Far North District Council

6 Bedggood Close, Paihia

Plan Change Three Waters Infrastructure Peer Review

29 August 2025

1-14713.00

6 Bedggood Close, Paihia Plan Change Three Waters Infrastructure Peer Review

Far North District Council

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REV	DATE	DETAILS
1	29 August 2025	Issued

	NAME	DATE	SIGNATURE
Prepared by:	Jean Botes	29 August 2025	
Reviewed by:	Kamanth Ramlal	29 August 2025	
Approved by:	Richard Pearson	29 August 2025	

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INTRODUCTION

This peer review has been prepared at the request of Far North District Council (FNDC) to provide an independent assessment of infrastructure servicing feasibility for a rezoning submission at 6 Bedggood Close, Paihia (the “site”).

The submission, supported by planning evidence from Steven Remana Sanson (9 June 2025), seeks to rezone 0.8 ha of land from Rural Lifestyle to General Residential in the Proposed District Plan.

The review is framed against the requirements of the Independent Hearings Panel Final Minute 14 (2 December 2024), which sets the rezoning criteria for infrastructure (three waters) servicing.

Supporting documents reviewed include:

- FNDC, District Plan Changes – Infrastructure High Level Review (February 2024)
- FNDC, Engineering Standards for Land Development (May 2023)
- Applicant evidence (Sanson, 2025)
- Applicant evidence (Amsler Memo response, July 2025)
- Trine Kel Limited (TKL) high-level assessment of FNDC's urban reticulation systems (2-April-2025)

The scope covers:

- **Water supply** feasibility and connection options
- **Wastewater** servicing capacity and alignment with FNDC infrastructure plans
- **Stormwater** management approach, neutrality, and downstream effects
- **General servicing risks** including staging, affected party approvals, and integration with roading or landform constraints

Out of Scope:

This peer review does not involve independent network modelling or hydraulic capacity testing, consistent with the engagement assumptions. Transport, geotechnical, detailed design, or property/legal matters are excluded unless they materially influence three waters feasibility.

1 GENERAL

1.1 SITE AND PROPOSAL

The subject site is located at 6 Bedggood Close, Paihia and is approximately 8,404 m² in size. The existing uses for the site include a dwelling and accommodation activities (B&B) accessed from both Bedggood Close and Kings Road.

The rezoning request seeks to change the zoning from Rural Lifestyle to General Residential, thereby enabling a higher development yield. The applicant's July 2025 memo records potential yields ranging from 9–18 realistic lots, or 14–28 theoretical lots depending on whether subdivision is undertaken as a controlled or discretionary activity.

1.2 APPLICANT'S SERVICING STATEMENTS

Key claims from the planning evidence

The original planning evidence stated that the site is already connected to urban services and that detailed servicing would be confirmed at the subdivision stage rather than at rezoning. It also claimed there is no public information to suggest that connections would be constrained.

In summary:

- The site is already connected to urban services;
- Detailed servicing will be confirmed at the time of subdivision or development.
- No public information suggests constraints on connection.

Further information from the Amsler Memo response (July 2025)

The subsequent Amsler Memo response (July 2025) improves on this position by acknowledging engagement with FNDC infrastructure staff and by providing yield ranges. However, the memo stops short of providing any demand calculations, connection design detail, or servicing concept plans.

- Engagement with FNDC infrastructure staff is recorded.
- Yield estimates are provided (These figures assist FNDC in checking capacity but are not translated into flows (L/s or L/p/d) or capacity headroom analysis.):
  - Controlled subdivision: 9 lots realistic (14 theoretical).
  - Discretionary subdivision: 18 lots realistic (28 theoretical).

Observation:

While the memo improves on the original evidence by declaring potential yields and noting engagement, it remains planning-oriented and does not include technical confirmation of connection points, firefighting provision, or downstream capacity. No three waters servicing plan or constraints analysis is included to "tell the servicing story" at a concept level.

2 THREE WATERS SERVICING

2.1 ASSESSMENT FRAMEWORK – MINUTE 14

Minute 14 of the Independent Hearings Panel (Final, 2 December 2024) sets the framework for assessing rezoning requests in the Proposed FNDC District Plan. It requires applicants to demonstrate that the subdivision and development potential enabled by rezoning can be supported by **adequate three waters servicing**.

Specifically, evidence should address:

1. **Proposed connections**
   Where and how the site would connect to existing water, wastewater, and stormwater infrastructure, demonstrating viability.
2. **Engagement and assumptions**
   Outcomes of discussions with FNDC infrastructure staff, and any assumptions about servicing, sequencing, or capacity, including the impact of other plan-enabled development.
3. **On-site Provision**
   Any infrastructure required on-site to make development feasible, such as storage, pumping, or attenuation devices.
4. **Substantive Demand**
   Where rezoning creates material demand on bulk infrastructure, applicants are expected to engage proactively with FNDC's infrastructure team prior to hearings.

Minute 14 is explicit that detailed design is not expected at rezoning stage. Instead, the requirement is for a credible, concept-level servicing assessment that gives Council and the Panel confidence that development enabled by rezoning can be adequately serviced.

In practice, this means applicants must "tell the servicing story": identify the connections, acknowledge the demand that rezoning will generate, summarise what has been discussed with infrastructure staff, and show how any constraints or on-site provisions could be managed.

2.2 TRINE KEL LIMITED'S HIGH-LEVEL NETWORK CAPACITY ASSESSMENT (FNDC, 2025)

The FNDC network capacity assessment applies conservative thresholds. Networks are flagged as failing if wastewater pipes surcharge or flood, or if water pressures drop below 250 kPa (peak day) or 100 kPa (firefighting).

The modelling snapshot reflects the state of FNDC's networks as represented in DIA-funded hydraulic models that were procured in 2020 and completed in 2022, applied by TKL in their April 2025 review to assess current condition only. Future growth assessments (5-, 10-, and 25-year horizons) are intended to be addressed separately as Stage 2 of FNDC's programme.

This provides a baseline position:

- If the network passes, there is capacity (Especially considering the relatively small maximum yield of this subdivision.

- If it fails, there may still be some practical headroom, but this cannot be confirmed without more detailed analysis.

It is therefore reasonable to rely on the FNDC results at rezoning stage, while noting that further modelling and refined calculations can be undertaken at the subdivision stage, when there is more certainty around actual yields, development staging, and greater clarity on FNDC's long-term plans and near-term capital works programmes.

2.3 WATER SUPPLY

The site is currently served by a 25 mm lateral connection to a 100 mm asbestos-cement (AC) main in Bedggood Avenue. This confirms that reticulated water is physically available.

The applicant's July 2025 memo declared potential yields ranging from 9–18 realistic lots (14–28 theoretical), but these figures were not translated into water demand estimates. No Average Day, Peak Day, or Peak Hour flows were presented, and no firefighting water (PAS 4509) assessment was provided. Without this information, FNDC cannot confirm whether the existing 100 mm diameter pipe main and hydrant coverage are adequate for the rezoning-enabled yield.

FNDC's *District Plan Changes, Infrastructure High Level Review* (February 2024) records servicing for this site as "Water: OK, subject to subdivision size." Crucially, at the time of that review, the applicant had not declared lot numbers. The "OK" finding is therefore indicative only and cannot be tied to the current rezoning yield.

The TKL high-level network capacity assessment shows that their pipe network has capacity per the pass-fail criteria mentioned in section 2.2 of this report. There are some mains from the reservoir located north of Paihia that seem to be at capacity but there are alternatives feeding this zone that seem to have capacity.

Finding

The presence of a reticulated connection, supported by FNDC's screening assessment and the TKL model results, suggests that water servicing is feasible, although capacity has not been conclusively proven. I recommend that more detailed analysis be undertaken at the subdivision stage, when there is greater certainty around the site's actual yield.

2.4 WASTEWATER

FNDC GIS data confirms the presence of a 200 mm reticulation pipe in MacMurray Road and a 150 mm pipe to the south of the site, terminating in Lot 1 DP 346730. Appendix A of the applicant's evidence also identifies an existing connection line from the site, likely connecting via a lateral in Bedggood Close. However, no information has been provided regarding the tie-in location or the method of connection for future development.

The Amsler Memo records yield ranges but does not convert these into wastewater design flows (ADWF, PDWF, PWWF). Without flow calculations, downstream capacity and treatment plant headroom cannot be confirmed. FNDC's High-Level Review recorded wastewater capacity as "OK," but this was based only on the immediate downstream pipe and did not consider cumulative impacts or treatment constraints.

The TKL high-level network capacity assessment shows that the gravity main along MacMurray Road is currently at capacity. However, the 150 mm pipe to the south has available capacity. Given the site's topography (sloping north to south), connecting new properties to this 150 mm pipe would be more practical and take advantage of its additional capacity. Some downstream constraints are noted further along the network, particularly at the intersection of Paihia Road and Tohitapu Road.

Finding

The presence of a reticulated connection, supported by FNDC's screening assessment and the TKL model results, suggests that wastewater servicing is feasible, although capacity has not been conclusively proven. A more detailed capacity check should be undertaken at the subdivision stage, when there is greater certainty around the site's actual yield. Even if capacity restrictions are identified, alternative methods such as on-site storage or pressure wastewater systems can be implemented to manage or reduce load on the existing network, meaning that servicing remains viable.

2.5 STORMWATER

The applicant's planning evidence and memo provide almost no information on stormwater servicing. There is no acknowledgement that rezoning will increase impervious surfaces and generate additional runoff. FNDC's Engineering Standards for Land Development (2023) require developments to achieve stormwater neutrality, provide secondary flow paths, and demonstrate safe discharge without adverse effects.

