

**BEFORE THE INDEPENDENT HEARINGS PANEL  
OF HAMILTON CITY COUNCIL**

**UNDER**

the Resource Management Act 1991 ("RMA")

**AND**

**IN THE MATTER**

of Private Plan Change 17 to the Hamilton City  
Operative District Plan ("PC17")

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**STATEMENT OF EXPERT EVIDENCE OF MATTHEW CHARLES FARRELL  
ON BEHALF OF FONTERRA LIMITED**

**WATER SUPPLY AND WASTEWATER**

**7 OCTOBER 2025**

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**Russell  
McLeagh**

D J Minhinnick / K L Gunnell  
P +64 9 367 8000  
F +64 9 367 8163  
PO Box 8  
DX CX10085  
Auckland

## 1. EXECUTIVE SUMMARY

1.1 This evidence prepared on behalf of Fonterra Limited ("Fonterra") addresses the water supply and wastewater servicing for PC17, which seeks to rezone approximately 91 hectares of land surrounding the Te Rapa Dairy Manufacturing Site ("Manufacturing Site") at Te Rapa North ("the Plan Change Area").

### Water supply

1.2 The Plan Change Area can be serviced by Hamilton City Council's ("Council") existing citywide water reticulation network, as confirmed by Council and its consultants.

1.3 Preliminary modelling has been undertaken to assess internal network requirements, with further detailed modelling to be completed at the resource consent stage for each phase of development.

1.4 Targeted upgrades to the pipe network will be staged in alignment with development, and interim solutions are available if development precedes Council's external upgrades.

1.5 Water sensitive design measures, including rainwater harvesting and efficiency improvements, are recommended at the lot level to support sustainable outcomes.

1.6 The PC17 provisions require a staged development framework, linking land release to infrastructure availability, and a strategic infrastructure table identifies water servicing requirements for each stage.

### Wastewater servicing

1.7 The Plan Change Area can be serviced by connection to the Pukete Wastewater Treatment Plant ("PWWTP"), subject to downstream upgrades. The preferred long-term solution involves a new rising main and gravity mains along Pukete Road, discharging to a new pump station adjacent to the PWWTP.

1.8 Within the Plan Change Area, wastewater will be conveyed via a reticulated network supported by pump stations, with flexibility in the number and location of these stations to accommodate development sequencing.

- 1.9 Infrastructure is to be sized to accommodate future development across the wider Te Rapa North Industrial Zone ("TRNIZ"), not just the Plan Change Area. If development is intended to occur ahead of strategic upgrades, any interim solutions would need to be tested and approved through the resource consent process.
- 1.10 A staged development framework and strategic infrastructure table will ensure coordinated and timely delivery of wastewater servicing
- 1.11 A number of submissions raised matters relating to water supply and wastewater servicing. The evidence addresses concerns raised in submissions, confirming that infrastructure planning for PC17 has been developed with the wider TRNIZ in mind and is capable of supporting future development beyond the plan change boundary.
- 1.12 The approach allows for flexibility, scalability, and integration with regional infrastructure initiatives, ensuring that infrastructure delivery is efficient, equitable, and future-proofed.

## 2. INTRODUCTION

### Qualifications and Experience

- 2.1 My name is Matthew Charles Farrell. I am a Senior Principal Civil Engineer at Harrison Grierson Consultants Limited, based in Hamilton.
- 2.2 I hold a Bachelor of Engineering in Civil Engineering from Oxford Brookes University, England (1997). I have over 27 years' experience as a civil engineer.
- 2.3 I am a member of Engineering New Zealand Te Ao Rangahau.
- 2.4 Examples of my experience on recent projects include:
  - (a) Preparing the water section of the Infrastructure Report that supported Private Plan Change 20 to the Waipā District Plan - Airport Northern Precinct Extension;
  - (b) Involvement in the design of wastewater pump stations in Cambridge Growth Cells C8, C10, and C3 that have all required sizing to accommodate future external catchments; and
  - (c) Involvement in the design of wastewater pump stations in Central Otago (Wooing Tree Estate), Western Bay of Plenty (Rangiuru

Business Park, Te Awanui wastewater pumpstation), Bay of Plenty (Tauriko Business Estate Stage 3A wastewater pumpstation and Stage 4A wastewater pumpstation).

