BEFORE THE HEARING PANEL
AT PALMERSTON NORTH

IN THE MATTER	**of the Resource Management Act 1991**
AND	
IN THE MATTER	**of Proposed Plan Change I to the Operative Palmerston North City Council District Plan**

STATEMENT OF PRIMARY EVIDENCE OF PHILIP THOMAS JAGGARD ON BEHALF OF KĀINGA ORA – HOMES AND COMMUNITIES

(STORMWATER)

11 AUGUST 2025

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1. EXECUTIVE SUMMARY

1.1 My full name is Philip Thomas Jaggard. I am a Director/Infrastructure Specialist consultant at MPS Limited providing expert and technical advice, and direction on three waters infrastructure and effects.

1.2 I have been engaged by Kāinga Ora-Homes and Communities (**"Kāinga Ora"**) to provide evidence addressing infrastructure and stormwater issues in support of its submissions to the Palmerston North City Council (**PNCC**) Proposed Plan Change I District Plan (**PPCI**).

1.3 In summary, my evidence concludes that focusing development into an existing and compact urban form has several benefits and can generally be viewed as positive as reduces the overall area required to be serviced, by reducing the need or requirement to expand into Greenfield areas.

1.4 Permissive planning rules are required to remove barriers to intensification and allow affordable housing to be built. I recognise that the cumulative impact of developments over time may place pressure on infrastructure capacity.

1.5 However, with more permissive planning rules, an extended Medium Density Residential Zone (**MDRZ**) boundary and good infrastructure planning practices, including the ongoing monitoring of development trends reduces the risk that capacity issues will develop. In addition, planned trunk infrastructure investments by Council's provide capacity to relatively large areas, reducing the risk that isolated areas will need to be constrained.

1.6 There is sufficient time to plan, design, consent and construct any upgrades required as the predicted growth will occur over a 30-year time frame and not all at once.

1.7 I support the Kāinga Ora submissions that seek to provide an extended area of MDRZ and a more permissible rule framework in PPCI with the removal of the Stormwater Overlay. Extending the MDRZ boundary is

required to meet a variety of housing choice and the forecasted growth within existing brownfield areas.

1.8 In regard to stormwater, the level of impervious coverage controls under the current District Plan are generally the same as proposed by PPCI, irrespective of the MDRZ proceeding.

1.9 Council under the existing Bylaws, LGA and Building consent processes, have an ability to decline connections to infrastructure, if no capacity is available.

2. INTRODUCTION

2.1 My full name is Philip Thomas Jaggard, and I am a Director/Infrastructure Specialist consultant at MPS Limited providing expert and technical advice, and direction on three waters infrastructure and effects. My experience includes providing infrastructure advice, support and expert witness evidence on water, wastewater and stormwater servicing for brownfield and greenfield development proposals for both public and private entities across Auckland.

2.2 I hold a Bachelor of Science from the University of Auckland and have over 20 years' experience in the water sector, with the past nearly nine years as a consultant at MPS Limited.

2.3 Prior to MPS Limited, I have been intimately involved in the strategy, planning and delivery of three waters infrastructure to improve levels of service and service growth in Auckland. I was the Wastewater Planning Manager at Watercare and more recently the Strategy and Resilience Manger, Healthy Waters, Auckland Council. During my time at both organisations, I provided input, and contributed to, the development of Auckland Council's Infrastructure Strategy and Land Release Programme.

2.4 My experience working for both public and private entities, gives me insight into infrastructure servicing challenges and how regulatory

systems operate, including the issues that arise when those systems don't function well.

2.5 Full details of my qualifications and relevant experience are at **Attachment A** to this evidence.

2.6 Kāinga Ora has requested my expert technical advice and opinion on the PPCI provisions relating to stormwater and development, with my scope of work including:

(a) Reviewing the PPCI provisions and the submission of Kāinga Ora.

(b) Reviewing Council reports and documents.

(c) Preparing expert stormwater and infrastructure evidence.

Code of Conduct

2.7 Although this is a Council hearing, I have read the Environment Court's Code of Conduct for Expert Witnesses in its Practice Note 2023 and agree to comply with it. My qualifications as an expert are set out above. I confirm that the issues addressed in this statement of evidence are within my area of expertise and experience.

Scope of Evidence

2.8 The aspects of the Kāinga Ora submission on PPCI of greatest relevance to infrastructural issues are:

(a) Kāinga Ora opposes the Stormwater Overlay within the MDRZ maps. Kāinga Ora has concerns as to the robustness of the Overlay and therefore the provisions associated and seek that this overlay and associated provisions are deleted until such a time that fulsome and complete evidence is provided.

(b) Kāinga Ora supports the inclusion of the MDRZ within the PNCC District Plan; however, consider that the spatial application of the zoning is too limited and have proposed additional areas as MDRZ. Within Council's s32 report, they

identify that further ‘up-zoning’ to MDRZ would be cost prohibitive and difficult to manage for Council as an infrastructure provider. Further, Council considers that expansion of the MDRZ would cause some areas to not be ‘infrastructure ready’.

