 1,000) x (Parameter Concentration (mg/L) / 1,000,000).

[216-247.](#) Should three consecutive samples return results above the median mass load limits for the parameters detailed in Condition [245216](#) or Condition [246217](#) (depending on the time of the year), the consent holder shall notify Auckland Council within 5 working days. The consent holder must then conduct an investigation into the cause, supported by a report to be supplied to Auckland Council. The report shall outline the actions being undertaken to address and remedy the cause of the exceedance and detail whether further monitoring is required.

[217-248.](#) The UV dose must be greater than 16mWs/cm² 95% of the time, while discharging.

[218-249.](#) Chlorine must not exceed 3 mg/L as Free Available Chlorine at the point of discharge to land irrigation.

Advice note: Condition [249220](#) relates solely to land irrigation, Condition [266234](#) applies to the infiltration trench.

[219-250.](#) The consent holder shall maintain sufficient on-site holding capacity at all times to avoid unauthorised discharge, including during delays to tanker collection or temporary closure of any receiving facility. No wastewater shall be loaded to or stored in a manner that could result in overtopping, leakage, or emergency discharge to land or water.

Commented [CM47]: Added in response to AC wastewater

7.1.5 Treated Wastewater Monitoring

[220-251.](#) Prior to the exercise of this consent, the consent holder must establish adequate facility and access for wastewater quality sampling of the treated wastewater before the wastewater discharges to the land application area.

[221-252.](#) The consent holder must continuously monitor treated wastewater discharge flows and volume, with data linked to the wastewater treatment plant SCADA system.

[222-253.](#) The consent holder must ensure and be able to demonstrate that a UV dose of a minimum of 16mWs/cm² is delivered by the UV disinfection facility 95% of the time (calculated on the basis of a 15-minute average, while discharging) over each calendar month.

[223-254.](#) The consent holder must take 24-hour flow proportioned samples of the treated wastewater on a fortnightly basis from the treated wastewater compliance monitoring point and analyse for the parameters set out below.

Parameters	Unit
------------	------

Total Nitrogen	(mg/L)
Ammoniacal Nitrogen	(mg/L)
Nitrate Nitrogen	(mg/L)
Nitrite Nitrogen	(mg/L)
Soluble cBOD5	(mg/L)
Total Suspended Solids	(mg/L)
Dissolved Reactive Phosphorus	(mg/L)
Total Phosphorus	(mg/L)
Escherichia-coli	(cfu/100mL)
Enterococci	(cfu/100mL)
Temperature	°C
Electrical Conductivity	µS/cm
Total Residual Chlorine	(mg/L)
pH	-

~~224-255.~~ No more than 12 samples out of any 24 consecutive fortnightly samples shall exceed the specified limit.

~~225-256.~~ The treated wastewater compliance monitoring point shall be at a location within the treatment plant compound, immediately following the final wastewater treatment plant step. All wastewater quality analyses must be undertaken by an IANZ accredited or equivalent laboratory. All methods used must be appropriate for the wastewater analyses undertaken.

7.1.6 Discharge to Irrigation Field

~~257.~~ The irrigation fields shall be designed in general accordance with the “*Delmore Water and Wastewater Treatment Plant Design Report*” (dated December 2025, by Apex).

~~258.~~ The consent holder must submit the detailed design of the irrigation fields to Auckland Council before installation. The detailed design must include, at a minimum:

- ~~(a) A final layout of the overall irrigation fields and irrigation zones;~~
- ~~(b) A layout showing buffer distances from watercourses, buildings, bores and other features requiring buffer separation from the irrigation drip lines; and~~
- ~~–Details of the irrigation system design, including dripline type, emitter type, emitter spacing and lateral spacing.~~

~~(c)–~~

~~(d)(c)~~

~~259.~~ Before operation of any irrigation area, the consent holder shall provide to Council:

- ~~(d) As-built plans of all irrigation lines, valves, zones and buffers;~~
- ~~(e) Certification from a SQEP that the irrigation system has been installed in accordance with the certified design; and~~
- ~~(f) Confirmation that all buffer setbacks to bores, watercourses, buildings and other sensitive~~

features have been achieved.

260. No treated wastewater shall be applied to land irrigation areas when soils are saturated, when rainfall conditions are such that ponding or runoff is likely.

261. No treated water shall be applied to land within 40 metres of any bore used for abstraction of water for human consumption.

226-262. The total nutrient loading into the irrigation field must not exceed the following application rates:

Nutrient	Loading
Total Nitrogen	220kg/Ha.year
Total Phosphorous	80 kg/Ha.year
Biological Oxygen Demand	600kg/Ha.day

227. The maximum loading rate to the irrigation fields shall not exceed 3mm/day.

228.

229-263. Irrigation at the disposal must not result in ponding or runoff.

264. A buffer zone of a minimum of 15 metres must be maintained between the discharge of wastewater in the irrigation field and any surface water body.

265. The consent holder must maintain a monthly record of:

(a) the volume discharged to each irrigation zone;

(b) the nutrient concentrations used for loading calculations; and

(c) the resulting nitrogen and phosphorus loading rate for each zone and for the irrigation field as a whole.

These records shall be provided to Council on request and summarised annually.

Commented [CM48]: Updated in response to AC - wastewater

230-1. The consent holder must submit the detailed design of the irrigation fields to Auckland Council before installation. The detailed design must include, at a minimum:

(a) A final layout of the overall irrigation fields and irrigation zones;

(b)(a) A layout showing buffer distances from watercourses, buildings, bores and other features requiring buffer separation from the irrigation drip lines; and

(c)(a) Details of the irrigation system design, including dripline type, emitter type, emitter spacing and lateral spacing.