### **Involvement in PC17**

2.5 I have been engaged by Fonterra to prepare evidence for PC17. I authored the wastewater and water sections of the Infrastructure Assessment and the Technical Memo entitled "Wastewater and Water Updates 2025" within Appendix 3 of the Supplementary Information Report dated August 2025, both associated with Fonterra's request.

### **Code of Conduct**

2.6 I can confirm that I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2023. I have complied with the Code of Conduct in preparing this evidence and I agree to comply with it while giving oral evidence before the Hearings Commissioners. Except where I state that I am relying on the evidence of another person, this written evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

## **3. PC17**

3.1 PC17 has been prepared to rezone approximately 91ha of land surrounding the Manufacturing Site. PC17 proposes to amend the Hamilton City Operative District Plan's planning maps by removing the Deferred Industrial Zone Overlay from the Plan Change Area and amending the provisions of the TRNIZ to enable its intended future industrial use.

3.2 The extent of the Plan Change Area is shown in Figure 1 below.



**Figure 1: Plan Change Area Boundaries.**

#### **4. SCOPE OF EVIDENCE**

4.1 This statement of evidence will:

- (a) outline the existing water supply network and wastewater services in the Plan Change Area;
- (b) summarise the key findings in relation to water supply and wastewater servicing outlined in the Infrastructure Assessment undertaken in relation to PC17;
- (c) summarise the PC17 framework from a water supply and wastewater servicing perspective;
- (d) respond to water supply and wastewater matters raised in the Council Officer's Section 42A Report ("Section 42A Report");
- (e) respond to water supply and wastewater matters raised in submissions; and
- (f) provide an overall conclusion on Fonterra's application for PC17 from a water supply and wastewater perspective.

## 5. EXISTING WATER SUPPLY AND WASTEWATER NETWORK

### Existing Water Supply Network

- 5.1 The TRNIZ is currently serviced by Hamilton's citywide water reticulation system. The Council has confirmed that bulk water supply can be provided from the Waioroa (water) Treatment Plant, with some pipe network upgrades staged in alignment with development.
- 5.2 Preliminary modelling has been undertaken to assess internal network sizing and staging implications. This has been carried out for the Plan Change Area and in isolation of the greater Council network. Further modelling will need to be completed at the resource consent stage for each development phase.

### Existing Wastewater Network

- 5.3 The land surrounding the Manufacturing Site, comprising the West Block, North Block, and South-East Block of PC17, is currently vacant and undeveloped, and does not contain any existing wastewater infrastructure. The existing municipal wastewater network is located outside the Plan Change Area.
- 5.4 A 110mm wastewater rising main from the nearby Te Awa Lakes development runs southwest along Hutchinson and Te Rapa Roads, where it discharges into an existing 300mm diameter gravity main at Maui Street. The nearest gravity-fed connection is about 150 metres southeast of the West Block at the Maui–McKee Street roundabout, with 150mm pipes located approximately 3m below ground.

## 6. KEY FINDINGS RELATING TO WATER SUPPLY AND WASTEWATER NETWORK

### Water Supply Network

- 6.1 Council has confirmed that the Plan Change Area can be serviced through the Council's existing citywide water reticulation network. This conclusion was reached following a detailed review of the current network, including the location and capacity of existing water mains, and the proximity of the Plan Change Area to key infrastructure nodes. The assessment was carried out by Council's consultant who identified infrastructure upgrades to supply the Plan Change Area.
- 6.2 I have carried out preliminary EPANET (water distribution) modelling to evaluate internal network sizing and the implications of staging on the

upgrades identified by Council. Our EPANET modelling was carried out for the Plan Change Area in isolation of the greater Council network, and it is recommended that the upgrades will be confirmed through Council's Hamilton-wide water model at the resource consent stage for each phase of development. This will ensure the upgrades address possible impacts on the greater TRNIZ area water supply.