FNDC GIS indicates there is likely an overland flow path running from west to east along Lot 1 DP 346730, located immediately south of the site. This flow path connects to an array of stormwater pipes along the southern boundary of Lot 1 DP 346730. These culverts appear to be located within a river flood hazard zone.

The site currently discharges stormwater to this flow path via diffused sheet flow. The future development will likely introduce a constructed outlet to discharge into the flow path or via piped connection to the existing culverts. In the case of a outlet discharging into the overland flow path significant attention will need to be given to scour protection to avoid erosion or damage within the receiving environment/property.

Although no stormwater information has been provided by the applicant, it is assumed that attenuation would be provided, either on a section-by-section basis or through a site-wide solution. In addition, strong emphasis will need to be placed at the subdivision stage on demonstrating how the site will connect to the existing network, and how secondary flow paths will be managed. This will be critical to ensuring that neighbouring properties are protected from adverse effects during storm events, including events up to at least the 1:100 ARI.

Further detailed work with FNDC will be required to determine a feasible connection location. In addition, an easement or other agreement will likely need to be reached with the owner of Lot 1 DP 346730 to secure either:

- A discharge into the overland flow path on their property (with adequate scour protection), or
- A piped connection routed through their property to tie into the existing culvert system.

Finding

The absence of a servicing story for stormwater means the application does not demonstrate compliance with the intent of Minute 14. While detailed design is not expected at the rezoning stage, acknowledgement of requirements and a credible indication of how they could be addressed is normally required. At a high level, stormwater servicing for the site appears plausible, but there is still substantial work to be done. The servicing pathway will need to be robustly addressed and resolved at the subdivision stage in close coordination with FNDC and affected landowners.

3 OVERALL CONCLUSIONS

The applicant has established that reticulated water and wastewater services are present in the area and that connection is, in principle, possible. FNDC's High-Level Review and the TKL network capacity assessment also indicate feasibility at a screening level. However, the evidence provided remains planning-oriented and stops short of telling a complete servicing story.

Water

The presence of a reticulated connection, supported by FNDC and TKL findings, suggests servicing is feasible and there is capacity in the wider network. Capacity has not been conclusively proven, but this can be confirmed at the subdivision stage when yields and staging are clearer.

Wastewater

Practical connection options are available given the site's topography and the alternative 150 mm line to the south. While downstream constraints and treatment headroom have not been fully addressed, the evidence indicates that servicing remains viable, with further detail to be resolved at subdivision.

Stormwater

For stormwater, the current gap is more significant. Although the site discharges via sheet flow into an existing overland flow path on the property bordering the site to the south, no information has been provided on how the site will tie into the existing receiving environment. At a high level, however, it appears plausible that stormwater can be managed through attenuation measures, however connection is dependant on agreements with adjoining landowners, and discussion with FNDC. These matters will need to be robustly addressed at the subdivision stage, in close coordination with FNDC and affected landowners/stakeholders.

In Summary

the applicant's evidence is sufficient to demonstrate that three waters servicing is plausible and that a development pathway exists. However, further detailed work is required at subdivision and consent stage to confirm servicing arrangements, secure easements where necessary, and ensure compliance with FNDC's standards.

Far North District Council

Lot 1 DP53506, Goffe Drive, Haruru.

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Prepared by:	Kama Burwell	29 August 2025	
Reviewed by:	Jean Botes	29 August 2025	
Approved by:	Richard Pearson	29 August 2025	

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INTRODUCTION

This peer review has been prepared at the request of Far North District Council (FNDC) to provide an independent assessment of infrastructure servicing feasibility for a rezoning submission at Lot 1 DP53506, Goffe Drive, Haruru (the “site”).

The submission seeks to rezone 6.996 ha of land, which is currently zoned Rural Production under the Proposed District Plan. It is proposed that a portion of the site, Area 1 and Area 2, would be re-zoned as Residential, and that the remainder of the site would be re-zoned as Rural-Residential. Refer to Figure 1 below.

Figure 1: Indicative Plan of Development Potential & High Natural Character Overlay (Brown NZ Ltd).

This review is framed against the requirements of the Independent Hearings Panel Final Minute 14 (2 December 2024), which sets the rezoning criteria for infrastructure (three waters) servicing.

Supporting documents reviewed include:

- FNDC, District Plan Changes – Infrastructure High Level Review (February 2024)
- Trine Kel Limited, Technical Memo, 059 – LWDW Scope of Work & Capacity Criteria Rev03 (2 April 2025)
- Trine Kel Limited, Reticulation Heat Map - Wastewater Network Capacity – Paihia (2025)
- Trine Kel Limited, Reticulation Heat Map - Paihia WS Capacity (2025)
- FNDC, Engineering Standards for Land Development (May 2023)
- Applicant evidence: High Level Engineering Assessment, Vision Consulting Engineers, Oct 2024.
- Applicant evidence: Indicative Plan of Development Potential & High Natural Character overlay, Brown NZ Ltd, June 2025.
- Email from Sarah Trinder (Senior Policy Planner – District Plan), FNDC, dated 28 August 2025.

The scope covers:

- **Water supply** feasibility and connection options
- **Wastewater** servicing capacity and alignment with FNDC infrastructure plans
- **Stormwater** management approach, neutrality, and downstream effects
- **General servicing risks** including staging, affected party approvals, and integration with roading or landform constraints

Out of Scope:

This peer review does not involve independent network modelling or hydraulic capacity testing, consistent with the engagement assumptions. Transport, geotechnical, detailed design, or property/legal matters are excluded unless they materially influence three waters feasibility.

1 GENERAL

1.1 SITE AND PROPOSAL

The subject site is Lot 1 DP53506 in Haruru, located between Goffe Drive and the estuary of the Waitangi Inlet, with the southern part of the site adjoining Puketona Road and the Kaipatiki Stream. The site is approximately 69,960 m² in size and slopes steeply from Goffe Drive down to the estuary. The site is generally undeveloped and is largely covered in native bush. There is an abandoned quarry located in the southern section.

Most of the site is a Protected Natural Area (DOC 2016). It is designated High Natural Character (HNC409) in the Proposed District Plan, with the description “Largely indigenous vegetation with relatively few pest plants. Minimal human-mediated hydrological or landform changes.”

The site stretches along the coastline of the estuary of the Waitangi inlet and Kaipatiki Stream. The estuary (the receiving environment for this site) is a Protected Natural Area (DOC 2016) and is also part of the Te Pewhairangi (Bay of Islands) Marine Mammal Sanctuary.

The rezoning request seeks to change the zoning from Rural Production to a mix of Residential zone (the area outside the High Natural Character overlay) and Rural-Residential. It is proposed to subdivide the site into 13 lots.

The proposed use of the site includes 14 dwellings, a community storage space, an information centre, a café and visitors centre, a wharf, carparks, bush walks, and a treetop walk. Vehicle access is proposed from Puketona Road and via a proposed right-of-way from Goffe Drive.

1.2 APPLICANT’S SERVICING STATEMENTS

Key claims from the planning evidence

The high-level engineering assessment (engineering assessment) states there are water supply and wastewater reticulation services present in Goffe Drive, and proposes to connect to these services via a proposed right-of-way.

The engineering assessment states that there is no stormwater service present in the vicinity of the site. It proposes that no stormwater attenuation is required on the site, as stormwater would be discharged to the estuary.

Observation:

The engineering assessment does not quantify the site’s rezoning-related potable water demand or projected wastewater flows. It also omits an analysis of the downstream capacity within the existing reticulation network.

The infrastructure assessment concludes that stormwater attenuation is not required. This may be acceptable if the development does not connect to Council’s stormwater infrastructure, however, this assumption should be confirmed with FNDC to ensure compliance with FNDC’s 2023 Engineering Standards..

No evidence was provided of engagement with FNDC staff about this proposed zone change with regards to three waters servicing.

2 THREE WATERS SERVICING

2.1 ASSESSMENT FRAMEWORK – MINUTE 14

Minute 14 of the Independent Hearings Panel (Final, 2 December 2024) sets the framework for assessing rezoning requests in the Proposed FNDC District Plan. It requires applicants to demonstrate that the subdivision and development potential enabled by rezoning can be supported by **adequate three waters servicing**.

Specifically, evidence should address:

1. **Proposed connections**
   Where and how the site would connect to existing water, wastewater, and stormwater infrastructure, demonstrating viability.
2. **Engagement and assumptions**
   Outcomes of discussions with FNDC infrastructure staff, and any assumptions about servicing, sequencing, or capacity, including the impact of other plan-enabled development.
3. **On-site Provision**
   Any infrastructure required on-site to make development feasible, such as storage, pumping, or attenuation devices.
4. **Substantive Demand**
   Where rezoning creates material demand on bulk infrastructure, applicants are expected to engage proactively with FNDC's infrastructure team prior to hearings.

Minute 14 is explicit that detailed design is not expected at rezoning stage. Instead, the requirement is for a credible, concept-level servicing assessment that gives Council and the Panel confidence that development enabled by rezoning can be adequately serviced.

In practice, this means applicants must "tell the servicing story": identify the connections, acknowledge the demand that rezoning will generate, summarise what has been discussed with infrastructure staff, and show how any constraints or on-site provisions could be managed.

2.2 TRINE KEL LIMITED'S HIGH-LEVEL NETWORK CAPACITY ASSESSMENT (FNDC, 2025)

The FNDC network capacity assessment applies conservative thresholds. Networks are flagged as failing if wastewater pipes surcharge or flood, or if water pressures drop below 250 kPa (peak day) or 100 kPa (firefighting).

The modelling snapshot reflects the state of FNDC's networks as represented in DIA-funded hydraulic models that were procured in 2020 and completed in 2022, applied by TKL in their April 2025 review to assess current condition only. Future growth assessments (5-, 10-, and 25-year horizons) are intended to be addressed separately as Stage 2 of FNDC's programme.