2.9 I have been asked to provide evidence in relation to the Stormwater Overlay and its potential infrastructure constraints on development, and the additional proposed spatial extent of the MDRZ in regard to infrastructure capacity.

2.10 My evidence will address the following topics in order:

(a) Background

(b) Stormwater Servicing Assessment Report

(c) Stormwater Overlay

(d) Submissions

(e) Kāinga Ora MDRZ Spatial Extents

2.11 Where appropriate and relevant, my evidence will reference and rely on the report Stormwater Servicing Assessment (**SSA**) Report prepared by PNCC in support of PPCI including the associated Tonkin and Taylor (**T&T**) Model Build Report included in the Appendix C, the Section 42A Technical Report (Stormwater) of Mary Wood (25/07/2025) and Section 32A Report included in the PPCI Council documentation.

2.12 I thoroughly understand the concerns raised by PNCC regarding flood risk and capacity of the infrastructure to service growth through intensification and will address those concerns through my evidence.

3. BACKGROUND

3.1 A key outcome of the National Policy Statement on Urban Development (**NPS:UD**) is to **minimise** barriers that constrain the

ability to deliver housing development across public housing, affordable housing, affordable rental, and market housing.

3.2 PPCI proposes a Stormwater Overlay over a large portion of the proposed MDRZ zoning. Kāinga Ora sought either deletion in full of Policies SUB-MRZ-P4 and MRZ-P7 (should the Overlay itself be deleted in full), or amendments to the notified policy wording (as alternate relief, should the Overlay not be deleted in full).

3.3 As stated in Matt Lindenberg's evidence; "*it is important to remember the intent and purpose of the plan change – as stated by the Council – is to "cut red tape and make housing more accessible*". However, the proposed Stormwater Overlay adds a layer of "red tape" that will likely impede development and could be removed by applying a permissive and critical mindset to managing the potential adverse effects the Overlay seeks to control.

3.4 Whilst the PPCI provisions appear to be more enabling, the presence of the Stormwater Overlay creates barriers to intensification and development that may impact the outcomes of affordable housing and in my opinion, as outlined in my evidence, places more restrictive controls than required to manage development proposals impact on stormwater infrastructure capacity and flooding.

3.5 The Stormwater Overlay adds a barrier (perceived and real) and unnecessary costs to small scale developments, where the fees and costs are a larger percentage of the overall cost to develop. This increases the risk in delays and the financial risk to small developments, creating an impediment to redevelopment.

3.6 It is acknowledged that the Section 42A Stormwater Report's analysis indicates that the Stormwater Overlay boundary as proposed has been selected on flood risk and effects based on the results presented by the model and has not undertaken a review of the model or its numerical results.

3.7 In addition to the Stormwater Overlay, my evidence will cover the benefits of intensification and infrastructure planning in regard to the

extended MDRZ areas that Kāinga Ora have proposed and its impact on infrastructure capacity.

4. STORMWATER SERVICING ASSESSMENT REPORT

4.1 While I agree that the Stormwater Servicing Assessment Report (**SSA**) shows some stormwater and flood risk issues, however, this is not surprising based on the way the technical assessment has been carried out.

4.2 As I note below in my evidence, good infrastructure planning takes into consideration that not all land will develop to the full potential of the plan, this includes impervious coverage that influences stormwater and flood risks, more so than development yield.

4.3 The modelling assessment undertaken in the SSA report assumes that the existing development model impervious coverage for properties within the MDRZ is 60%. No information is provided in the supporting documentation to justify or support the selection of this value, and it is unclear if it relates to an existing level of imperviousness within the catchment.

4.4 It is noted that under the current District Plan, that there hasn't been a minimum permeable surface requirement across the entire GRZ, though some residential areas are noted to be limited to an impervious coverage of 70%. Therefore, it is possible some existing sites in the MDRZ are at or higher than the 60% impervious coverage already.

4.5 These two points raises questions around the suitability of the 60% impervious coverage value in the baseline modelling in a resource management context. For example, it could be argued that the base model assumption of 60% is below what may exist within the City or is permitted under the current District Plan. Further information on the selection of the 60% value is required on its suitability in assessing potential constraints.

4.6 It is noted that the Plan Change retains the same currently permitted impervious coverage with the potential for lesser stormwater discharges due to the requirements for attenuation. It is not clear from the information what the impact is of attenuation on peak flows. The impervious coverage controls are based on percentages and are generally the same irrespective of the MDRZ proceeding.

4.7 However, irrespective of the above, it is noted that the Growth Scenario modelled "*The proposed intensification areas were modelled with an increased impervious area of 100% in the city centre and 80% elsewhere, resulting in an increase in runoff*"[1], with no time frame provided for when this level of intensification would occur over.