- 6.3 The Infrastructure Assessment considered alternative demand scenarios, including a reduced per capita water use assumption of 70 litres per person per day which reflects the proposed industrial nature of the Plan Change Area.
- 6.4 The preferred servicing option involves connecting into the existing reticulation network, supported by targeted upgrades to address capacity constraints. At the lot level, water sensitive design measures such as rainwater harvesting, reuse, and efficiency improvements are recommended to reduce pressure on the network and support sustainable development outcomes.
- 6.5 The provisions of PC17 have been specifically designed to align with the findings of the Infrastructure Assessment and to ensure that water supply infrastructure is delivered in a coordinated and timely manner. The introduction of a staged development framework within the Structure Plan enables land release to be directly linked to infrastructure availability. This is supported by a strategic infrastructure table that identifies water servicing requirements for each stage of development.<sup>1</sup>
- 6.6 The combination of bulk supply from the citywide network and lot-level water sensitive design measures provides a resilient and adaptable servicing strategy for the Plan Change Area. If development is intended to occur ahead of strategic upgrades, any interim solutions would need to be tested and approved through the resource consent process. This ensures that land release is not constrained by infrastructure timing while maintaining the integrity and efficiency of the wider network.

### **Wastewater Network**

- 6.7 The Infrastructure Assessment undertaken to support PC17 confirms that the Plan Change Area can be serviced through connection to the PWWTP, subject to a package of downstream upgrades. The assessment methodology included a review of existing wastewater infrastructure, analysis of design flows based on projected land use and population equivalents, and identification of long-term and interim servicing options.

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<sup>1</sup> Rule 3.9.3.3 Strategic Three Waters Infrastructure.

6.8 Design flows were calculated using both the Waikato Local Authority Shared Services Regional Infrastructure Technical Specification (RITS) and AS/NZS1547:2012 On-site Domestic Wastewater Management standards. These standards establish guidelines for anticipated wastewater flow rates across various development types, including the calculation of average daily flows and peak wet weather flows. The assessment also mapped existing services and identified capacity constraints within the downstream network, particularly the gravity network at Maui Street. A concept servicing layout was developed, including proposed pump station locations and rising main alignments, to convey flows from the Plan Change Area to the PWWTP.

6.9 The preferred long-term servicing solution involves the construction of a new rising main and new gravity mains along Pukete Road, discharging to a new pump station adjacent to the PWWTP as the downstream upgrades. Within the Plan Change Area, wastewater will be conveyed via a reticulated network supported by pump stations, with the number and location of these stations to be confirmed through detailed design. In a best case scenario, the initial modelling indicates the West Block could be serviced by a single pump station located in the northern portion of the block, although flexibility is retained to allow for additional smaller pump stations depending on development sequencing.

6.10 The assessment also considered the wider TRNIZ, which extends beyond the Plan Change Area's and recommended that infrastructure be sized to accommodate flows from both the Plan Change Area and adjoining blocks. Provision for a terminal pump station in the north of the Plan Change Area was identified as a means of achieving operational efficiencies and supporting future growth.

6.11 The wastewater network will be designed to ensure that wastewater servicing is delivered in a coordinated and timely manner. The introduction of a staged development framework within the Structure Plan enables land release to be directly linked to infrastructure availability. This is supported by a strategic infrastructure table that identifies wastewater servicing requirements for each stage of development.<sup>2</sup>

6.12 If development is intended to occur ahead of strategic upgrades, any interim solutions would need to be tested and approved through the resource consent process. These may serve as short-term measures or be retained as permanent elements of the network, depending on how the overall servicing

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Rule 3.9.3.3 Strategic Three Waters Infrastructure.

strategy evolves. This approach ensures that wastewater servicing will not constrain the release of land, while still providing for efficient long-term integration into the citywide network.