This provides a baseline position:

- If the network passes, there is capacity (Especially considering the relatively small maximum yield of this subdivision.

- If it fails, there may still be some practical headroom, but this cannot be confirmed without more detailed analysis.

It is therefore reasonable to rely on the FNDC results at rezoning stage, while noting that further modelling and refined calculations can be undertaken at the subdivision stage, when there is more certainty around actual yields, development staging, and greater clarity on FNDC's long-term plans and near-term capital works programmes.

2.3 WATER SUPPLY

The engineering assessment proposes that the site will connect to an existing reticulated main on Goffe Drive, via a proposed right-of-way (ROW). The location of the proposed ROW is not specified, and there is no evidence provided that the applicant can secure the proposed ROW.

The engineering assessment states that 13 lots will be created, with a variety of use including residential and commercial. However, no water demand estimates are provided, and no assessment of the existing reticulated water system's capacity is provided.

The Trine Kel assessment of the Paihia water supply network from Goffe Drive shows that the network is currently at capacity. Based on the map, it appears there may be capacity available along Puketona Road in either the 150 mm or 200 mm supply mains, although the overlapping lines make this difficult to confirm. Any connection would also be subject to pressure constraints and other network considerations.

If FNDC confirms that the water supply network does not have sufficient capacity to service the site, this confirmation, under Section 6.1.1 of the FNDC Engineering Standards, would allow the developer to consider alternative water supply options. Any on-site system must comply with NZ Building Code Clause G12 and the G12/AS1 acceptable solution. While the engineering assessment suggests on-site water tanks for potable water and firefighting purposes, no evidence has been provided to demonstrate the feasibility of such systems for the rezoning-enabled development.

No evidence has been provided of discussions with FNDC staff regarding water servicing for this site.

Finding

A servicing pathway exists. While the existing FNDC reticulated water network does not appear to have sufficient capacity at present, potable connection may be possible if network upgrades are undertaken or if a connection can be made along Puketona Road. Alternatively, on-site water supply is considered a feasible option at this stage of the plan change process, provided compliance with NZBC G12/AS1. Further investigation will be required at subdivision or building consent stage to confirm the preferred solution, including storage volumes, firefighting capacity, and any network upgrade requirements.

2.4 WASTEWATER

The subject site is lower in elevation than Goffe Drive. The engineering assessment proposes a low-pressure reticulation network to convey wastewater via a proposed right-of-way (ROW) to the existing 150 mm FNDC gravity sewer main on Goffe Drive, with each dwelling using a grinder pump.

The location of the proposed ROW is not specified, and no evidence has been provided that the applicant can secure this access, creating uncertainty about the connection route. No wastewater flow estimates for the proposed rezoning-enabled development have been provided, nor has the capacity of the existing wastewater network been assessed.

FNDC's Infrastructure High-Level Review (February 2024) does not address this site or the relevant network.

The Trine Kel assessment of the Paihia Wastewater Network indicates available headroom from Goffe Drive, but this does not account for future growth so further investigation closer to subdivision stage would have to be done to confirm. However, a pumped system can be set up to limit impact on existing networks by managing pumping schedules etc.

No evidence has been provided of discussions with FNDC staff regarding wastewater servicing for this site.

Finding

A servicing pathway exists, and wastewater servicing is considered feasible at this stage of the plan change process. The preferred solution depends on securing a ROW and confirming the capacity of the existing network. While site constraints and environmental sensitivity will require careful design, these risks can be addressed during later design phases. Further investigation will be required at subdivision or building consent stage to confirm the connection route, network adequacy, and compliance with relevant standards.

2.5 STORMWATER

The engineering assessment proposes a stormwater reticulation system with "appropriate water quality treatment measures", that discharges to the estuary via "appropriately designed outfalls, considering the potential impacts on the coastal environment".

FNDC Engineering Standards (2023) note that impervious surfaces and piped stormwater systems alter catchment hydrology by increasing runoff rates, reducing base flows, and accelerating channel erosion and sediment deposition. These changes can adversely affect receiving environments and aquatic ecosystems.

Given the site's proximity to a Protected Natural Area and the Te Pewhairangi (Bay of Islands) Marine Mammal Sanctuary, maintaining stormwater neutrality, or at least minimizing hydrological impacts, would be considered best practice irrespective of discharge location.

While the engineering assessment addresses treatment in principle, further work will be required to demonstrate that the chosen solution can meet servicing, water quality, and environmental objectives.

Overland flow paths have been considered and appear achievable.

Finding

A servicing pathway exists, and stormwater servicing is considered feasible at this stage of the plan change process. Given the sensitivity of the receiving environment, maintaining stormwater neutrality, or minimising hydrological impacts, is best practice. Further work will be required through detailed design and resource consent to confirm that the chosen solution meets servicing, water quality, and environmental requirements.

3 OVERALL CONCLUSIONS

Servicing pathways exist for water supply, wastewater, and stormwater, and all three waters are considered feasible at this stage of the plan change process. The relatively low density of the proposed development means its impact on existing networks is likely to be minor, provided appropriate design and management measures are implemented.

Water Supply

Connection to the reticulated network in Goffe Drive is unlikely without upgrades, but a connection may be possible if network improvements are undertaken or if an alternative connection can be made along Puketona Road (to be confirmed with FNDC). On-site water supply options, such as rainwater harvesting, provided compliance with NZBC G12/AS1, may be feasible. Greywater reuse could further reduce demand on the potable network. Further work will be required to confirm the preferred solution, including storage volumes, firefighting capacity, and any network upgrade requirements.

Wastewater

A low-pressure system connecting to the FNDC network via Goffe Drive appears feasible in principle, subject to securing a ROW and confirming network capacity. Pumped systems can be managed to reduce network impacts. Further investigation will be required at subdivision or building consent stage to confirm the connection route, network adequacy, and compliance with relevant standards.

Stormwater

Discharge to the estuary is considered feasible but given the sensitivity of the receiving environment and the site's high natural character, maintaining stormwater neutrality or minimising hydrological impacts would be best practice. Further design work and resource consent processes will confirm that the final solution meets servicing, water quality, and environmental requirements.

While the applicant has not provided sufficient concept-level detail to give full assurance at this stage, the identified servicing pathways demonstrate that rezoning-enabled development can be appropriately serviced, subject to further technical work during resource consent and detailed design phases.

Memorandum

To Sarah Trinder
Senior Policy Planner - District Plan, FNDC

From Melean Absolum
Landscape Architect, MALtd

Date 7 July 2025

Dear Sarah,

SUBMISSIONS 530 & 567 - GALVIN & YORKE, HARURU

INTRODUCTION

This memorandum records my advice prepared on behalf of Far North District Council (FNDC), in response to Submissions 530 and 567 from Mr Galvin and Ms Yorke, seeking a change of zoning for their property on the edge of the Kaipatiki Estuary at Haruru. The property is zoned Rural Production in the PDP with two High Natural Character overlays (409 & 422) over the majority of the land.

The Submissions both requested that the HNC boundary be adjusted. This request was responded to by me at Hearing 4.

Additionally, both submissions seek the Rural Production zoning to be changed to either residential (s530) or Settlement Zone (s567). Additional assessment reports have more recently been provided to support the submissions, along with an email from Mr Brian Putt clarifying that the submitters now seek a mixture of Rural Residential and General Residential zones (RRZ & GRZ).

I am familiar with the surrounds of the property, but have not undertaken a site visit. In preparing this memo I have reviewed the following documents:

- Submissions 530 & 567, including:
  - Archaeological Survey and Assessment of a proposed subdivision prepared by Northern Archaeological Research (Ivan Bruce), dated November 2005;
  - Creative Intentions Ltd (CIL) letter & attachments, dated 9 September 2022;
- Email from Brian Putt dated 17 June 2025 and attachments:
  - Traffic Assessment report by TPC, dated October 2024;
  - High Level Civil Engineering Assessment, by Vision Consulting Engineers, (VCE), dated October 2024;
  - a single page map prepared by Brown NZ Ltd, (BNZL) titled, 'Indicative Plan of Development Potential and High Natural Character Overlay';
- Preliminary Assessment of Development Zoning & High Natural Character Overlay by Brown landscapes, dated 4 July 2025, and
- Proposed District Plan, as notified.

DEVELOPMENT PROPOSALS

There has clearly been an evolution in thinking about potential development of the subject site. Both the reports attached to the original Submission 530 include development proposals. The Archaeological Assessment includes a plan of a proposed 12 lot subdivision of the property which has not proceeded.

The much later CIL letter includes a development proposal comprising 12 homes, access road, public board walk, eco-centre and community storage space on the edge of the estuary.

The TPC Transport Assessment also includes a development plan prepared by CIL. This one shows 14 stand-alone house sites and 5 blocks of 6 unit residential development, totalling 44 dwellings, along with an information centre, boardwalk, zip-line, community storage facility, cafe and wharf on the edge of the estuary. Although the VCE report does not include a proposed development plan it does include a description of proposed development which suggests it is the same proposal as shown in the TPC report.

Interestingly, the BNZL report, which I only received today, makes references to a report prepared by Mike Farrow of Littoralis, written in June 2022. Although this was written before the TPC and VCE reports, from the excerpts cited it was clearly cautioning against widespread residential development.

Although the BNZL plan does not show a development concept *per se*, the areas identified for potential residential development do not match those shown in the CIL plans. Areas where development is proposed adjacent to the coast are reduced in extent, as is the area of residential development along the western boundary.

Despite all this information, no clear picture is provided of what is actually proposed for the site. I understand from you that there are serious problems with access to the site. I also note that the BNZL report does provide any surety around what would happen to those parts of the site where development is not proposed. Mr Putt's email suggests that they would be zoned rural residential, (RRZ). But Area 3 is also proposed to be RRZ, so I am unclear how they would be differentiated.