7.1.7 Discharge to Land Infiltration Trench

231-266. No chlorine dosing must take place into the discharge to the land infiltration trench.

232-267. The discharge trench must be fenced off and signposted to discourage access to the area.

~~233-268.~~ The infiltration trench shall be monitored and maintained by a SQEP to ensure it continues to perform as intended. A record of any maintenance carried out shall be kept on site and available for review upon request by the council.

7.1.8 Performance Monitoring

~~234-269.~~ Within one month of the first exercise of this wastewater discharge permit, the consent holder must supply Auckland Council with a Producer Statement/Certificate of Compliance from a SQEP, certifying that the Wastewater Treatment Plant, irrigation fields and land contact infiltration trench have been constructed as required by this consent.

7.1.9 Receiving Environment Monitoring

Monitoring Locations

~~235-270.~~ The consent holder must undertake surface water quality monitoring, and ecological surveys as described in Conditions ~~271~~~~239~~ - ~~274~~~~242~~ at the general locations within the unnamed tributary of the Orewa River, as follows:

- (a) A control site, 'US', situated approximately 100m upstream from the land contact infiltration trench discharge.
- (b) An impact site, 'DS-1', situated approximately 50m downstream from the land contact infiltration trench discharge.
- (c) A second impact site, 'DS-2', situated approximately 50m downstream of the main channel's confluence with a tributary.

Surface Water Quality Monitoring

~~236-271.~~ Surface water quality sampling must be undertaken:

- (a) For a period of at least 12 months prior to commencement of discharge, at quarterly intervals, to establish baseline conditions and seasonal variability.
- (b) Following the commencement of the discharge, at quarterly intervals.

(c) Once the development has been operating at design capacity for a minimum of two years, the sampling frequency may be reduced to once every three years, in consultation with Council, provided monitoring demonstrates no significant discharge-related reduction in surface water quality and no incidents having been reported under Condition ~~247~~~~218~~.

~~(d)~~ The survey data must be provided to Auckland Council within 20 working days of the survey being carried out.

Commented [CM49]: Updated in response to DOC feedback

~~237-272.~~ All surface water quality samples must be tested for the following parameters:

- (a) pH
- (b) Total suspended solids
- (c) Total ammoniacal nitrogen
- (d) Nitrate-nitrogen
- (e) Total nitrogen
- (f) Dissolved reactive phosphorous
- (g) Total phosphorous

- (h) Escherichia coli
- (i) Enterococci
- (j) Soluble carbonaceous five-day biochemical oxygen demand (cBOD₅)

All sample analyses must be undertaken by an IANZ accredited or equivalent laboratory.

Ecological Monitoring

~~238-273.~~ Ecological surveys must be undertaken:

- (a) Once, prior to the commencement of the discharge, during summer (between December and February).
- (b) Annually, following the commencement of the discharge, during summer (between December and February).
- (c) Once the development has been operating at design capacity for a minimum of two years, the sampling frequency may be reduced to once every three years, in consultation with the Consent Authority, provided monitoring demonstrates no significant discharge-related deterioration in ecological condition and no incidents having been reported under Condition ~~247~~²¹⁸.

~~(e) The survey data must be provided to Auckland Council within 20 working days of the survey being carried out.~~

(d)

Commented [CM50]: Update in response to DOC feedback

~~239-274.~~ Each ecological survey must include:

- (a) A qualitative assessment of physical habitat characteristics.
- (b) Collection and analysis of macroinvertebrate samples.
- (c) Overnight fish trapping.

Incident Reporting

~~240-275.~~ Where surface water quality sampling and/or ecological surveys identify a deterioration in water quality and/or ecological health that is attributable to the WWTP discharge, the consent holder shall:

- (a) Immediately investigate the cause and extent of the deterioration.
- (b) Provide a report to the Council within 20 working days of becoming aware of the deterioration, including recommended actions.
- (c) Implement any remedial measures required to address discharge related effects.

Monitoring Report

~~241-276.~~ The consent holder must prepare an Annual Environmental Monitoring Report (AEMR) to be submitted to Council by each anniversary of consent commencement. The AEMR must include:

- (a) All monitoring results required by Conditions ~~271~~²³⁹ - ~~274~~²⁴².
- (b) A comparison of monitoring results against baseline conditions (including seasonal variability) and relevant guideline values.

~~(e)~~ An assessment as to whether any observed changes are attributable to the WWTP discharge, including any reporting required under Condition ~~275~~²⁴³.

~~(c)~~

7.1.10 Spill Response and Emergency Management

277. The consent holder shall maintain spill kits and emergency response procedures at the loading area and along the tanker loading interface. In the event of any spill, leak, tanker rollover, hose failure, or other accidental discharge, the consent holder shall:

- (a) immediately stop the discharge if safe to do so;
- (b) contain and recover the spill;
- (c) prevent any wastewater entering the stormwater system or watercourses;
- (d) notify Council as soon as practicable; and
- (e) provide a written incident report within a specified period.

7.1.11 Annual Report

278. Upon completion of commissioning of the wastewater treatment plant and when the plant approaches normal operation, the consent holder shall engage a suitably qualified and independent wastewater professional to undertake an annual audit of:

- (a) Treatment plant performance;
- (b) Compliance with discharge limits;
- (c) Irrigation and infiltration field performance;
- (d) Maintenance records;
- (e) Alarm history;
- (f) Incidents, spills, odour complaints, and corrective actions; and
- (g) Adequacy of on-site discharge capacity relative to actual flows.