## 7. SECTION 42A REPORT

7.1 I have reviewed the Section 42A Report, including the Technical Memorandum prepared by Mr Chris Hardy (WSP) dated 8 September 2025, which assesses water and wastewater servicing for PC17. I respond to the key matters raised as follows:

- (a) **Infrastructure Plan Requirement** - The Section 42A Report recommends the requirement for an Infrastructure Plan to accompany the first land use or subdivision consent. I support this recommendation. The Infrastructure Plan is a critical tool to ensure coordinated delivery of water and wastewater infrastructure, and will provide clarity on staging, capacity, strategic upgrades, and integration with Council's wider network. The Section 42A Report, also recommends that the Infrastructure Plan include the method of wastewater treatment, including any upgrades or new infrastructure that may be required to the public network. The method of treatment will be via Council's PWWTP. I do not agree that details of the wastewater treatment should be included in the Infrastructure Plan.
- (b) **Staging and Sequencing** - The Section 42A Report notes inconsistencies in the proposed staging between water and wastewater infrastructure. I acknowledge this and confirm that while a common staging framework across all infrastructure types is intended, the sequence of staging is yet to be determined. The Strategic Infrastructure Table included in the Supplementary Information Report identifies the infrastructure requirements for each development zone but does not prescribe a fixed order of development.
- (c) This approach provides flexibility, allowing multiple zones to potentially form part of Stage 1, depending on infrastructure availability and development readiness. The Infrastructure Plan will formalise the staging sequence in consultation with Council and ensure alignment with network capacity and servicing requirements.
- (d) **Dedicated Wastewater Connection** – The Section 42A Report identifies that strategic wastewater infrastructure is not yet funded or

programmed and recommends a dedicated connection to PWWTP to enable early development. I agree with this recommendation in principle.

- (e) The report also notes that the future strategic infrastructure will be of significantly larger capacity than is required for PC17 or even the wider TRNIZ area, which is a fair observation. Accordingly, the Infrastructure Plan will need to include an appropriately sized interim solution that enables development to proceed ahead of the strategic upgrades. This interim solution will follow a similar alignment along Pukete Road and include a smaller lift station to convey flows to the PWWTP.
- (f) The design will ensure that the interim infrastructure can be integrated or decommissioned once the larger strategic infrastructure is constructed. If strategic infrastructure is implemented prior to development occurring, a smaller interim connection will not be required.
- (g) **Water Allocation and Consent** – The Section 42A Report recommends that Fonterra secure a new water abstraction consent and transfer it to Council. I do not agree with this recommendation.
- (h) The Council owns the Water Treatment Plant and the associated abstraction consents, and it is not appropriate for a private landowner to be required to secure additional allocation to enable development that Council has committed to servicing. The Infrastructure Assessment and Supplementary Report were prepared on the basis that water supply would be provided by Council, and any allocation or consent matters should be addressed by Council as part of its broader water servicing strategy. The Section 42A report also recommends that the Infrastructure Plan include confirmation and detail of the water allocation secured for the Plan Change Area and to be transferred to Council.<sup>3</sup> As stated above, I do not agree with this recommendation.
- (i) **Servicing the Wider TRNIZ Area** – The Section 42A Report recommends that infrastructure within PC17 be sized to service the wider TRNIZ. This aligns with the recommendations in the Infrastructure Assessment. I confirm that trunk infrastructure within

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<sup>3</sup> Section 42A Report at [40(c)].

the Plan Change Area will be designed to accommodate future development across the TRNIZ. In addition, the areas to be included within the PC17 infrastructure will need to be identified by Council at the start of development or during the preparation of the Infrastructure Plan. This will ensure that infrastructure is appropriately sized and coordinated to support both the Plan Change Area and future development within the TRNIZ.

- (j) **Strategic Infrastructure Corridors** – The Section 42A Report recommends protecting corridors for future strategic water and wastewater pipelines. I support this recommendation and confirm that corridor allowances will be incorporated into the Infrastructure Plan, in consultation with Council and relevant stakeholders.
- (k) **Response to Submissions** – The Section 42A Report provides a detailed analysis of submissions relating to water and wastewater. I note that many of the concerns raised by submitters are addressed through the Infrastructure Plan requirement, the commitment to public network connections, and the scalable servicing strategy developed for PC17 and the wider TRNIZ. These have been addressed in my response to submitters in Section 8.
- (l) **Infrastructure Cost Allocation** – The upsizing of infrastructure within the Plan Change Area to accommodate future development across the wider TRNIZ, including provision for strategic infrastructure corridors located within PC17, will involve additional cost. These costs are beyond what is required to service the Plan Change Area alone. The cost-sharing arrangements for this upsizing will need to be agreed with Council prior to the preparation of the Infrastructure Plan, to ensure clarity and fairness. This will enable the Infrastructure Plan to accurately reflect the scope of infrastructure required, the responsibilities for funding, and support efficient and equitable delivery of services across the growth node.