In conclusion, there is much too much uncertainty about what is actually being proposed here, either in terms of zoning or in terms of development. The land owners may wish to pursue some carefully designed, limited development, in the future, but at this stage I cannot support the submission.

REGISTERED LANDSCAPE ARCHITECT

Melean **Absolum**
Dip LA FNZILA
7 July 2025

FNDC Rezoning Hearing 15C - evidence review

Victoria Yorke and Andrē Galvin, Submitter 530 and Andrē Galvin, Submitter 567

Prepared for	Far North District Council
Project Number	FNDC-J014
Revision	A
Issue Date	27 August 2025
Prepared by	Mat Collins, Associate Transportation Engineer

1. Introduction

Abley Limited (Abley) was engaged by the Far North District Council (Council) to provide transport planning and engineering assistance for rezoning submissions that were received on the Proposed Far North District Plan (PDP).

The purpose of this memo is to summarise my review of evidence provided for Submitter 530: Victoria Yorke and Andrē Galvin and Submitter 567: Andrē Galvin.

I have reviewed the following documents:

- Transportation Assessment, prepared by Team Traffic, dated October 2024.
- Feedback from NZ Transport Agency Waka Kotahi (NZTA) received by Council on Tuesday 26 August 2025[1].

The site and proposed site plan are shown in Figure 1.1.

[1] **From:** Tessa Robins Tessa.Robins1@nzta.govt.nz; **Sent:** Tuesday, 26 August 2025 10:37 am;
Subject: Re: Development potential - Puketona Road (SH11), Haruru, Waitangi - Application-2025-1052 CRM:0503000278

Figure 1.1 Site (left) and proposed site plan (right)

Key matters relating to transport are as follows:

- Surrounding road network:
  - Puketona Road (SH11) is a two-lane with a posted speed limit of 80 km/h outside the site and 60 km/h closer to Yorke Road. The estimated daily traffic volume is 550 veh/hr and 5,500 veh/day.
  - Yorke Road and Goffe Drive are local roads with lower traffic volumes (1,100 and 400 vehicles per day respectively).
  - Crash trends have been identified on SH11 by the submitter.
- Active and public transport:
  - A Kaikohe–Waipapa via Waitangi bus service operates one return trip per day. There are no formal bus stops near the site, although the driver may stop where safe.
  - A footpath is provided on the north side of SH11 and on one side of Yorke Road and Goffe Drive.
  - No dedicated cycling infrastructure is provided, although anecdotally I have observed the footpath on SH11 being used by cyclists.
- Potential traffic generation:
  - The proposal includes 44 standalone dwellings, a 200 m² café, and a visitor centre.
  - The Transport Assessment estimates that the site will generate approximately 57 veh/hr and 516 veh/hr, however this does not include trips that may be generated by the visitor centre.
- Proposed Access and Intersection Design:
  - A potential pedestrian/cyclist connection is proposed via Goffe Drive, subject to further investigation of topographical constraints.
  - Primary access is proposed via SH11, with shoulder widening on the south side of SH11, however the Transport Assessment notes that this would not comply with NZTA vehicle access Diagram E, due to the nearby bridge.

- The Transport Assessment states that the sightline at the proposed access to SH11 is currently deficient. It concludes that a compliance sightline can be achieved if:
  - Applying the Extended Design Domain (EDD) by adopting a reduced observation time, from 3 seconds to 2 seconds
  - Vegetation is cleared on the southern side of SH11

Information gaps and queries

- The assessment does not quantify trip generation for the visitor centre. Further clarification or justification is required. I recommend that the submitter comment on the sensitivity of the SH11 access to additional trips generated by this activity.
- The Transport Assessment estimates that the café may generate 10 veh/hr/100m^2. However, this may be understated, as NZTA Research Report 453 indicates a trip rate of 15.6 - 18 veh/hr/100m^2 for food and beverage type activities. I recommend that the submitter comment on the sensitivity of the proposed access to SH11 if the café generates a higher number of vehicle movements than has been assumed.
- I am concerned that the proposed access to SH11 may not be feasible:
  - Vegetation clearance:
    - The required vegetation clearance appears to be outside the state highway boundary and within the Coastal Environment Overlay. It is unclear whether this clearance is achievable or permitted.
    - Even if clearance is undertaken, ongoing maintenance would be required to prevent regrowth.
  - Use of EDD parameters, which may not be justified/appropriate:
    - The crash history along SH11 includes loss-of-control and turning conflict crashes. This raises concerns about the appropriateness of applying EDD parameters.
    - NZTA, as the road controlling authority, would need to approve the use of EDD for any new vehicle crossing or intersection [2]
  - Shoulder widening constraints
    - The assessment acknowledges that full shoulder widening per NZTA Diagram E cannot be achieved due to the proximity of the bridge.
  - Turning treatment requirements:
    - Based on Austroads Guide to Traffic Management Part 6, a Channelised Right Turn (CHR) treatment may be required. With an estimated 550 veh/hr on SH11, a CHR would be required if the number of right turning into the site access exceeds approximately 10 veh/hr, as shown below Figure 1.2.

[2] Austroads Guide to Road Design Part 1, Section 4.4.2 "*EDD extends the lower bound of the design domain used for a new road, based on what can be justified and defended on engineering grounds in certain circumstances (Area 2 in Figure 4.3). However, a value within the EDD can be used only with the explicit, corporate approval of the relevant road agency, supported by a documented risk assessment that fully justifies the use of that value*"

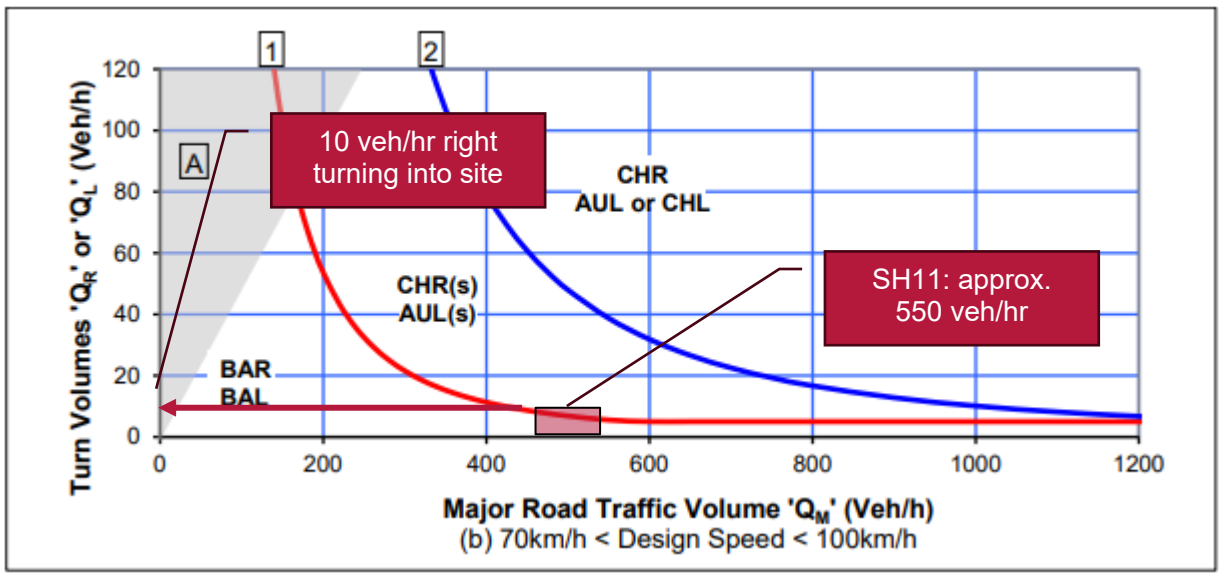

Figure 1.2 Austroads Guide to Traffic Management Part 6 Figure 3.25 showing warrant for CHR at approximately 10 veh/hr

NZTA feedback was received by Council and the submitter on 26 August 2025, via email. I have summarised this as follows:

- NZTA cannot support the rezoning until its transport effects are clearly understood.
- NZTA is concerned that upgrades discussed by the submitter's experts (e.g. bridge modifications, barrier relocation) have not been adequately assessed.
- NZTA considers the current roading infrastructure is not considered suitable for the level of development that would be enabled by General Residential Zone.
- NZTA requires clear documentation of necessary transport upgrades, triggers, and funding arrangements.

I share NZTA's concerns on these matters.

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Date: 26/08/2025

To: Sarah Trinder
Senior Policy Planner – District Plan
Far North District Council

Summary of comments regarding economic evidence supporting Ken Lewis Limited's submission

Ken Lewis Limited (KLL) commissioned Property Economics (PE)[1] to undertake an economic assessment of the proposed rezoning of 62ha near Kaitaia from Rural Residential (under the Proposed District Plan, PDP), to General Residential Zone (GRZ). According to the PE report, this rezoning would enable around 500 dwellings. This memorandum summarises my views of the economic evidence with the full version presented in my economic evidence (submitted as part of Hearing 15D).

I agree with several points outlined in the PE report but there are areas where I add additional information for a different view. Without going into the technicalities, I agree with the spatial extent of the analysis, and I note the growth projections are similar to the one I have used the Housing and Business Capacity Assessment (HBA). I also agree that while Kaitaia does not have the population to satisfy the definition of an urban environment under the National Policy Statement on Urban Development (NPS-UD), economic efficiency and the need to improve the functioning of the town are important matters.

Like other locations in the Far North, the real estate market in Kaitaia is challenged by high construction costs and low household incomes (low ability to pay). Consequently, the feasibility of new dwelling developments is suppressed, and the PE report draws on the Housing and Business Assessment (HBA) to highlight these dynamics. The affordability issue is used as motivation for the relief sought.