Commented [CM51]: Request from AC - wastewater

8.0 Air Discharge Permit (s15)

Advice Note: The Air Discharge Conditions are not applicable if the development connects to the public wastewater network.

8.1.1 Odour Management Plan

242-279. The consent holder must prepare and submit to Auckland Council a Final OMP for certification. The OMP must incorporate a series of monitoring, management and operational procedures, methodologies and contingency plans, and together shall accurately record all information required to comply with the conditions of this consent.

243-280. The OMP must be in general accordance with the Draft OMP provided under Condition 1 and must include the following:

- (a) Identification of all point sources for discharges of contaminants into air, including a map and schematic diagram showing the location of each source;
- (b) Procedures to minimise discharges of contaminants into air (including odour), including details of the inspection, maintenance, monitoring and contingency procedures in place for the wastewater treatment plant and the trucking of untreated wastewater off-site;
- (c) The operating parameters of odour control equipment and the frequency and scope of the regular checks to be performed on emissions control equipment; including testing of the carbon bed saturation;
- (d) Procedures for the monitoring of odour, including details of inspection procedures, recording requirements and contingency measures;
- (e) The identification of staff responsibilities; and
- (f) The procedures for the receipt, recording and handling of air quality complaints received.

244-281. The OMP must be reviewed on an annual basis and any subsequent changes to the certified OMP must be submitted to the council for certification prior to implementation. The council will advise the Consent Holder in writing if any aspects of the OMP are considered to be inconsistent with achieving the provisions of this consent.

Advice Note: The council acknowledges that the OMP is intended to provide flexibility both for the consent holder and the council for the management of the air discharges. Accordingly, the OMP will be reviewed over time. Any reviews should be in accordance with the stated objectives of the management plan and limited to the scope of this consent.

8.1.2 Air Discharges Limits

245-282. All processes associated with the management of wastewater must be operated, maintained, supervised, monitored and controlled in accordance with the OMP in accordance with Condition 279-245 - 280-246 to ensure that all emissions authorised by this consent are maintained at the minimum practicable level.

246-283. Discharges of contaminants into air from the site must not cause:

- (a) Odour that is noxious, dangerous, offensive or objectionable effect beyond the boundary of the Site, in the opinion of an enforcement officer.

- (b) Visible emissions (other than water vapour/steam or heat haze) that cause a dangerous, offensive or objectionable effect, in the opinion of an enforcement officer.

Advice Note: Air discharge limits

Condition [283249](#) is to be assessed by suitably trained council enforcement officers in accordance with the procedures outlined in the Good Practice Guides for Odour (Ministry for the Environment, 2016), including consideration of the FIDOL factors (frequency, intensity, duration, offensiveness and location) for amenity effects (dust, odour and visible emissions).

8.1.3 Untreated Wastewater to be Taken Off-Site

[247-284.](#) The consent holder must design and construct an odour control system for air that is displaced from the tankers during filling. The odour control system must be designed so that the discharge will not cause odour that is noxious, dangerous, offensive or objectionable to any residential dwellings.

[248-285.](#) The consent holder must design and construct an odour control system for vented emissions from the holding tank. The odour control system must be designed so that the discharge will not cause odour that is noxious, dangerous, offensive or objectionable to any residential dwellings.

[249-286.](#) Within one month of the installation of the odour control systems, the Consent Holder must provide to the Council a report from an appropriately qualified person, which verifies that the design and installation of the odour control system has been undertaken in accordance with Conditions [284250](#) and [285251](#).

8.1.4 Wastewater Treatment Plant

[250-287.](#) Air discharges from solids screening and storage and sludge dewatering and storage must be extracted to an emission control system (including an activated carbon scrubber) and discharged from a stack at least 3m above ground level or the apex height of the nearest building within 20 metres, without obstruction of the vertical discharge of air.

[251-288.](#) Within one month of the WWTP commencing treatment, the Consent Holder must provide to the Council a report from a SQEP, which verifies that the design and installation of the WWTP and odour control system (including the odour extraction and treatment system) has been undertaken in accordance with Condition [287253](#).

8.1.5 Monitoring and Reporting Conditions

[252-289.](#) Within 3 months of exercising this resource consent, The consent holder must:

- (a) Operate and maintain a weather station on the site to measure and record the air temperature, wind direction and wind velocity on a continuous basis (at no less than 10-minute intervals). The weather data must be retained for at least the duration of the resource consent.
- (b) Weather data of any period must be provided to Auckland Council within 5 days of a request.
- (c) The weather station must be located on the site in a location which, as far as is practicable, is unaffected by surrounding structures or vegetation or other features for the purpose of ensuring the most accurate measurements as practicable on the site.
- (d) The weather station must be installed and operated in accordance with AS/NZS 3580.14:2014 (Methods for sampling and analysis of ambient air - Meteorological monitoring for ambient air quality monitoring applications).

290. Within two months of the first operation of the wastewater treatment plant and commencement of tanker filling activities (whichever occurs first), the consent holder must engage a SQEP to undertake a post-commissioning odour assessment.

The assessment must:

- (a) Include field-based odour observations at and beyond the site boundary under representative operating conditions for both the WWTP and tanker filling activities;
- (b) Be carried out in general accordance with the Ministry for the Environment's Good Practice Guide for Assessing and Managing Odour (2016);
- (c) Identify any odour that is, in the opinion of the SQEP, offensive or objectionable beyond the boundary of the site; and
- (d) Recommend corrective actions where necessary to avoid future odour effects.

Within 20 working days of completing the assessment, the consent holder must provide the odour assessment report to the Council and implement any corrective actions identified in the report within the timeframe specified by the SQEP.