## 8. RESPONSE TO SUBMISSIONS

- 8.1 I have read the submissions received on PC17 that raise concerns relating to water supply and wastewater matters. Many of these submissions are based on the Infrastructure Assessment. At the time of preparing its Infrastructure Assessment, Council had identified limitations within its infrastructure and noted that the Plan Change Area was not included in their Long-Term Plan for water and wastewater. As a result of this, the Infrastructure Assessment

identified some alternative (and in some cases interim) servicing solutions. In May 2025, Council revised its stance and confirmed it would be able to support the rezoning of PC17. In August 2025 we prepared a technical memo to address these changes.

8.2 As the author of the water supply and wastewater services in the Infrastructure Assessment and Supplementary Information Report for PC17, I provide responses to the matters raised in submissions relating to water supply and wastewater below. Where submissions raise similar issues, they are addressed together to avoid repetition.

**Scope of PC17, the structure planning approach, infrastructure servicing, integration and the implications for the wider TRNIZ**

8.3 A number of submitters raised concerns regarding the scope of PC17, the structure planning approach, infrastructure servicing, and the implications for the wider TRNIZ, including the risk of neighbouring properties being excluded from future infrastructure planning and investment.<sup>4</sup> In particular, submitters suggest that infrastructure planning should be undertaken for the entire TRNIZ at the structure planning stage to ensure coordinated and efficient delivery of services.

8.4 In response I note that while PC17 applies to a defined portion of the TRNIZ, the Infrastructure Assessment and Supplementary Information Report have been developed with the broader zone in mind. The Infrastructure Assessment and Supplementary Information Report both confirm that the servicing strategy for water and wastewater is scalable and capable of supporting future development beyond the Plan Change Area.

8.5 For wastewater, the assessment identifies a long-term servicing solution involving a new rising main, new gravity mains along Pukete Road, and a new pump station adjacent to the PWWTP. Within the Plan Change Area, the reticulation network and pump station locations are designed to be flexible and responsive to staging. Importantly, the assessment recommends planning for a terminal pump station in the TRNIZ to receive flows from both the Plan Change Area and future development areas. This approach ensures that wastewater infrastructure can be efficiently extended to support the wider zone. T

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<sup>4</sup> Empire Corporation and Porter Group (Submitter 007) Graeme Boddy (Submitter 008), Hayden Porter (Submitter 009), Paul and Gloria Stone (Submitter 012), Te Awa Lakes (Submitter 014), and Rachel McGuire and Stephen Morth (Submitter 016).

- 8.6 For water supply, the Infrastructure Assessment confirms that the Plan Change Area can be serviced via Council's existing reticulation network, with targeted upgrades to maintain capacity as development progresses. Preliminary modelling has been undertaken to assess internal network sizing, and further modelling will be completed at the resource consent stage for each development phase. The assessment also acknowledges that external upgrades will be required to support growth beyond the Plan Change Area and that these upgrades will be confirmed through Council's citywide water model. This staged confirmation process ensures that water supply capacity is aligned with demand across the TRNIZ.
- 8.7 The PC17 provisions require an Infrastructure Plan to be submitted with the first consent application, detailing the method of wastewater servicing and any necessary upgrades. This ensures that servicing is coordinated and responsive to infrastructure availability. The Infrastructure Plan must also detail water supply arrangements, including any required upgrades. This staged approach allows for flexibility and ensures alignment with Council's infrastructure programme.
- 8.8 The strategic infrastructure table included in the Structure Plan provisions identifies servicing requirements for each stage of development, including blocks outside the Plan Change Area. This table provides a framework for sequencing infrastructure delivery in a coordinated manner and supports integration with future development across the TRNIZ. While PC17 does not rezone the entire TRNIZ, the infrastructure planning undertaken provides a clear and adaptable basis for servicing the wider zone.
- 8.9 The submitter's concern about avoiding duplicated infrastructure upgrades is acknowledged. The flexibility built into the staging framework and the requirement for an Infrastructure Plan ensures that permanent infrastructure can be appropriately sized and coordinated with Council's wider servicing programme. Cost-sharing arrangements and future planning processes will be key to ensuring that infrastructure delivery remains efficient and equitable across the TRNIZ.