PE summarises the economic costs and benefits and at a general level and I agree with the listed points. However, I would add that many of the identified cost and benefits could be achieved by other developments. That is, they are not exclusive to the relief sought. For example, if the growth is accommodated via another greenfield options or through intensification, then most of the stated benefits would materialise.

As part of my review, I estimated the additional capacity that the Proposed District Plan with the recommendations (PDP-R) would enable. Plan enabled capacity for detached dwellings increases from 505 under the PDP to 1,750 under the PDP-R – a threefold increase. However, affordability remains a key challenge, with limited feasible capacity over the short and medium terms. The PDP-R will support an improvement in dwelling affordability, but the timeline associated with this process is over the long term. Despite a significant increase in plan enabled capacity due to the PDP-R, affordability challenges are expected to remain over the short and medium terms.

The potential role of the relief sought over the short and medium term should be considered. In light of the anticipated future demand of circa 210 dwellings (long term, total for Kaitaia regardless of affordability levels), the scale of the relief sought (circa 500) is more than double the anticipated demand. This means that the likely market response for the KLL site could be to use a lower density (larger sites) or to use only a portion of the site (at higher site densities).

[1] Mr Heath is listed as the contact person.

However, using lower densities (larger sites) is likely to see higher sales price which erodes housing affordability. In contrast, developing only a portion of the site could be used to manage cost pressures. The specific share of growth (210 over 30 years) that the KLL development would target is not mentioned in the PE report. For context, the medium term (circa 15 years) growth is expected to be in the order of 80 dwellings.

In my view, there is merit in enabling development to support the local real estate market over the medium term. Over the medium- to long term, I also see a role for future greenfield opportunities to act together with intensification opportunities to accommodate growth. Providing diverse development opportunities support competition in the real estate market, offering choice and containing prices.

Many of the economic benefits and costs[2] outlined in the PE report could be delivered by almost any residential development in Kaitaia and are not entirely unique to the KLL relief. I agree with PE's observation that the KLL site would send a positive signal regarding potential supply and provide certainty. However, I have doubts that the development would not face the same affordability challenges that are already inhibiting local activity. In addition, infrastructure cost is an essential item that must be incurred to facilitate the growth. In my view, care should be taken to avoid a situation where the infrastructure costs (capex and opex) are loaded onto the existing communities in an inequitable way.

An additional potential cost that I have identified relates to the scale of the relief sought. In my view, the scale of the relief relative to the anticipated demand appears disproportionate. If approved at the proposed scale, this mismatch (vs demand) could lead to land banking-type behaviour, constraining future competition. Such behaviour normally generates adverse economic effects associated with asset price inflation, higher barriers to entry and capital misallocation.

Using a range of assumptions covering densities and timelines, I estimate that the total required land is in the order of 11ha – or 18% of the site.

[2] PE report, page 20

Far North District Council

A24315 Donald Road & Allen Bell Drive, Kaitaia

Plan Change Three Waters Infrastructure

Peer Review

29 August 2025

1-14713.00

A24315 Donald Road & Allen Bell Drive, Kaitaia Plan Change Three Waters Infrastructure Peer Review

Far North District Council

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REV	DATE	DETAILS
1	29 August 2025	Issued

	NAME	DATE	SIGNATURE
Prepared by:	Jean Botes	29 August 2025	
Reviewed by:	Kamanth Ramlal	29 August 2025	
Approved by:	Richard Pearson	29 August 2025	

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INTRODUCTION

This peer review has been prepared at the request of Far North District Council (FNDC) to provide an independent assessment of infrastructure servicing feasibility for a rezoning submission at Donald Road and Allen Bell Drive, Kaitaia (the “site”).

The submission, supported by planning and engineering evidence from CKL (prepared by Ash Vodnala, 4 June 2025), seeks to rezone approximately 62 ha of land (Part Lot 1 DP 173052) from Rural Residential to General Residential in the Proposed District Plan. The indicative development yield is ~500 residential lots, representing a significant intensification compared to the current zoning.

The review is framed against the requirements of the Independent Hearings Panel Final Minute 14 (2 December 2024), which sets the rezoning criteria for infrastructure (three waters) servicing.

Supporting documents reviewed include:

- FNDC, District Plan Changes – Infrastructure High Level Review (February 2024)
- FNDC, Engineering Standards for Land Development (May 2023)
- Applicant evidence (CKL Infrastructure Assessment Report, June 2025)
- Trine Kel Limited (TKL) high-level assessment of FNDC's urban reticulation systems (2 April 2025)

The scope covers:

- **Water supply** feasibility and connection options
- **Wastewater** servicing capacity and alignment with FNDC infrastructure plans
- **Stormwater** management approach, neutrality, and downstream effects
- **General servicing risks** including staging, affected party approvals, and integration with roading or landform constraints

Out of Scope:

This peer review does not involve independent network modelling or hydraulic capacity testing, consistent with the engagement assumptions. Transport, geotechnical, detailed design, or property/legal matters are excluded unless they materially influence the three waters feasibility.

1 GENERAL

1.1 SITE AND PROPOSAL

The subject site comprises approximately 62 ha at Donald Road and Allen Bell Drive, Kaitaia (Part Lot 1 DP 173052). It is currently zoned Rural Residential and lies immediately adjacent to existing General Residential-zoned land to the north and west.

The rezoning request seeks to change the zoning from Rural Residential to General Residential, thereby enabling a higher development yield consistent with the adjacent urban area. Based on the applicant's masterplan and topographic constraints, between 50% and 70% of the site is considered developable, with an indicative yield of approximately 500 residential lots. The balance of the land is anticipated to accommodate roads, open space, and stormwater management areas.

1.2 APPLICANT'S SERVICING STATEMENTS

Key claims from the planning evidence

- The site is strategically located adjacent to FNDC's Kaitaia water reservoir, confirming reticulated water is physically available.
- FNDC has commenced significant wastewater upgrades in the Donald Road catchment, including a new trunk sewer, pump stations, and storage tanks, which the applicant identifies as enabling future servicing of the site.
- Stormwater is proposed to be managed in accordance with FNDC's Engineering Standards, with attenuation and neutrality required at subdivision. A separate flood risk assessment has been prepared to support this approach. I did not have access to this document during my review.
- The applicant acknowledges that staging may be necessary to align with FNDC's upgrade programme and recognises the need for further detailed modelling at the subdivision stage.

Observation:

The CKL report provides a coherent servicing approach and demonstrates awareness of existing network constraints and planned FNDC upgrades. It acknowledges the role of development staging and highlights the need for detailed modelling at subdivision, which is appropriate at this stage of the planning process. There is scope for further collaboration with FNDC to determine how future capital works can best be aligned with development.

2 THREE WATERS SERVICING

Assessment Framework – Minute 14

Minute 14 of the Independent Hearings Panel (Final, 2 December 2024) sets the framework for assessing rezoning requests in the Proposed FNDC District Plan. It requires applicants to demonstrate that the subdivision and development potential enabled by rezoning can be supported by **adequate three waters servicing**.

Specifically, evidence should address:

1. **Proposed connections**
   Where and how the site would connect to existing water, wastewater, and stormwater infrastructure, demonstrating viability.
2. **Engagement and assumptions**
   Outcomes of discussions with FNDC infrastructure staff, and any assumptions about servicing, sequencing, or capacity, including the impact of other plan-enabled development.
3. **On-site Provision**
   Any infrastructure required on-site to make development feasible, such as storage, pumping, or attenuation devices.
4. **Substantive Demand**
   Where rezoning creates material demand on bulk infrastructure, applicants are expected to engage proactively with FNDC's infrastructure team prior to hearings.

Minute 14 is explicit that detailed design is not expected at rezoning stage. Instead, the requirement is for a credible, concept-level servicing assessment that gives Council and the Panel confidence that development enabled by rezoning can be adequately serviced.

In practice, this means applicants must "tell the servicing story": identify the connections, acknowledge the demand that rezoning will generate, summarise what has been discussed with infrastructure staff, and show how any constraints or on-site provisions could be managed.

2.1 TRINE KEL LIMITED'S HIGH-LEVEL NETWORK CAPACITY ASSESSMENT (FNDC, 2025)

The FNDC network capacity assessment applies conservative thresholds. Networks are flagged as failing if wastewater pipes surcharge or flood, or if water pressures drop below 250 kPa (peak day) or 100 kPa (firefighting).

The modelling snapshot reflects the state of FNDC's networks as represented in DIA-funded hydraulic models that were procured in 2020 and completed in 2022, applied by TKL in their April 2025 review to assess current condition only. Future growth assessments (5-, 10-, and 25-year horizons) are intended to be addressed separately as Stage 2 of FNDC's programme.

This provides a baseline position:

- If the network passes, there is capacity (Especially considering the relatively small maximum yield of this subdivision.
- If it fails, there may still be some practical headroom, but this cannot be confirmed without more detailed analysis.

It is therefore reasonable to rely on the FNDC results at rezoning stage, while noting that further modelling and refined calculations can be undertaken at the subdivision stage, when there is more certainty around actual yields, development staging, and greater clarity on FNDC's long-term plans and near-term capital works programmes.

2.2 WATER SUPPLY

The site is directly adjacent to FNDC's Kaitaia water reservoir and near the existing reticulated network along Donald Rd and Allan Bell Drive, confirming that a reticulated water supply is physically available. The applicant's June 2025 Infrastructure Assessment recognises this strategic location and proposes staging of development to align with the capacity of the network as it becomes available.