Commented [CM52]: New odour condition added in based on recommendation from AC air quality

~~253-291.~~ The Council must be notified as soon as practicable in the event of any significant discharge to air, which results or has the potential to result in a breach of air quality conditions or adverse effects on the environment. The following information must be supplied:

- (a) Details of the nature of the discharge including any wind conditions as recorded under condition ~~289255~~ during the incident timeframe.
- (b) An explanation of the cause of the incident.
- (c) Details of remediation action taken.

Advice Note: Significant discharges to be notified to council in accordance with this condition include abnormal discharges arising from unexpected failures of the WWTP (including emission control systems). An email to monitoring@aucklandcouncil.govt.nz should be sent detailing the nature of the issue and what contingency measures are to be implemented to minimise potential air quality effects.

~~254-292.~~ All air quality complaints that are received must be recorded and if requested by Council, provided to Council within one working day of the complaint. The recorded complaint details must include:

- (a) The date, time, location and nature of the complaint.
- (b) The name, phone number and address of the complainant, unless the complainant elects not to supply these details.
- (c) Weather conditions, including wind speed and direction, at time of the complaint.
- (d) Any remedial actions undertaken.

9.0 Archaeological Authority

Commented [CM53]: This will be updated to reflect HNZPT amendments, as per discussions with council

~~255-293.~~ All works must be undertaken in accordance with the Archaeological Management Plan (AMP) prepared by Clough and Associates titled “Delmore Proposed Residential Development, Upper Ōrewa, Auckland” dated December 2025 (AMP). Any changes to the AMP require the prior written agreement of Heritage New Zealand Pouhere Taonga.

~~256-294.~~ A copy of the AMP (and any updates to these documents) shall be provided to Ngāti Manuhiri, Te Kāwarau ā Maki, te Runanga o Ngāti Whātua, and Ngaati Whanaunga.

~~257-295.~~ Any activity undertaken at the site under the archaeological authority must conform to accepted archaeological practice.

~~258-296.~~ Within 12 months of the completion of the on-site archaeological work, the authority holder shall ensure that a final report, completed to the satisfaction of Heritage New Zealand Pouhere Taonga and following the Archaeological Report Guideline (AGS12 2023), is submitted to Heritage New Zealand Pouhere Taonga for inclusion in the Heritage New Zealand Pouhere Taonga Archaeological Reports Digital Library.

- (a) One hard copy and one digital copy of the final report are to be sent to the Heritage New Zealand Pouhere Taonga Senior Archaeologist.
- (b) Digital copies of the final report must also be sent to: the NZAA Central Filekeeper, Auckland Museum, Auckland Council, and Tangata Whenua.

~~259-297.~~ Prior to any works commencing, the authority holder must ensure that all contractors working on the project are briefed on site by the approved person, who may appoint a SQEP to carry out the briefing on their behalf, on:

- (a) The possibility of encountering archaeological evidence;
- (b) How to identify possible archaeological sites during works;
- (c) The archaeological work required by the conditions of this authority; and
- (d) Contractors responsibilities with regard to notification of the discovery of archaeological evidence to ensure that the authority conditions are complied with.

~~260-298.~~ Prior to the start of any on-site archaeological work, the authority holder must ensure that Heritage New Zealand Pouhere Taonga is advised of the date when work will begin. This advice must be provided at least two (2) working days before work starts. The authority holder must also ensure that Heritage New Zealand Pouhere Taonga is advised of the completion of the on-site archaeological work, within five (5) working days of completion.

~~261-299.~~ All earthworks that may affect any archaeological sites must be monitored by the approved person who may appoint a person to carry out the monitoring on their behalf.

~~262-300.~~ In addition to any tikanga agreed to between the authority holder and Ngāti Manuhiri, Te Kāwarau ā Maki, te Runanga o Ngāti Whātua, and Ngaati Whanaunga provided with the authority application, the following shall apply:

- (a) If any kōiwi (human remains) are encountered, all work should cease within 5 metres of the discovery. The Heritage New Zealand Pouhere Taonga Senior Archaeologist, New Zealand Police and [name of Tangata Whenua] must be advised immediately in accordance with Guidelines for

Kōiwi Tangata/Human Remains (AGS8 2010) and no further work in the area may take place until future actions have been agreed by all parties;

- (b) Ngāti Manuhiri, Te Kāwarau ā Maki, te Runanga o Ngāti Whātua, and Ngaati Whanaunga shall be informed if any possible taonga or Māori/Moriori artefacts are identified to enable appropriate tikanga to be undertaken, so long as all statutory requirements under the Heritage New Zealand Pouhere Taonga Act 2014 and the Protected Objects Act 1975 are met;
- (c) Ngāti Manuhiri, Te Kāwarau ā Maki, te Runanga o Ngāti Whātua, and Ngaati Whanaunga shall be provided with a copy of any reports completed as a result of the archaeological work associated with this authority and be given an opportunity to discuss it with the s45 approved person if required.

~~263-301.~~ Annually, from the date of issue of this authority, Site Record Forms are to be updated or submitted to the NZAA Site Recording Scheme, and the authority holder must submit to the Heritage New Zealand Pouhere Taonga Senior Archaeologist and Ngāti Manuhiri, Te Kāwarau ā Maki, te Runanga o Ngāti Whātua, and Ngaati Whanaunga a written report containing a summary of the progress of the project.