4.8 The modelling of 80% intensification goes against the impervious coverage allowance for the MDRZ, when the PPCI states a limit of 70% impervious coverage (30% permeable). The result is that the stormwater runoff generated by the model is greater than that allowed under the PPCI in the MDRZ. This raises questions of the validity of the modelling results to assess projected effects from intensification in the MDRZ.

4.9 In addition, there is a lack of detail around the impervious percentage applied to the remainder of the model, including how the existing large green spaces located within the CBD confirm these were retained as permeable surfaces.

4.10 For context, the 80% growth scenario equates to an increase in impervious area of 163 hectares over the base level model of 60% and 81.5 hectares over and above that allowed in PPCI. A summary of the areas is provided in the Table below.

4.11

	Area (ha)	Diff to 60%
Total MDRZ	814.8	
60% Impervious Area	488.9	-
70% Impervious Area	570.4	81.5
80% Impervious Area	651.8	163.0

[1] Plan Change I – Stormwater Servicing Assessment

4.12 The expected development need over the next 30 years within the MDRZ is for 4,251 number of houses (Council's HBA)[2], which roughly would equate to an increase of 9.35 to 12.50 hectares in impervious coverage in the MDRZ assuming the following:

(a) one house per 220m^2;

(b) The median development site area in the MDRZ is 660m^2 with one existing house. It is assumed this house is demolished to allow intensification to occur to the level required.

(c) Total number of redeveloped houses required to meet growth equals 5,668 (4,251 + 1,417).

(d) Development sites impervious coverage increases from 60% to 70%; and

(e) The full 4,251 is developed in the MDRZ, noting that PPCI does not enable this as noted in Council's EA[3] reports.

(f) The Feasible Development Capacity within the MDRZ as per the Development Capacity Assessment[4] is 1,427.

4.13 Relatively speaking, the 12.5 hectares is equivalent to 7.7% (12.5/163 ha) of the impervious increase modelled by Council to assess effects, or 15.3% (12.5/ 81.5 ha) of impervious surface permitted by the PPCI. This demonstrates the level of conservatism that has been applied to the modelling to justify the Stormwater Overlay.

4.14 Even if we allow for increases in imperviousness within the MDRZ unrelated to intensification development, for example, by doubling it, the resulting increase in impervious area still does not match those modelled by Council.

4.15 The expected 12.5 hectares is also significantly less than the 53 hectares increase in imperviousness (Scenario 2) that showed the

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[2] Noting the concerns of Mr Heath's economic evidence for Kāinga Ora.
[3] Plan Change I – Economic Assessment
[4] Plan Change I – Development Capacity Assessment

areas proposed for intensification that could be progressed with minimal effect on peak flood levels in surrounding areas.

4.16 The above analysis shows that the modelling undertaken to date is overly conservative, as it assumes a significant increase in impervious coverage, and therefore increase in stormwater runoff that is not in line with proposed intensification development over the next 30 years.

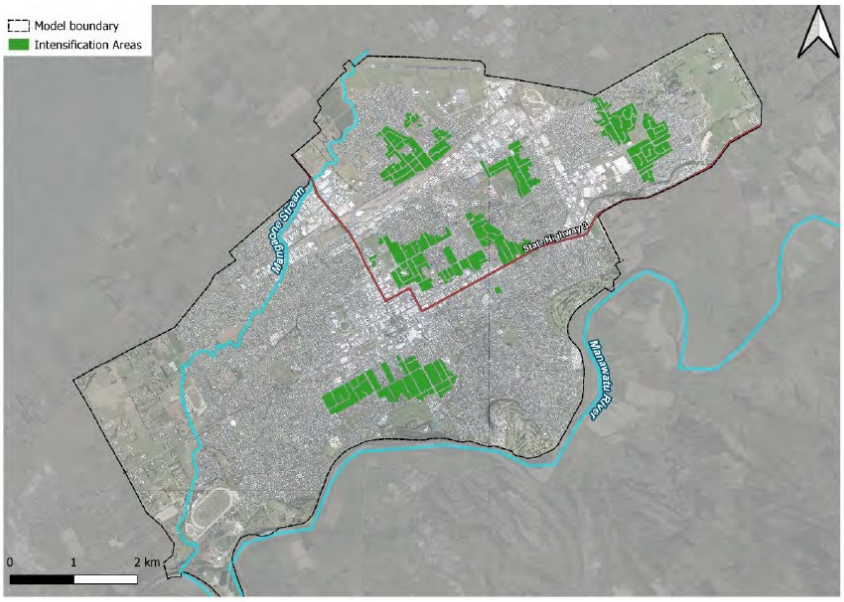
4.17 Therefore, in my opinion the proposed Stormwater Overlay cannot be supported by the SSA report prepared as it allocates an unreasonable level of imperviousness to the future growth scenario that is inconsistent with predicted intensification. Furthermore, it is unclear if any planned stormwater upgrades were included in the future growth scenario. It is likely that some investment would be expected over the next 30 years and would be included in the PNCC Stormwater Asset Management Plan.