The Trine Kel Limited (TKL) high-level assessment of FNDC's reticulation systems (April 2025) confirms there is general headroom in the wider water network. However, the reports modeling results highlight constraints in bulk supply lines from the treatment plant along Norman Senn Avenue, Okahu Road, and a 150 mm main running northeast from the treatment plant. These appear to be localised bottlenecks and may require upgrades, supplementary pipelines, or network management measures (such as additional storage or flow control) to ensure robust capacity for growth.

Of relevance is the 250 mm pipe from the Kaitaia reservoir to Donald Road (~580 m), which TKL identify as already operating at capacity. While the commissioning of the Sweetwater Bore has increased source resilience, distribution bottlenecks seem to remain the key constraint.

The applicant's approach is pragmatic in recognising that:

- Development can be staged to align with the Council's upgrade programme;
- Detailed modelling of reticulation, storage reservoirs, and treatment facilities will be required to confirm headroom;
- FNDC-owned land adjacent to the reservoir could provide for new storage should this be necessary.

Finding

Water servicing is viable in principle, supported by proximity to key assets and the Council's recent investment in new supply sources. However, distribution network upgrades are likely to be required to enable the full rezoning yield. These constraints are not a barrier at the rezoning stage but must be explicitly addressed at subdivision through detailed modelling and staging conditions agreed with FNDC.

2.3 WASTEWATER

The site is located within both the Donald Road and Allen Bell Drive wastewater catchments, which ultimately discharge to the Kaitaia WWTP on Bonnets Road. The Donald Road catchment conveys flows westward via a 150 mm/200 mm AC gravity main to Pump Station SP764, while the Allen Bell Drive catchment drains via a 150 mm AC network to Pump Station SP293. FNDC has commenced upgrades in this area, including a 1.6 km trunk sewer, new pump stations, and two 200 m³ emergency storage tanks, but constraints remain in the downstream gravity system.

The Trine Kel Limited (TKL) assessment (2 April 2025) indicates:

- 450 mm trunk main (Grigg St to WWTP, ~3 km): At capacity.
- 300 mm main (North Rd, Grigg St to Farrimond Pl, ~500 m): At capacity.
- 200 mm main (Allen Bell Dr / Donald Rd to Pump Station SP764): Appears to have available capacity.
- 150 mm upstream main (Donald Rd): Generally, has capacity apart from a small, localised section, possibly grade-related (further investigation required).
- SP764 rising main: Appears to have capacity, but where it discharges to gravity near Farrimond Pl, the downstream 300 mm network is already at capacity.

- Western sub-catchment via Pump Station SP293: 150 mm AC network to SP293 appears to have capacity, but the 150 mm gravity main it discharges into near Dunn St is at capacity through to its tie-in with the 300 mm main at Grigg St. SP293 pump station capacity is currently unknown.
- WWTP headroom: No information available; needs confirmation.

Finding

The presence of available local reticulation, supported by FNDC's screening assessment and the TKL model results, suggests that wastewater servicing is feasible, although downstream capacity is a constraint based on the information available at the time of this review. The site borders two catchments, with flows able to discharge either to Pump Station SP764 (Donald Road) or to Pump Station SP293 (Allen Bell Drive). This provides some flexibility for staging or distribution of flows, however, both catchments ultimately discharge into downstream gravity mains that are already constrained.

The gravity network downstream of both pump stations is the key limitation, and further collaboration between the developer and FNDC will be required to determine how capital works can best be implemented to facilitate development without exceeding the existing network capacity. This may include testing how flows are allocated between the two catchments, as well as considering network upgrades and staging scenarios to agree on a servicing pathway.

A more detailed capacity check should be undertaken at the subdivision stage, when there is greater certainty around yield and timing. Even if restrictions are confirmed, alternative methods such as on-site storage or pressure systems could be implemented to manage or reduce load, meaning that servicing remains viable.

2.4 STORMWATER

The applicant's Infrastructure Assessment (CKL, June 2025) identifies that the site lies at the upper end of a natural catchment draining predominantly westward towards the Awanui River. Stormwater in the wider area is managed through roadside channels, open drains, and piped infrastructure, with an existing overland flow path entering from the north and traversing the site. Recent NRC regional flood modelling confirms minimal flooding risk, limited to low-lying channel areas along the western boundary.

The applicant proposes that stormwater will be managed through attenuation and hydraulic neutrality in accordance with FNDC's Engineering Standards. A separate flood risk assessment has been prepared to inform the management strategy. While concept details are limited, the assessment assumes development would include a combination of on-site and communal detention systems, supported by overland secondary flow paths consistent with the natural topography.

Finding

The presence of natural overland flow paths and elevated topography across much of the site suggests that stormwater management is feasible. The applicant acknowledges the requirement for attenuation to achieve neutrality and provides a preliminary framework that aligns with FNDC standards, although detailed concept design has not been advanced at this stage.

Further investigation will be required at the subdivision to confirm the sizing of detention facilities, demonstrate safe conveyance of secondary flows, and assess outlet capacity to the receiving environment. The applicant appears aware of these obligations.

Stormwater servicing seems feasible, if attenuation, secondary flow path management, and safe discharge are addressed at subdivision design. This approach is consistent with FNDC's standards and expected practice for rezoning-enabled development of this scale.

3 OVERALL CONCLUSIONS

The Donald Road / Allen Bell Drive site is located within an area where FNDC is investing in new three waters infrastructure. The applicant has acknowledged existing network constraints and indicated that the Site development may need to be staged or supported by additional measures to align with planned upgrades. This approach reflects an understanding of the limitations within the current systems and the need for coordination with the Council to confirm servicing feasibility.

Water Supply

The site's adjacency to FNDC's Kaitaia reservoir and integration with the Awanui River supply (augmented by the Sweetwater Bore) confirm that water servicing is feasible in principle. However, the TKL assessment identifies distribution bottlenecks, including the ~580 m length of 250 mm main from the reservoir to Donald Road and other bulk supply lines from the treatment plant. Upgrades are therefore likely to be required to support the full rezoning yield. Detailed modelling and staging conditions at subdivision will be essential to confirm headroom and firefighting capacity.

Wastewater

Available local reticulation, supported by FNDC's screening assessment and the TKL model results, suggests that wastewater servicing is feasible, but downstream gravity network constraints present a significant limitation at this stage. The site spans two catchments, with flows able to discharge either to Pump Station SP764 (Donald Road) or to Pump Station SP293 (Allen Bell Drive), providing some flexibility for staging or distribution of flows. However, both catchments ultimately discharge into downstream gravity mains, including the North Road corridor and the 450 mm trunk to the WWTP, which are already at capacity.

Stormwater

The site benefits from favourable topography and established overland flow paths, with minimal flood risk identified by regional modelling. The applicant acknowledges the need for attenuation to achieve neutrality and has provided a preliminary strategy consistent with FNDC standards. Detailed design at subdivision will need to confirm detention sizing, secondary flow conveyance, and outlet capacity, but no fatal flaws are identified at the rezoning stage.

Overall Finding

The site is likely to be serviceable for three waters in the medium term, subject to completion of FNDC's planned upgrades and alignment of development staging with available capacity. The applicant acknowledges staging and further modelling but has not specified how or when future capital works would tie in with their development programme. This reinforces the need for ongoing collaboration with FNDC to ensure that upgrades and subdivision staging are aligned. Rezoning is therefore considered feasible, provided conditions at subdivision explicitly require confirmation of capacity, detailed modelling, and coordination with FNDC's upgrade programme to ensure responsible and resilient growth.

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TECHNICAL MEMORANDUM

7 August 2025

HIGH LEVEL STORMWATER MANAGEMENT REVIEW TO SUPPORT S42A REPORT, PROPOSED REZONING OF KAITAIA, FAR NORTH

Far North District Council

Geologix Ref. C0627N-02-TM01

By email: sarah.trinder@fndc.govt.nz

INTRODUCTION

Geologix Consulting Engineers Limited (Geologix) have been engaged by Far North District Council (FNDC) as our Client in accordance with the standard short form agreement model for Consultant Engagement to provide engineering support to the Proposed District Plan team regarding technical submissions on the proposed plan change.

The purpose of this technical memorandum is to provide a high-level review of the stormwater management strategy within the related technical submission provided to us that covers the approximately 62 hectares of land located at Donald Road and Allen Bell Drive, Kaitaia, for rezoning from Rural Residential Zone to General Residential Zone in the FNDC Proposed District Plan (PDP). This development seeks to enable the development of around 500 dwellings.

In brief, it is understood from the submission that the author is seeking to enable comprehensive medium-density development of a large parcel of land that has historically been utilised for agriculture.

The proposal from the author outlines the suitability of the site for rezoning and generally supports the requirements for the General Residential Zone under the PDP. As a result, this memorandum has been requested to provide high-level review to determine if the stormwater management detailed in the submission is feasible by the means indicated in the supporting documentation and whether the proposal supports the policies and rules proposed for the zoning under the PDP.

LIMITATIONS

This technical memorandum has been prepared to specifically review the available information provided to us to determine the suitability of the stormwater elements of the proposal and any mitigation measures proposed by the supporting documentation.

This technical memorandum focuses specifically upon the information provided at the time of writing. It does not detail alternative mitigation measures or alternative recommendations which may be available to develop the site. This high-level review summarises the applicability of the relevant stormwater

recommendations provided in relation to proposed masterplan, infrastructure and stormwater elements and the PDP.

Geologix Consulting Engineers did not undertake a site inspection, nor any modelling nor verification of calculations.

SUMMARY AND APPLICABILITY OF AVAILABLE INFORMATION

The applicable supporting documents we have been asked to provide a high-level review of are listed below:

- Annexure 3 - CKL Infrastructure Assessment Report (Stormwater sections), dated 04/06/2025, ref A24315
- Annexure 4 – CKL Stormwater and Flood Management Opportunities and Constraints, dated 05/06/2025, ref A24315
- Annexure 6 – Bespoke Landscape Architects and CKL Masterplan, Rev 0, dated May 2025.