Attachment 1 – Table of Plans and Reports

Report title and reference	Author	Rev	Dated
Ecological Impact Assessment	Viridis	N/A	18/12/2025
Arboricultural Assessment	Peers Brown Miller	1	19/12/2025
Draft Stormwater Management Plan	McKenzie & Co	C	2/07/2025
Preliminary Site Investigation	Williamson Water and Land Advisory	4	16/12/2025
Geotechnical Report	Riley Consultants	1.0	19/12/2025
Geotechnical Supplementary Memo	Riley Consultants	N/A	19/12/2025
Geomorphic Risk Assessment	Morphum	N/A	20/11/2025
Geomorphic Risk Assessment Supplementary Memo	Morphum		19/12/2025
Archaeological Assessment	Clough & Associates Ltd	N/A	12/2025
Landscape Assessment Report	Greenwood Associates	0	18/12/2025
Water, Wastewater and Utilities Report	McKenzie & Co	G	22/12/2025
Stormwater Report	McKenzie & Co	H	22/12/2025
Earthworks Report and Drawings	McKenzie & Co	F	15/12/2025
Roading and Access Report	McKenzie & Co	H	15/12/2025
Noise Assessment	SLR	1.0	18/12/2025
Urban Design Assessment	Barker & Associates	N/A	19/12/2025
Upper Orewa Concept Structure Plan	Barker & Associates	N/A	12/2025
Integrated Transportation Assessment	Commute	N/A	22/12/2025
Flood Assessment Report	McKenzie & Co	D	18/12/2025
Water and Wastewater Design Report	Apex Water Limited	-	
Wastewater Disposal Memorandum	Vineway Limited	N/A	18/12/2025
Wastewater Discharge Assessment	Viridis	N/A	19/12/2025
Air Discharge Assessment	AirMatters	6	19/12/2025
Hazardous Substances Assessment	Williamson Water and Land Advisory	N/A	16/12/2025
Hydrology Assessment	Williamson Water and Land Advisory	2	18/12/2025

Commented [CM54]: This will need to be updated but best to leave until later.

<i>Architectural Plans</i>			
Architectural Drawings	Terra Studios	B	-
<i>Landscape Plans</i>			
Landscape Plans	Greenwood Associates	-	19/12/2025
Planting Implementation and Maintenance Plan	Greenwood Associates	-	18/12/2025
<i>Engineering Plans</i>			
Stage 1 Raingarden Plans	McKenzie & Co	E	22/12/2025
Stage 1 Earthworks Drawings	McKenzie & Co	L	22/12/2025
Stage 1 Site Clearing	McKenzie & Co	H	22/12/2025
Stage 1 Erosion and Sediment Control	McKenzie & Co	E	22/12/2025
Stage 2AB Earthworks Drawings	McKenzie & Co	I	22/12/2025
Stage 2CDE Earthworks Drawings	McKenzie & Co	M	22/12/2025
Stage 1 Rooding Drawings	McKenzie & Co	G	22/12/2025
Stage 2 Rooding Drawings	McKenzie & Co	G	22/12/2025
Stage 1 Stormwater Drawings	McKenzie & Co	F	22/12/2025
Stage 2AB Stormwater Drawings	McKenzie & Co	F	22/12/2025
Stage 2AB Site Clearing	McKenzie & Co	F	22/12/2025
Stage 2AB Sediment Erosion	McKenzie & Co	E	22/12/2025
Stage 2CDE Stormwater Drawings	McKenzie & Co	D	22/12/2025
Stage 2 CDE Site Clearing	McKenzie & Co	F	22/12/2025
Stage 2 CDE Sediment Erosion	McKenzie & Co	D	22/12/2025
Stage 1 Wastewater, Water & Utilities Drawings	McKenzie & Co	B	22/12/2025
Stage 2 Wastewater, Water & Utilities Drawings	McKenzie & Co	B	22/12/2025
<i>Scheme Plans</i>			
Stage 1 Scheme Plan	McKenzie & Co	I	22/12/2025
Stage 2 Scheme Plan	McKenzie & Co	G	22/12/2025

Attachment 2: Inputs to the Groundwater and Settlement Monitoring and Contingency Plan

Schedule A: Alarm and Alert Levels			
Movement		Trigger Thresholds (+/-)	
		Alarm	Alert
a)	Differential vertical settlement between any two Ground Surface Deformation Stations (the Differential Ground Surface Settlement Alarm or Alert Level):	TBC	TBC
b)	Total vertical settlement from the pre-excavation baseline level at any Ground Surface Deformation Station (the Total Ground Surface Settlement Alarm or Alert Level):	TBC mm	TBC mm
c)	Differential vertical settlement between any two adjacent Building Deformation Stations (the Differential Building Settlement Alarm or Alert Level):	TBC	TBC
d)	Total vertical settlement from the pre-excavation baseline level at any Building Deformation Station (the Total Building Settlement Alarm or Alert Level):	TBC mm	TBC mm
e)	Total lateral deflection from the pre-excavation baseline level at any retaining wall deflection station (the Retaining Wall Deflection Alarm or Alert Level):	TBC mm	TBC mm

Schedule B: Groundwater Monitoring Frequency					
Bore Name	Location		Groundwater level monitoring frequency (to an accuracy of 10 mm)		
			From bore construction until one month before Commencement of Construction Phase Dewatering	Two weeks before Commencement of Construction Phase Dewatering	From Completion of Construction Phase Dewatering until 3 months later
GWBH	TBC	TBC	Weekly (for at least two weeks)	Weekly	Monthly