4.18 Furthermore, the Economics Assessment (**EA**) Report states "*In the first instance, PC:I seeks to enable intensification as a permitted activity in parts of the MDRZ where stormwater infrastructure capacity is sufficient to support intensification. The performance standards for intensification across the remainder of the zone are also intended to enable higher density residential development relative to the existing MUH provisions but require landuse consent as a restricted discretionary activity to manage any impacts of intensification on stormwater management.*"

4.19 It is not clear from reporting to date that the impacts of intensification have been modelled appropriately, so PPCI should defer back to permitted activity status.

4.20 One clarification that is required is that in regard to how impervious coverage has been generally applied to the model for all land use types, for example roads. There is insufficient reporting information to determine if the impervious coverage 60% or 80% applied includes or excludes roads, that sit generally 90/95%.

4.21 However, the above assessment has assumed that as Surface roughness values and soil infiltration rates were adopted in the model, road surfaces would be separately identified in the model with their own imperviousness applied. This is supported by a closer examination of *Figure 3.1: Modelled proposed intensification areas* in Appendix C (presented in 9.16 below). The green intensification polygons indicate that roads are not included in the Intensification areas modelled, as they do not extend over the road corridors.



4.22 *Figure 3.1:Modelled proposed intensification areas* [5]

5. STORMWATER OVERLAY

5.1 The Kāinga Ora submission sought the deletion in full of the Stormwater Overlay in PPCI, on the basis of a lack of sufficient assessment / informing technical evidence.

5.2 I support Kāinga Ora proposed full removal of the Stormwater Overlay on the basis of my evidence presented in Section 4 above until further technical information is provided.

5.3 In my opinion, the modelling conservatism used to support the Stormwater Servicing Assessment Report and associated results over predict the impact of intensification of development.

[5] Plan Change I – Stormwater Servicing Assessment: Appendix C

5.4 In my opinion, a "permitted activity" framework would be more suitable to manage and control the concerns of Council and submitters to manage stormwater effects so that they are no more than minor.

5.5 If the Stormwater Overlay is not deleted, then I recommend that it is reduced in size to cover only those areas with excessive flood depths (maybe >0.5m) and include an effects hierarchy, which it currently lacks. i.e. low, medium and high risk.

5.6 I would be amendable to discuss a potential rule framework within expert conferencing. I further recommend that Council publishes its flood information on its website with downloadable model and data, allowing this information to be shared and used by developers to assess effects from proposed developments.

6. SUBMISSIONS

6.1 I recognise that Council has received several submissions from members of the public regarding the MDRZ extent – opposing or requesting the zone extent to be amended to reflect local flooding issues that they have experienced. I note these have been summarised in the Section-42a Report – Stormwater by Mary Wood[6].

6.2 I agree with Mary Wood's comment that complaints and anecdotal data, while valuable, may not necessarily align with large flood event data as there can be other reasons for observed flooding that may not be apparent to those directly impacted by the flooding.

6.3 Local flooding issues reported and experienced by residents can occur for a range of reasons. For example, insufficient inlet capacity compared to the rainfall intensity, inlet and soakage blockages (e.g. from leaves or lack of maintenance), invisible pipe failures, root intrusions, poor land contouring, local pipe capacity constraints and capacity constraints downstream backing up the pipe network.

6.4 Therefore, extra care is required in interpreting these submissions. Council should be investigating these concerns to determine the cause

[6] Section 42a Report – Stormwater by Mary Wood

of each issue and whether a small or large-scale intervention is required such as fixing a broken pipes or increasing inlet capacity vs a larger network upgrade. It is noted that it can take time to investigate and resolve issues, as the cause of the issue is not always abundantly clear.

6.5 In my experience, numerous issues could be addressed by small scale interventions, particularly where there was nuisance flooding. These may not always typically resolve the issue during extreme large storm events but go a long way to optimising the performance of the entire stormwater system and building goodwill with residents when large scale intervention taking years to implement.

7. KĀINGA ORA MDRZ SPATIAL EXTENTS

7.1 Kāinga Ora have proposed additional areas to be rezoned to MDRZ. Whilst the proposed spatial application creates a more enabling consenting pathway for residential suburbs surrounding the City Centre, Kāinga Ora is concerned that the spatial application proposed by the Council is insufficient and does not provide for additional suburbs in which medium density development should be considered to meet demand.

7.2 In order for Kāinga Ora to meet the demands for social housing and appropriately redevelop, reconfigure and renew the portfolio to meet its statutory objectives, Kāinga Ora has identified additional areas of the city where it has landholdings that are suitable for rezoning to MDRZ as shown in the Figure below.