These documents outline a conceptual stormwater management strategy, incorporating flow attenuation, water quality treatment and stormwater conveyance through piped networks, overland flow paths and potential integration of attenuation and treatment into green corridors.

CKL, the author, references NRC flood mapping, topographic data, and proposes compliance with FNDC engineering standards. We note no hydrological nor hydraulic modelling analyses results were included for any on-site and downstream infrastructure, although this is not necessarily expected at this high-level stage of project development.

It was specified in the Infrastructure Assessment Report that the assessment/s therein were informed by a review of publicly available records and a site visit to determine and confirm site conditions.

The Infrastructure Assessment Report (Annexure 3) was prepared by a senior engineer and authorised by a project director with over 15 years' experience as a land development consultant (registered professional surveyor). The Stormwater and Flood Management report (Annexure 4) was prepared by a civil engineer and authorised by a Chartered Professional Engineer in civil and environmental engineering, with over 15 years' experience.

The scope of the submission in general satisfies the level of detail required for a high-level review of constraints and recommendations and it is appreciated that the report cannot provide detailed recommendations above conceptual means for the proposed development at this stage. As acknowledged within the reports, further detailed hydrological and hydraulic assessment may be required to develop the on-site (and downstream) infrastructure solutions further, and it is generally considered an acceptable approach to manage this through the consenting process.

GENERAL STORMWATER CONTEXT

The CKL Stormwater and Infrastructure reports outline that the subject site occupies a relatively elevated position in the local topography and drains predominantly westward. Surface runoff is conveyed via a series of gullies, overland flow paths, and open streams, which discharge toward the Pairatahi and Awanui Rivers.

The reports identify that the proposed development will utilise the site's natural drainage patterns while aiming for compliance with FNDC's Engineering Standards.

The CKL Stormwater report acknowledges that the downstream environments are sensitive and subject to existing flooding areas. Our review agrees that extensive downstream flooding is present, affecting a large part of Kaitaia and the areas between the subject site and the downstream rivers. The report briefly outlines in Chapter 4.3 that there may be a need to provide peak flow attenuation as there are downstream capacity constraints and that the extent of these constraints is yet to be determined.

While the CKL reports briefly mentions these constraints, they do not quantify the extent or significance of these at this stage. Therefore we have summarised the following observations from our separate review of the available information on FNDC GIS and NRC GIS maps.

Two main flow paths are existing on site and proposed to remain in the masterplan:

- The northernmost catchments are captured by two main flow paths, which join together approximately halfway down, this channel then travels to a man-made channel located at 112 Allen Bell Drive. From our review of available data on FNDC GIS mapping, this channel is then conveyed through a 1200mm culvert below Allen Bell Drive to the Pairatahi River (tributary of the Awanui River).
- The southernmost catchments are captured by a main flow path, that joins other channels from the southern (external) sites adjacent to 60 Allen Bell Drive. From here the flow path splits, with an open channel to the south alongside Allen Bell Drive, and a 1200mm culvert below Allen Bell Drive, that runs approximately 125m to then discharge to the Awanui River.

HAZARD ASSESSMENT & DOWNSTREAM INFRASTRUCTURE

Significant downstream flood hazards exist in Kaitaia township. Due to the elevated nature of this site, CKL outlines that the site lies mostly outside the 1% AEP floodplain, except for some lower channels where flood-prone open space is integrated into the proposed stormwater network and management system.

This is identified by the submission as a positive opportunity for more resilient urban development, in contrast to already-zoned General Residential land in Kaitaia which is significantly affected by flooding. The reports note that the current supply of General Residential-zoned land in Kaitaia is largely affected by flooding, and that rezoning the subject site could support strategic options for retreat from flood impacted zones. This broader policy point is acknowledged as positive, however is not considered further in the context of this memorandum.

The CKL report mentions constrained downstream discharge points, however no indicative capacity assessment or photos of downstream infrastructure have been provided. Detailed modelling or assessment is not usually expected at this conceptual stage; however, we note it as a shortcoming that no further high-level information was provided. The following risks are highlighted for consideration:

1. Capacity constraints – the constraint of existing infrastructure may require additional attenuation over and above that laid out in the FNDC Engineering Standards 2023, as the infrastructure may not have capacity to adequately convey current 'pre-development' flows from the site. Any additional discharge over this existing capacity may worsen downstream flooding and would need to be assessed.
2. FNDC may be exposed to capital costs for the replacement, upgrade and maintenance of existing downstream infrastructure.
3. There are two 1200mm diameter culverts, as described in the previous section, that are shown within the GIS maps to traverse beneath private residential properties and therefore upgrades, if required, may be difficult to achieve.
4. We also note that CKL have not referenced the available GHD flood modelling completed in 2007, only the NRC mapping. This modelling provides some assessment of peak flows from the existing overland channels. From our high-level review, there are significant flows from these channels originating from the subject site, and it is very likely that the downstream infrastructure is not suitably sized to manage this in their existing state. Detention ponds as proposed within the submitted plans may be feasible to

limit peak flows to less 80% of pre-development levels, or less, if that is required to ensure infrastructure capacity is suitably managed, but this is not determined as yet and remains a risk that is not well understood.

HYDROLOGICAL ANALYSIS

The CKL Stormwater report outlines the catchment delineation undertaken for the drainage sub-catchments using LiDAR data, which is appropriate for this level of planning. Runoff is directed predominantly westward through natural overland flow paths, as discussed above. There are minor upstream contributing catchments from outside the site, and the conveyance of these has been considered in the masterplan.

The proposed design storms for future design consideration include the 2-, 10- and 100yr ARI events. The CKL reporting is somewhat inconsistent in allocation of design storm but generally proposes that attenuation should be provided for the 2-, 10- and 100-yr events if deemed required by further hydrological analysis, consideration of downstream constraints and development of the solution with FNDC and NRC. Due to the presence of extensive downstream flooding this further analysis is critical, but it is appropriate to be managed within the context of the resource consent application. It is not necessarily an issue preventing the proposed rezoning.

Climate change has not been directly mentioned, however compliance with FNDC Engineering Standard has been repeatedly stated, therefore considered appropriate at this high-level stage as climate change allowance would be captured through future stages.

Conveyance options have been highlighted as piped networks, overland flow paths or conveyance channels and road corridors for surface flow. The proposal to integrate conveyance into the green corridors is considered suitable.

STORMWATER MANAGEMENT

CKL outline a treatment train approach involving lot-scale devices (e.g. raingardens, swales) and communal assets (e.g., wetlands, detention basins). This approach does well to manage the sites natural features and sensitivity. The CKL reports propose:

- Green corridors will act as primary conveyance channels and accommodate integrated stormwater functions.
- Detention for both frequent and extreme events will be achieved through headwater basins and wetland features.
- Water quality treatment will be prioritised due to the sensitivity of downstream streams.

The stormwater management strategy has been split between the upper terraces and the lower plateaus. The upper terraces are largely governed by their flatter topography, prioritising centralised/communal treatment rather than interspersed devices. The steeper lower plateaus have limited space for communal management, therefore would likely require separated attenuation and treatment.

Maintenance responsibilities are not discussed for the water treatment assets; however, the assets are referred to as communal treatment. These will require maintenance and the structure of this would be resolved at later stages. It should be noted these green space and water treatment and management assets may need to be vested in FNDC.

The masterplan does allow for attenuation and treatment locations within the green corridors, and there appears to be appropriate setbacks between water courses and buildable areas. One minor limitation could be that as attenuation and treatment requirements are not quantified at this stage, additional space may

be required for stormwater management, however this level of detail can be managed at consenting stages.

The CKL report identifies that on-site attenuation and treatment is proposed through a network of devices. Whilst this appears technically feasible and to have been allowed for in the masterplan through the green corridors, the following should be considered:

1. No defined setbacks have been provided for the green corridors between watercourses and buildable areas, however they appear to be appropriate from the plans provided.
2. As attenuation and treatment requirements are not quantified at this stage, additional space may be required within the green corridors.
3. Final capacity and configuration of the downstream network constraints may ultimately govern attenuation requirements i.e. beyond the standard flow and flood control requirements of the FNDC Engineering Standards.
4. Avoidance of positioning stormwater devices (assets) within flood plain – this appears to be achievable from the documentation provided.
5. Topographical considerations – the lower portions of the site may limit feasible attenuation and treatment types. This has been highlighted in the reporting and sufficient alternatives are provided. This can be addressed through consenting stages.

Water quality treatment is prioritised due to the sensitivity of the receiving environment. Proposed measures are generally consistent with best practice, and a Low Impact Design approach has been proposed. Treatment devices such as on-lot raingardens and treatment, communal wetlands and/or basins and opportunities for passive filtering through green space all prioritise a Low Impact Design approach.

Erosion is also identified as a key issue, with the report noting that detention of the 90th percentile rainfall event over 24 hours will be used to reduce stream erosion and protect downstream values. It is accepted that the proposal to develop the site may improve outcomes for erosion of the waterways, by providing both engineered and green outcomes.

The proposed Low Impact Design (LID) approach and the considerations of the different topographies across the site is appropriate and provides an opportunity to integrate stormwater management with ecological and amenity outcomes.

CONCLUSIONS

Based on a high-level review of the provided reporting and master plan documentation, the proposed rezoning at Donald Road appears generally feasible from a stormwater management perspective. It is somewhat subject to further investigation and confirmation of downstream infrastructure constraints which will generally be resolved through consenting pathways, but broadly speaking, the proposed engineering concepts appear to be feasible to manage these potential challenges.