Schedule C: Ground Surface and Building Monitoring			
Monitoring Station and type*	Frequency		
	Pre-Commencement of Excavation	Commencement to Completion of Excavation	Post- Completion of Excavation
Ground: TBC	Twice to a horizontal and vertical accuracy of +/-2 mm (achieved by precise levelling)	Weekly	Monthly for 6 months
Buildings: TBC	Twice to a horizontal and vertical accuracy of +/-2 mm (achieved by precise levelling)	Weekly	Monthly for 6 months

Schedule D: Retaining Wall Monitoring Frequency				
Frequency				
Pre-Commencement of Excavation	Commencement of Excavation to one month after Completion of Excavation		From Completion of Excavation until 3 months later	
Pre-Commencement of Dewatering	Retaining Wall Deflection Stations	Inclinometers	Retaining Wall Deflection Stations	Inclinometers
N/A - can only be installed after installation and immediately prior to excavation commencing	Once for every 2 metres depth (on average) of excavation, and, in any case, at a minimum of once weekly.	Once for every 2 metres depth (on average) of excavation, and, in any case, at a minimum of once fortnightly.	Fortnightly	Monthly

| _____

Attachment 3: Groundwater Diversion and Dewatering Definitions**Commented [CM55]:** Request from AC groundwater

<u>Word</u>	<u>Definition</u>
<u>Alarm Level</u>	<u>Specific levels at which actions are required as described in the relevant conditions.</u>
<u>Alert Level</u>	<u>Specific levels at which actions are required as described in the relevant conditions.</u>
<u>Bulk Excavation</u>	<u>Includes all excavation that affects groundwater excluding minor enabling works and piling less than 1.5 m in diameter.</u>
<u>Commencement of Excavation</u>	<u>Commencement of Bulk Excavation or excavation to create perimeter walls.</u>
<u>Completion of Construction</u>	<u>Means when the Code Compliance Certificate (CCC) is issued by Auckland Council</u>
<u>Completion of Excavation</u>	<u>Means the stage when all Bulk Excavation has been completed</u>
<u>Condition Survey</u>	<u>Means an external visual inspection or a detailed condition survey (as defined in the relevant conditions).</u>
<u>Damage</u>	<u>Includes Aesthetic, Serviceability, Stability, but does not include Negligible Damage. Damage as described in the table below.</u>
<u>External visual inspection</u>	<u>A condition survey undertaken for the purpose of detecting any new external Damage or deterioration of existing external Damage. Includes as a minimum a visual inspection of the exterior and a dated photographic record of all observable exterior Damage.</u>
<u>GSMCP</u>	<u>Means Groundwater and Settlement Monitoring and Contingency Plan</u>
<u>Monitoring Station</u>	<u>Means any monitoring instrument including a ground or building deformation station, inclinometer, groundwater monitoring bore, retaining wall deflection station, or other monitoring device required by this consent.</u>
<u>RL</u>	<u>Means Reduced Level.</u>
<u>Seasonal Low Groundwater Level</u>	<u>Means the annual lowest groundwater level – which typically occurs in summer.</u>
<u>Services</u>	<u>Include fibre optic cables, sanitary drainage, stormwater drainage, gas and water mains, power and telephone installations and infrastructure, road infrastructure assets such as footpaths, kerbs, catch-pits, pavements and street furniture.</u>
<u>SQEP</u>	<u>Means Suitably Qualified Engineering Professional</u>
<u>SQBS</u>	<u>Means Suitably Qualified Building Surveyor</u>

Building Damage Classification Table

<u>Category of Damage</u>	<u>Normal Degree of Severity</u>	<u>Description of Typical Damage</u> <i>(Building Damage Classification after Burland (1995), and Mair et al (1996))</i>	<u>General Category</u> <i>(after Burland – 1995)</i>
<u>Q</u>	<u>Negligible</u>	<u>Hairline cracks.</u>	<u>Aesthetic.</u>

<u>1</u>	<u>Very Slight</u>	<u>Fine cracks easily treated during normal redecoration. Perhaps isolated slight fracture in building. Cracks in exterior visible upon close inspection. Typical crack widths up to 1 mm.</u>	<u>Damage</u>
<u>2</u>	<u>Slight</u>	<u>Cracks easily filled. Redecoration probably required. Several slight fractures inside building. Exterior cracks visible, some repainting may be required for weather-tightness. Doors and windows may stick slightly. Typically crack widths up to 5 mm.</u>	
<u>3</u>	<u>Moderate</u>	<u>Cracks may require cutting out and patching. Recurrent cracks can be masked by suitable linings. Brick pointing and possible replacement of a small amount of exterior brickwork may be required. Doors and windows sticking. Utility services may be interrupted. Weather tightness often impaired. Typical crack widths are 5 mm to 15 mm or several greater than 3 mm.</u>	<u>Serviceability Damage</u>
<u>4</u>	<u>Severe</u>	<u>Extensive repair involving removal and replacement of walls especially over door and windows required. Window and door frames distorted. Floor slopes noticeably. Walls lean or bulge noticeably. Some loss of bearing in beams. Utility services disrupted. Typical crack widths are 15 mm to 25 mm but also depend on the number of cracks.</u>	
<u>5</u>	<u>Very Severe</u>	<u>Major repair required involving partial or complete reconstruction. Beams lose bearing, walls lean badly and require shoring. Windows broken by distortion. Danger of instability. Typical crack widths are greater than 25 mm but depend on the number of cracks.</u>	<u>Stability Damage</u>

Note: In the table above, the column headed "Description of Typical Damage" applies to masonry buildings only and the column headed "General Category" applies to all buildings.