7.3

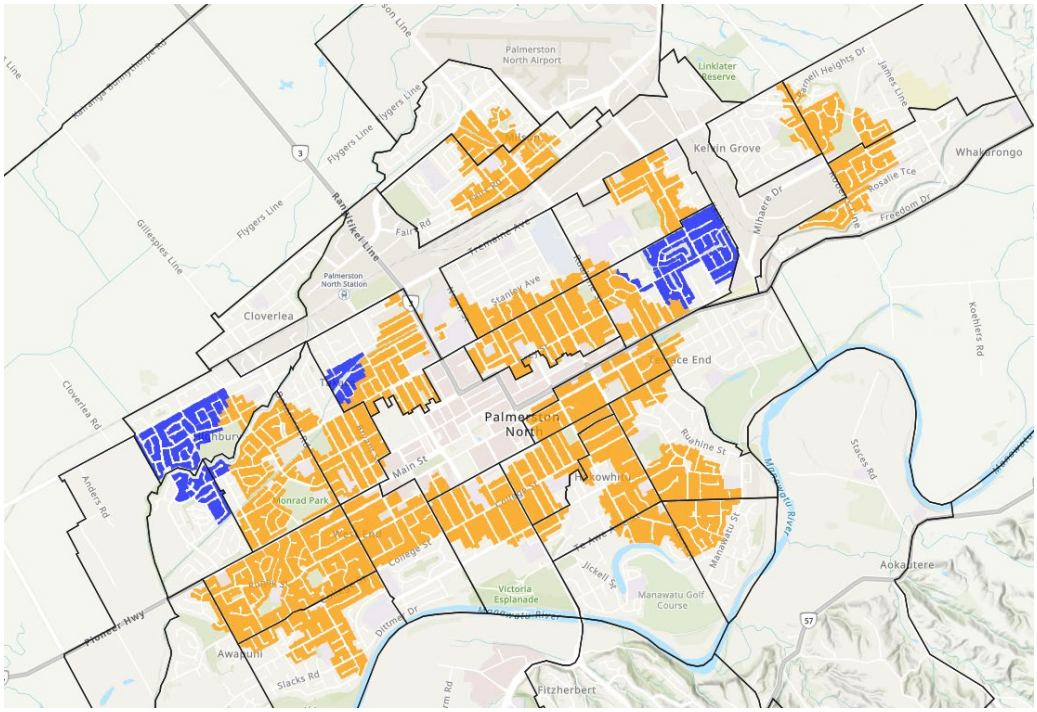


Figure 1 - Areas of Kainga Ora MDRZ as proposed in blue.

7.4 I note that within Council's s32 report, there is concern that extended areas of MDRZ would be cost prohibitive from an infrastructure point of view and a concern that these areas would not be 'infrastructure ready'.

7.5 Council's own experts have identified that insufficient land has been provided for intensification. This is also a concerned raised within the evidence of Mr Heath for Kāinga Ora[7]. It would therefore be prudent from an infrastructure planning perspective to include the additional land identified by Kāinga Ora at the earliest opportunity.

7.6 This would allow the infrastructure planning to begin now, rather than wait for a future review of intensification on whether additional extent of MDRZ is required.

7.7 I generally support the Kāinga Ora submission that seeks to provide greater opportunity for residential density than recommended.

[7] Economics evidence of Mr Time Heath on behalf of Kāinga Ora – Homes and Communities, dated 8 August 2025

Infrastructure Capacity and Projected Demand

7.8 Infrastructure capacity is necessary to properly service urban development, and Council is required to provide sufficient infrastructure to service current households and reasonably expected future growth.

7.9 The key factor in assessing infrastructure capacity is the likely uptake of when growth will occur and whether the modelling undertaken accurately reflects growth and demand forecasts for the same period.

7.10 Though the PPCI may enable intensification, the plan change will not itself generate additional demand for housing in Palmerston North.

7.11 PPCI governs where and in what built forms that demand might be accommodated, with the market ultimately deciding where to build. That is, PPCI will affect the location and type of dwellings in which the growth will be accommodated, and the urban form of the townships.

7.12 The expected forecasted number of infill dwellings within the MDRZ for the 30-years to June 2053 is 4,251[8]. This allows more than sufficient time to plan, design, consent and construct the required infrastructure to service population growth and any increase in impervious surfaces within that timeframe.

7.13 However, it is noted that the 2023 Housing and Business Development Capacity Assessment (HBA) identified a demand for 4,251 additional infill dwellings, and the supply enabled by PPCI is not sufficient to meet this demand in its entirety. The HBA notes that development capacity enabled by PPCI will meet the predicted demand in the medium-term[9].

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[8] Palmerston North Housing and Business Development Capacity Assessment, 2023

[9] Noting the comments within Mr Heath's Economic Evidence for Kāinga Ora – Homes and Communities

Infrastructure Planning

7.14 In response to Council's concerns that any extended areas of MDRZ would be cost prohibitive and not 'infrastructure ready', I consider that where good infrastructure planning is put in place, detailed planning work assessing capacity and predicting further demands and issues will provide a range of interventions to develop an optimised investment plan for implementation.