The proposed Low Impact Design (LID) approach is appropriate for the site's topography and context and provides an opportunity to integrate stormwater management with ecological and amenity outcomes.

Whilst significant downstream flood hazards are present, the proposed development largely avoids existing floodplains, and stormwater is proposed to be managed through decentralised, on-site attenuation and treatment systems.

The following shortcomings of the reporting are highlighted, and should be considered in decision making:

- Existing downstream stormwater infrastructure creates additional constraints, and may require upgrade to unlock the development area and facilitate growth, or require FNDC to impose additional constraints

on the development to provide attenuation over and above the current FNDC Engineering Standard requirements.

Prepared by

Sebastian Hicks,
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For **GEOLOGIX CONSULTING ENGINEERS LTD**

FNDC Rezoning Hearing 15C - Ken Lewis Limited, Submitter 9

Transport review

Prepared for	Far North District Council
Project number	FNDC-J014
Revision	A
Issue date	19 August 2025
Prepared by	Mat Collins, Associate Transportation Engineer

1. Author and qualifications

My full name is Mathew (Mat) Ross Collins. I am an Associate Transport Planner at Abley Limited. I have been in this position since September 2023. I hold a Bachelor of Engineering (Hons) from the University of Auckland and have a post-graduate certificate in transportation and land use planning from Simon Fraser University in Vancouver, Canada.

I have ten years of experience as a transportation planner and engineer in public and private sector land development projects, which includes experience preparing assessments and reviewing transport aspects for master plans, District Plan Reviews, Plan Changes, large scale land use and subdivision resource consents, Notices of Requirement, and Outline Plans of Work.

I have been working with the Far North District Council (Council) on the Proposed District Plan (PDP) since September 2024, and Hearing 15C since March 2025. I have been asked to provide evidence on transport matters relating Submission 9: Ken Lewis Limited to the PDP, to support the evaluation report prepared under s42A of the RMA for Hearing 15C.

I have read and am familiar with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in preparing my evidence and will continue to comply with it while giving oral evidence before the Independent Hearings Panel. I confirm that my evidence is within my area of expertise except where I state that I am relying on the evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in my evidence

2. Proposal summary

The submission seeks to rezone the subject site from Rural Residential Zone to General Residential Zone. The submitter states that expected yield is approximately 500 dwellings. The site and draft masterplan are shown in Figure 2.1.

I have reviewed the following documents:

- Statement of Evidence of Sarah Robson (Planning), dated 8 June 2025 (transport matters only)
- Transportation Assessment Report, prepared by CKL, dated 6 June 2025
- Draft Master Plan, prepared by CKL and bespoke Landscape Architects, dated May 2025.
- Letter: Ken Lewis Ltd – Response to Evidence Review, prepared by CKL, dated 5 August 2025.

Figure 2.1 Site (left) and proposed masterplan (right)

3. Review of transport matters

Key matters relating to transport are as follows:

- The proposed development could yield up to 500 dwellings, generating approximately 693 peak hour trips and 4,720 daily trips. The Transport assessment assumes that 56% of traffic will be northbound (towards Pak n Save), and 44% southbound (towards town centre).
- Proposed internal transport network:
  - A primary spine road is proposed, linking Donald Road and Allen Bell Drive.
  - Secondary roads and footpath connections within reserves are included.
  - A potential secondary connection to Donald Road is shown, though feasibility is uncertain due to topography.
- Proposed off site upgrades:
  - Reprioritisation of the Donald Road / Allen Bell Drive intersection to favour north-south movement.
  - Upgrade of SH1 / Allen Bell Drive to a mini roundabout, subject to NZTA approval.
  - Upgrade of the one-way bridge on Donald Road to two-way once 230 dwellings are developed.

In a memo dated 2 July 2025, I identified gaps in information and requested further information from the submitter. This included:

- Further assessment of crash trends on Allen Bell Drive and Donald Road one-lane bridge.
- Provision of the traffic model files.
- Timing of the proposed upgrade of SH1 / Allen Bell Drive and Donald Road / Allen Bell Drive intersections.

- Requests and recommendations relating to pedestrian, cycling, and roading connectivity.

I discuss these matters in the following subsections

3.1 Crash trends

In my initial review, I noted that the following crash records:

- Multiple crashes along Allen Bell Drive where speed is a factor
- One crash on the Donald Road one-lane bridge where a bridge deck surfacing may have been a cause of loss of control.

Regarding Allen Bell Drive, the Submitter noted that:

- since the original assessment was prepared, there has been a fatal crash on Allen Bell Drive approximately halfway between the two intersections to Parkdale Crescent south of the site. This was also a loss of control crash where an intoxicated driver was travelling southbound at excessive speed.
- the wide carriageway and limited demand for on-street parking on Allen Bell Drive results in a very wide carriageway that can encourage higher vehicle operating speeds.
- the inclusion of side islands/buildouts would give the perception of a narrower road which would reduce the likelihood of drivers speeding along the road
- The exact design and location of any traffic calming can be confirmed as part of subsequent design and consenting stages and would require consultation with Far North District Council as road controlling authority

Regarding the Donald Road one-lane bridge, the Submitter noted that:

- an anti-skid surface could be added to the wooden bridge as an interim measured (prior to it being upgraded to a two-way bridge)
- this is considered to be an appropriate temporary measure to reduce likelihood of crashes due to poor traction until the bridge is formally upgraded to be two-way

I agree with the submitters view on these matters and recommend that a Planning Mechanism is included that requires the applicant to deliver a skid resistant surface on the Donald Road one-lane bridge and traffic calming on Allen Bell Drive, between Donald Road and Korimako Lane, with the first stage of development within the site – subject to FNDC approval.

3.2 Traffic modelling

SIDRA intersection modelling

The Submitter provided the SIDRA traffic models for the SH1/Donald Road and SH1/Allen Bell Drive intersections. I instructed Abley staff to review these files, and I accept the assessment and conclusions drawn by the Submitter.

One-lane bridge conflict modelling

The Submitter provided Poisson distribution assessment used to estimate the likelihood of conflicting vehicle movements on the Donald Road one-lane bridge. I instructed Abley staff to review these files, and it was identified that the results were sensitive to the assumed vehicle speeds and clearance times.

The Submitter provided sensitivity testing, and further discussion of the assumed vehicle speeds and clearance times. I accept this assessment and agree with the Submitter that a threshold of 230 dwellings that can be completed before an upgrade of the bridge to be two-way would be required.

3.3 SH1 / Allen Bell Drive intersection upgrade

The Submitter has stated that this upgrade would be dependent on consultation with NZTA. The submitter proposes this would be triggered prior to the completion of 290 dwellings.

I agree with the submitters view on this matter and recommend that a Planning Mechanism is included that requires the applicant to provide a mini-roundabout at this intersection prior to the completion of 290 dwellings, subject to NZTA approval. Should NZTA approval not be provided, I consider that FNDC should have discretion to allow development to proceed without this upgrade, if it can be demonstrated that safety effects at the intersection can be managed without the upgrade.

3.4 Donald Road / Allen Bell Drive intersection upgrade

The Submitter has recommended that the priority of the Donald Road / Allen Bell Drive to make the eastern approach the minor intersection approach, at the same time that the bridge is upgraded to two-way. In my view this can be addressed in conjunction with the bridge upgrade, and no specific Planning Mechanisms are required.

3.5 Transport network connectivity

In my initial review, I noted that:

- The existing footpath facilities on Donald Road may not be adequate to support the increase in pedestrian movements from the development, as the existing footpath is narrow, is often adjacent to the carriageway, and in some locations does not have kerb separation
- Transport linkages with the proposed reserve areas should be designed as shared use paths, to provide for cyclist access
- A pedestrian facility should be provided on Allen Bell Drive at the southern end of the site, to enable pedestrians to connect from the site to the existing footpath on the western side of Allen Bell Drive

In response, the Submitter proposed that:

- The footpath along the Donald Road site frontage should be upgraded to 1.8m wide, once an access from the site to Donald Road is provided.

I agree with the submitters view on this matter and recommend that a Planning Mechanism is included.

No response was provided to my comments regarding transport linkages with the proposed reserve, and a pedestrian crossing facility on Allen Bell Drive. However, I consider that these matters can be through a comprehensive development plan.

4. Summary and recommendations

This technical note provides my review of Submission 9 on the PDP. In summary I recommend that planning mechanisms are included that require the Submitter to deliver the following transport upgrades:

- a skid resistant surface on the Donald Road one-lane bridge, with the first stage of development within the site – subject to FNDC approval.
- traffic calming on Allen Bell Drive, between Donald Road and Korimako Lane, with the first stage of development within the site – subject to FNDC approval.
- a 1.8m wide footpath along the Donald Road site frontage, in conjunction with the first access from the site to Donald Road.
- an additional lane on the Donald Road bridge, prior to the completion of 230 dwellings.

- a mini-roundabout is provide at the SH1 / Allen Bell Drive intersection prior to the completion of 290 dwellings, subject to NZTA approval. Should NZTA approval not be provided, I consider that FNDC should have discretion to allow development to proceed without this upgrade, if it can be demonstrated that safety effects at the intersection can be managed without the upgrade.

Further, I recommend that a planning mechanism is included, which requires the submitter to provide a comprehensive development plan in conjunction with the first stage of development. The comprehensive development plan should cover the full site and include:

- a demonstration of how the masterplan will be delivered in stages across the development of the site, including providing for transport connectivity and active modes linkages through the site
- discussion of any changes or updates to the masterplan, acknowledging that the masterplan included with the submission was preliminary.

If my recommendations be adopted, I consider that the transport effects of the rezoning can be managed through future resource consent applications – should Council consider that urban growth in this location is appropriate.

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