Delmore Fast Track Application

To: Auckland Transport – Stormwater

From: Lachlan Van der Meij – McKenzie & Co (MKC)

Date: 15 April 2026

Re: Auckland Transport Stormwater Memorandum

1.1 Introduction

This memorandum responds to the Technical Specialist Memo prepared by Auckland Transport (stormwater) in relation to the above fast-track application (as lodged). This response addresses:

- Further information requests / technical queries; and
- Recommended amendments to consent conditions.

1.2 Response to Further Information Requests / Technical Comments

Information Request from Council on the lodged material	Applicant Response	Council Specialist Response
Section 10.3 of the Flood Assessment Report (Appendix 35) states that “An adaptive time step based on a maximum Courant of 4 and a minimum Courant number of 1 was adapted”. Please clarify if this approach was agreed with Healthy Waters.	The raw model has been provided to Healthy Waters and they are still reviewing.	
It appears that only the NZTA culvert was blocked in the culvert block scenarios. Can the applicant please clarify the culverts proposed in this	A culvert blockage scenario in line with the SWCoP requirements has been modelled and included in	

development were assessed for blockage scenarios? We note that this is a requirement in the Stormwater Code of Practice.	the documentation. Please see drawing 3725-0-4540 attached. This demonstrates that all lots are free of flooding and freeboard requirements of the SWCoP are achieved.	
It is not clear where the inflow nodes for the model are located; are catchments PRE12-1, PRE29-2, and PRE33-1 the only ones that have inflow nodes at the bottom of the subcatchment? 1. Section 7 states “Inflow nodes have been applied at the top of sub-catchment boundaries”. 2. Section 10.5 states that “The hydrological inflow is configured to account for actual sub-catchment slope based on equal area terrain method., and each node is positioned at the highest point of its corresponding sub-catchment to ensure the full time of concentration is accurately represented in the model”. 3. Section 10.5 also states that “For catchments PRE12-1, PRE29-2, and PRE33-1, the time of concentration has been calculated using the equal area method based on the potential flow length and slope. The inflow nodes have been applied at the bottom of the respective sub-catchments.”	1. Yes the PRE-XX catchments are applied at the bottom of the catchment as this is external inflow conditions and applied at the bottom with the tc calculated. 2. The inflow BC for the internal catchments has been updated to account for the time of concentration after a review and discussion with Healthy Waters. Please see drawing 3725-0-4500 with nodes showing this information. 3. Correct as per point 1.	4.
While the Flood Assessment Report (Appendix 35) refers to drawing 3725-0-4500 for a Catchment Plan, it is not clear which document this is located	Drawing 3725-0-4500 has been included for reference. The Hydrological inflow configurations were added to this drawing to address the above query.	

in. Can the applicant please clarify which document this drawing is located in. Additionally, can the applicant please ensure that this drawing shows the inflow nodes? The intent for this comment is to verify that flows within roads are correctly represented.		
1. It is not clear what the Culvert Plans (Appendix 33) are intended to demonstrate: 1.1. The longsections have a ground profile through them; is this intended to be the ground embedment? 1.2. The elevation views often do not show culverts at the lowest point of the channel. In particular: 1.2.1. Culverts 4 and 11 are not located in the lowest point in the channel. 1.2.2. Culverts 5, 8, and 9 appear to be located underground (or completely embedded) i.e., with no area to allow flow. 1.2.3. It is not clear how flow is proposed to enter Culvert 9 as it appears to be completely embedded. 1.2.4. Culvert 10 is missing from the elevation view.	1.1 - No, the ground profile has been shown to show the grade of the existing channel for freshwater ecology reasons (fish passage, maintaining similar grades across existing wetland, etc.). 1.2 - The cross section is taken through the middle of the proposed culverts, the ground will be locally re-shaped around the inlet and outlets, as part of the culvert, headwall, and rip rap install. Plans have been updated to reflect this. 1.2.1 – Inlet and outlets are located at the base of the channels. As above, the ground will be locally re-shaped around the inlet and outlets, as part of the culvert, headwall, and rip rap installation. 1.2.2 - As above the ground will be locally re-shaped around the inlet and outlets, as part of the culvert, headwall and rip rap installation. 1.2.3 - Culvert 9 has been extended slightly to remove this concern. 1.2.4 - Noted and updated.	

3. It is not clear what the culvert dimensions are for Culvert 10. The Flood Assessment Report states it to be a 1,900 mm circular culvert, however the calculations in Appendix B of the Stormwater Report state it to have a span of 2,100 mm and a rise of 2,100 mm and the culvert plans state it to have a 2,100 mm diameter. Can the applicant please clarify what dimensions the culvert is to have, and what was used in the model?	Reporting, modelling / calculations and plans have been updated to ensure consistency across all culverts. To answer this particular question, the culvert is circular with a diameter of 2100Ø.	
4. Section 10 (Culvert Crossings) in the applicant's Stormwater Report (Appendix 32) states that "All culverts have been designed to comply with the SWCOP v4", however this is not demonstrated. Can the applicant please provide an assessment of all proposed culverts demonstrating compliance with all the requirements of section 4.3.9.8? We note that section 6.6 of the SMP (Appendix 34) states that "Attenuation of the 1% AEP event is proposed through the throttling of flows that will occur behind the proposed culverts". Considering this, demonstration of compliance to the SW CoP is critically important. 1. We note that culvert calculations are provided in Appendix B of this document, however they are not complete. They also demonstrate that the headwater depth for culverts 3, 4, 5, 8, 9, 10, 11, and 12 appears to exceed the 3.0 m permitted in the SwCOP.	A damming assessment of all culverts has been undertaken by Flow State Consulting (FS). We understand discussions are currently being undertaken between FS and Auckland Transport's stormwater specialist. A memo will be provide on this separately.	