7.15 It is best practice to regularly review capacity, growth and upgrade/renewal plans as new information becomes available, including tracking of approved developments to ensure capital expenditure plans support growth where it is occurring.

7.16 Good infrastructure planning takes into consideration that not all land will develop to the full potential of the plan. Providing planning provisions that enable development, is not the same as that development occurring. There are many reasons why development does or does not occur, such as: immigration, job opportunities, community facilities, location, climate, and costs, just to name a few.

7.17 There is likely sufficient time to plan, design, consent and construct any infrastructure and any stormwater upgrades required beyond the existing growth forecasts that will respond to existing issues, while supporting growth.

7.18 In fact, it is nearly always the case, as the planning and construction of infrastructure will generally allow for more development than the infrastructure can currently service. This is especially relevant to Greenfield areas, where no infrastructure usually exists when plans are approved.

7.19 Following changes to planning documents, it is common for infrastructure providers to review and update infrastructure plans taking into consideration the ultimate population predictions. It would not be prudent to invest in infrastructure without the subsequent plan changes occurring.

8. CONCLUSION

8.1 I support the Kāinga Ora proposal for the removal of the Stormwater Overlay and I generally support the Kāinga Ora submission that seeks to provide greater opportunity for residential density than recommended by the Council.

8.2 I would be amendable to discuss a potential permissive rule framework within expert conferencing to remove barriers to intensification, allowing affordable housing to be built.

Philip Jaggard
11 August 2025

Experience Summary

- **MPS Limited:** Director/Project Management/Infrastructure Planning, 2016 to present.
- **St Francis Primary School:** Board of Trustees – Parent Representative, 2019 to 2025; Co-Chair 2022 to 2024
- **Auckland Council:** Stormwater Strategy and Resilience Manager, 2013 to 2016.
- **Te Motu a Hiaroa Governance Trust (Governance Trust) and Te Motu a Hiaroa Charitable Trust (Island Trust):** Trustee and Secretary, 2011 – 2014
- **Watercare Services Limited:** Wastewater Planning Manager, 2008 to 2014.
- **North Shore City Council:** Wastewater Network Planner, 2006 to 2008
- **Sinclair Knight Merz (SKM):** Project Engineer / Hydraulic Modeller, Hydrogeologist, 2000 to 2006 (excluding September 2004 – January 2005)
- **Connell Wagner:** Water Engineer September 2004 – January 2005

Education and Qualifications

- **Bachelor of Science**, Geography and Geology, University of Auckland.
- **Post Graduate Diploma of Science**, (Partially complete), University of Auckland.
- **Engineering Technology Papers,** Open Polytechnic
- **Better Business Cases** – Foundation – APMG International
- **People Leaders** – Auckland Council
- **Strategic Planning, Motivation and Leadership** – University of Auckland Short Courses
- **Project Management Level 1 & 2** - SKM
- **Understanding NZS3910 Conditions of Contract**
- **Urban Drainage Modelling**

Personal Details

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I am an accomplished infrastructure leader with over 20 years' experience delivering major programmes from concept to implementation across New Zealand's water sector. With a strong foundation in engineering, project management, and catchment planning, I bring the technical expertise, commercial insight, and stakeholder leadership necessary to deliver complex infrastructure projects with confidence.

I have successfully led cross-functional workstreams across central and local government initiatives, including infrastructure assessments, consenting, feasibility studies, site development, and due diligence. Recent advisory roles include work for Kāinga Ora, the Ministry of Housing and Urban Development, Kāinga Ora, Tamaki Regeneration Company, and Wellington Water. Previously, I held senior leadership roles at Auckland Council and Watercare, overseeing financial and operational performance on multi-million and multi-billion-dollar capital works programmes aligned with business objectives.

I thrive in complex environments, taking ownership to resolve issues, drive delivery, and achieve meaningful, long-term outcomes. I am recognised for building and leading high-performing teams, navigate technical and strategic challenges, and deliver optimised infrastructure solutions.

My expertise spans the full project lifecycle from strategic planning and business case development to implementation. With a strong technical lens that ensures projects are scoped effectively and delivered successfully. I have also served as an expert witness on water, wastewater, and stormwater servicing for both greenfield and brownfield developments.

Recent Professional Experience

Carrington Development: Ministry of Housing and Urban Development – Infrastructure Advisor – MPS Limited
Land within the Wairaka Precinct, Auckland was transferred via legislation to the Crown in 2018 and is now under the control of the Ministry of Housing and Urban Development (HUD). The Crown, through HUD, in partnership with Ngā Mana Whenua o Tāmaki Makaurau, propose to develop an inclusive sustainable community on the Crown land. The site is a significant brownfield residential development (approximately 63 Ha) with up to 6,000 residential dwellings proposed. MPS has been providing infrastructure advice and support to HUD on development plans, infrastructure upgrade requirements, shovel-ready projects, fast track consenting, resource consents, design, and engineering approvals. In addition, MPS prepared the Stormwater Management Plan for the Wairaka Precinct and assisted HUD tender and appoint the lead designer for the proposed Backbone Infrastructure works including identifying the shovel ready projects that are underway.