### Northern Metro Detailed Business Case

8.10 The submission from Waikato District Council ("WDC") (Submitter 010) raises a specific point regarding wastewater servicing in relation to the Northern Metro Detailed Business Case ("Northern Metro") future plans. WDC notes that future wastewater flows from Taupiri, Ngaruāwāhia, Horotiu, and Te Kowhai are planned to be conveyed to the PWWTP via a new interceptor. WDC suggests that PC17 should consider opportunities to receive these future flows at the proposed terminal wastewater pump station or upstream gravity network, while also acknowledging that the interceptor is not yet planned and will require further design, land acquisition, consultation, and funding.

8.11 In response, I note that the Infrastructure Assessment and Supplementary Information Report have considered the broader wastewater servicing context, including integration with Council's strategic infrastructure programme. This has been discussed above.

8.12 While the Northern Metro interceptor is not yet confirmed, the proposed infrastructure layout for PC17 does not preclude future integration with regional wastewater servicing initiatives. The flexibility built into the staging and pump station configuration allows for adaptation as regional infrastructure planning progresses. The Infrastructure Assessment also acknowledges that interim solutions may be required, and that these can be refined through the resource consent process as development advances.

8.13 The submission from Waikato Regional Council ("WRC") (Submitter 013) supports the live zoning of the TRNIZ but raises several points regarding water supply and wastewater servicing.

8.14 WRC acknowledges that the Infrastructure Assessment identifies no available wastewater capacity within the existing Te Rapa North pipe network and notes that upgrades to the PWWTP are likely to occur only in 10 – 15 years. WRC supports the requirement for an Infrastructure Plan to accompany the first land use or subdivision consent and recommends that this plan include staging details for wastewater upgrades. WRC also expresses a preference for the Plan Change Area to be connected to Council's public wastewater infrastructure, rather than relying on interim on-site or communal systems, to avoid potential adverse effects on groundwater quality.

8.15 The wastewater strategy for PC17 includes a rising main, new gravity main along Pukete Road, and a new pump station near the PWWTP. A terminal

pump station is also proposed to support future development across the TRNIZ.

- 8.16 An Infrastructure Plan is required with the first consent, detailing wastewater servicing and any necessary upgrades. The staging framework allows for interim solutions, with final arrangements confirmed through the consent process to ensure coordinated delivery.
- 8.17 WRC seeks more detail on short-term water supply options, including construction water needs and preferred sources. The Infrastructure Assessment estimates daily demand at 287 m<sup>3</sup>/day, while the Supplementary Information Report references 1067 m<sup>3</sup>/day. The 1067 m<sup>3</sup>/day is based on the WLASS<sup>5</sup>-RITS demands of 45 People/ha and 260 l/person/day, the 287 m<sup>3</sup>/day is based on an assessment carried out on metered water demand at a similar (low water use) development in the Waikato. The difference reflects varying assumptions; both are valid and will be refined at the consent stage. The Infrastructure Plan must outline water supply methods and any required upgrades. Future water permits will be assessed under the applicable allocation framework.

## 9. CONCLUSION

- 9.1 The Infrastructure Assessment and Supplementary Information Report supporting PC17 demonstrate the Plan Change Area can be adequately serviced for water supply and wastewater, with infrastructure planning designed to support both the immediate needs of PC17 and future growth across the TRNIZ.
- 9.2 The staged and coordinated approach, underpinned by the requirement for an Infrastructure Plan, ensures that infrastructure delivery will be efficient, adaptable, and aligned with Council's broader servicing strategy.

**Matthew Charles Farrell**  
**7 October 2025**

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Waikato Local Authority Shared Services.