5. It appears that many of the culverts may be a classifiable dam according to the Building (Dam Safety) Regulations 2022, as the headwater above embedment (Appendix B of the Stormwater Report) exceeds 4 m. However, it is not clear what the volume of water impounded by the culverts is. Can the applicant please clarify which culverts will be classifiable dams under the Building Act 2004 or the Building (Dam Safety) Regulations 2022? Can the applicant then also please demonstrate that these classifiable dams meet the requirements of the Stormwater Code of Practice, the Building Act 2004, and the Building (Dam Safety) Regulations 2022? Note that if there is overlap of requirements, as per section 4.3.9.8.a of the Stormwater Code of Practice, the more stringent requirement will take precedence over the Stormwater Code of Practice requirements.	See above.	
6. It is not clear why the embedment depths have been selected. We note that the culvert calculations in Appendix B of the Stormwater Report (Appendix 32) reports that culvert 8, which has a rise of 1,000 mm has an embedment of 600 mm. We also note that section 10 of this report states that “All culverts are proposed to be embedded 25% into the existing stream bed”. However, section 11.6 of the Flood Assessment Report (Appendix 35) states that “All proposed culverts	Except for Culvert 9, all box culverts have an embedment of at least 350mm, and circular culverts are embedded at least 25% to ensure fish passage is provided. Culvert 9 is located along wetland and is required to match the existing topography and upstream invert level to ensure the existing wetland is not impacted. In some cases, additional embedment has been provided to attenuate flows during storm events. Wording and inconsistencies within the reporting have been updated to suit the above.	

within the Delmore development are embedded a minimum of 35% of their total height. It is unclear which requirement should be met; however, many culverts do not meet this requirement. For example, Culvert 3 has a rise of 4,000 mm but an embedment of 350 mm, which is 9%. Can the applicant please clarify what embedment depths are provided, and why these values were selected?		
7. It is not clear if fish passage is required. Can the applicant please clarify if fish passage is required for the proposed culverts?	Comment from the ecologist (Viridis) from a response to the freshwater ecology queries is below: Yes, appropriate fish passage is required for the species present, which include (based on trapping and eDNA); redfin bully, longfin and shortfin eel, banded kōkopu, and giant bully. The proposal improves overall fish passage by removing 17 existing farm culverts that currently restrict connectivity and replacing them with 12 new culverts designed to maintain natural stream conditions. Most new culverts are short (<30 m), sized at ~1.3× stream width, and embedded (25% for pipes or ~350 mm for box culverts), supporting natural bed continuity and fish movement. Culverts 7, 9, and 10 are exceptions due to site constraints (e.g., wetland levels and wide, flat terrain). These are located high in the catchment where fish communities are dominated by strong climbers (eels and banded kōkopu). While passage	

	may be reduced during high flows, conditions during normal/low flows, and the short culvert lengths, are expected to provide adequate passage. Overall, removal of existing barriers and improved culvert design is expected to enhance fish passage across the site.	
8. It appears that not all culverts extend beyond the road reserve. Can the applicant please revisit the Culvert Plans (Appendix 33) and revise the culvert locations.	All culverts have been amended to ensure they extend past the road reserve. Plans have been updated to reflect this.	
9. It is not clear how many culverts can be accessed on both sides for maintenance. Can the applicant please clarify how the culverts can be accessed on both sides and update their Culvert Plans (Appendix 33) to demonstrate this?	Access to both sides of culverts has been provided. Plans have been updated to reflect this.	
10. OLFP: 1. Can the applicant please clarify what the red polygon in the legend represents. It appears to indicate where the depth-velocity product exceeds 0.4 m ² /s, however this is not stated.	Updated drawings (series 4610) have been attached that clearly indicate all layers in the legend.	
2. The OLFP section (section 9.8) of the Stormwater Report (Appendix 32), and in the Stormwater Management Plan (section 6.7 of Appendix 34) does not discuss OLFP's within the road. While some OLFP analyses are provided in the drawings, there appears to be locations of obvious danger to pedestrians (e.g., around corners) that have depth-velocity products	A memo addressing the OLFP's across the site and focusing on these concerns has been prepared and amended to this response.	

exceeding 0.4 m²/s. Notably, section 12 within the Stage 2 OLFP drawings (Appendix 33) reports a depth velocity product of 0.43 m²/s, and this section is close to a corner between Road 20 and 18 – an area of obvious danger to pedestrians. Can the applicant please provide a discussion of the OLFP analysis provided in their drawings, and demonstrate that the requirements of Table 3 of the Road Drainage chapter of AT's TDM are met?		
3. In the OLFP drawings it is not clear where pedestrian crossings are proposed. Considering that pedestrian crossings will be places of obvious danger to pedestrians, can the applicant please clearly identify these in their drawings?	See 2 above.	
4. There is currently no assessment of the depth-velocity, and therefore flood hazard for locations where OLFP's overtop the roads. Can the applicant please provide this, ensuring that the requirements of Table 3 of the Road Drainage chapter of AT's TDM are met?	See 2 above.	

List of Attachments:

Mckenzie & Co Drawing 3725-0-4540

Mckenzie & Co Drawing 3725-0-4500

Mckenzie & Co Drawing series 3725-1-4800

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Kerikeri | Whangārei | Warkworth | Auckland | Hamilton | Cambridge | Tauranga | Havelock North | Wellington | Christchurch | Wānaka & Queenstown



Mckenzie & Co Drawing series 3725-0-4610

Mckenzie & Co Technical Memo – Internal OLFP Analysis

Mckenzie & Co Stormwater Report

Mckenzie & Co Flooding Report

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