Tamaki Regeneration Programme (Tamaki Regeneration Company - TRC): Providing infrastructure advice on development plans, infrastructure upgrades, resource consents and engineering approvals for transformative urban regeneration.

Takapuna Golf Course Flood Mitigation: Leading technical discussions with Auckland Council to provide an affordable solution to retain the golf course while enabling the proposed Council flood storage facility.

Wellington Water Limited – Seconded Engineer – MPS Limited
Providing expert technical engineering and infrastructure advice to Wellington Water's Network Engineering Team. Projects include the Very High Critical Asset Renewal Programme, Identification, and investigation of critical projects for implementation, Stormwater Prioritisation, and managing the delivery of the Network Discharges Consent Pilot programme.

Three Waters Expert Evidence: Kāinga Ora – MPS Limited
Since 2020, central government reset the rules for how big cities can grow and introduced two pieces of legislation that tell councils how they must make that happen: the National Policy Statement on Urban Development (NPS-UD) and the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021.

The above new rules directed big cities to increase the provision for high density, multi-storey homes across their cities through changes to the relevant planning documents. In response to the government mandates, Hasting District Council, Hamilton City Council, Waipā District Council and Waikato District Council notified the necessary plan changes to their respective District Plans to accommodate the new planning provisions.

Phil was appointed to prepare three water expert evidence to support submissions made by Kāinga Ora on the above plan changes. In addition, Phil was appointed to provide Environment Court expert evidence for Kāinga Ora on the Waka Kotahi New Zealand Transport Authority designation and resource consents for the Otaki to Levin highway project.

Order in Council (OiC): Auckland Council Regulatory – Stormwater and Flooding – MPS Limited.
Healthy Waters as part of the Blue Green Network project seeks to respond to the Anniversary Flood events in Auckland by requesting the Government to make a short-term law change to the RMA and associated regulations by requesting an OiC under the Severe Weather Emergency Recovery Legislation Act 2023 (SWERLA). The request seeks to speed up the resource consenting of the flood resilience works in Auckland by changing the activity status of the consents to 'controlled' and limiting the matters of control. Phil has been appointed by the Auckland Council Regulatory Engineering & Resource Consents Premier Unit to review and provide comments on the proposed projects and conditions.

State Highway 22 Urbanisation: Waka Kotahi - Stormwater Design Lead – Subconsultant to Aecom /Beca
The upgrade of State Highway 22 (SH22) is being advanced as part of the New Zealand Upgrade Programme (NZUP) South Auckland package to improve safety and support growth in Drury West, South Auckland. It will provide growing communities with more travel options that help people get where they want to go safely.

graded road will consist of four lanes of traffic (2 in each direction), cycle lanes on both sides, pedestrian footpaths, and upgraded traffic intersections. Phil is currently the Stormwater Design Lead on the Pre-implementation phase of the project that includes confirming the concept design, design standards and staging and timing of construction. In addition, it includes understanding how major land-use development project will interface with the corridor.

Land Development Projects: Multiple clients – Infrastructure Specialist – MPS Limited
Provided expert technical three waters infrastructure advice on multiple large scale land development projects for a variety of public and private developer clients. Developments included commercial, industrial, and residential developments in both greenfield and brownfield areas across Auckland. Projects include working alongside Auckland Council's Development Project Office to identify three water upgrade projects and assisting in the preparation of Precinct Infrastructure Master Plans. In addition, Phil has provided technical input into applications for fast-track consenting, Infrastructure Acceleration Funding, developer agreements, resource consents and engineering approvals. On multiple projects, I was appointed to resolve infrastructure, resource consent and engineering issues for clients with Auckland Council and/or Watercare to unlock stalled projects.

Te Auaunga/Oakley Creek Framework Stormwater Management Plan (SMP): Kāinga Ora/Piratahi – MPS Limited Subconsultant to Piratahi
Phil was appointed to lead the Green Infrastructure Workstream of the Te Auaunga/Oakley Creek Framework SMP project. Phil's role was to provide expert stormwater technical advice and co-ordinate outputs from the ecology, hydrogeology, water quality, Iwi, and stakeholder engagement teams to develop the Best Practical Option (BPO) for stormwater management within the Te Auaunga/Oakley Creek catchment that included Kāinga Ora's Roskill Precinct.

Takapuna Beach Water Quality Improvement Project: Auckland Council - Project Manager and Technical Expert - MPS Limited
Through Auckland Council's Safeswim programme and website, the public is informed about health risks and beach water quality ratings associated with contact recreation at Takapuna Beach. The overall objective of the Takapuna Beach Water Quality Improvement Programme was to investigate and identify the source/s of recreational water quality issues at Takapuna Beach and evaluate and recommend solutions to improve water quality. My role was the Project Manager for the overall programme of work, and the technical expert responsible for preparing the Options Report.

Rapaki Decommissioning and Heritage Recovery Project: Regional Facilities Limited, New Zealand Maritime Museum (NZMM) and Panuku – Project Manager - MPS Limited
I was appointed to find a solution to relocate the Rapaki and project manage the relocation project to allow the Americas' Cup Hobson Wharf extension construction works to proceed in a timely manner. I undertook a review of all existing documentation and information on the Rapaki and developed an assessment of options, information documents for the relevant Board and senior management teams. In addition, I completed the business case for approval for the preferred option to decommission the ship and recover heritage items for preservation. Due to the tight timeframes for the America's Cup works to begin (weeks), I worked collaboratively with the limited number of available suppliers to develop a suitable contract and safety plans to decommission the Rapaki and recover the heritage items during December and over the Christmas break.

Due to the condition of the Rapaki, there were several significant risks that required oversight and careful management particularly due to the evidence of significant corrosion. Key risks identified were asbestos removal; failure of the crane superstructure; hull breach or failure; failure of propellers seals and failure to recover heritage items for preservation.

Weiti Villages Plan Change Variation: Williams Land (Weiti Development LP) – Project Manager- MPS Limited
The 860ha Weiti site is situated on the coast between Okura and Stillwater just north of Auckland. The initial focus is the delivery of the 150-lot (Sub-precinct A) private residential development of Weiti Bay, with later stages being the development of two Villages (Sub Precinct B) including some mixed use. The Weiti Sub-Precinct B - Village area is zoned for a maximum of 400 residential lots and 100,000 m2 Gross Floor Area (GFA) mixed use in the Auckland Unitary Plan's Weiti Precinct provisions. Auckland Council has agreed to accept a public notification of a Private Plan Change application to enable up to 1,200 dwellings in total in

Weiti Sub-precincts A (150 lots) and B (1,050), including a minor amendment to the boundary of Sub-precinct B.

My role was the project manager for the Plan Change variation, including managing various consultants and contractors, in preparing the application and supporting technical documentation.

Weiti Subdivision: Williams Land (Weiti Development LP) – Design Manager - MPS Limited
I was the design manager for the $10 million civil contract works for the construction of over 120,000m^3 cut and fill, 1.3 km of new public access road along the Penlink designation, including an upgraded intersection with East Coast Road. My role for the project was manging various consultants, adjacent landowners, and contractors, including the design, consents, and construction, managing service relocations, clearance of unexploded ordnances from a historic World War 2 firing range and all farm improvement works required as part of the Auckland Transport's agreement with the Hugh Green Group.

Close liaison with Auckland Council on the resource consents was required, given the tight timeframes, consents were obtained on time to allow construction, and the sediment control works to begin prior to the earth work season. In addition, I managed the preparation and submission of all 223 and 224c documentation, lodgement of easements and issuing of titles for the 150-lot development.

Project CANOPy and Western Isthmus Water Quality Improvement Programme: Auckland Council – Project Manager and Technical Expert - MPS Limited
Project CANOPy was initiated in January 2017 in response to long-standing concerns about the ongoing water quality issues in the western part of Auckland's inner city. CANOPy stands for Central Auckland Network Optimisation Programme and was undertaken jointly by Watercare Services (Watercare) and Auckland Council Healthy Waters (Healthy Waters). These projects were to develop an affordable, timely and integrated infrastructure programme for stormwater and wastewater services.

I was responsible for the project management of numerous consultants to deliver 11 catchment reports, provided expert technical advice and collaborated with others on the Strategic and Summary reports to the Project Governance Group. Upon completion of Project CANOPy, I undertook the development of the Western Isthmus Water Quality Improvement Programme for inclusion in the 2018 Long Term Plan and subsequent investigation requirements.

Unitec Carrington Campus Re-development: Unitec/Wairaka Land Company – Infrastructure Technical Expert - MPS Limited
Unitec planned to consolidate some 177 existing buildings spread over 53 hectares into a purpose-built education core on only 10 to 15 hectares, releasing some 40 hectares for residential and commercial development. I was involved in reviewing and updating the three waters master plan for the whole site. In updating the Master Plan, I undertook consultation with Auckland Council and Watercare Services Limited, prepared a gap analysis, assessed stormwater and wastewater capacities, managed the CCTV contractor, surveyor and consultants developing the water supply model for the site. In addition, I undertook the additional tasks and investigations:

- Project Management of the Stormwater Management Plan and Modelling
- Infrastructure Report for Boundary Rationalisation Subdivision Consent
- Infrastructure Servicing Report for the proposed Business Park Redevelopment.

Stormwater Strategy and Resilience Manager: Auckland Council.
Responsible for the strategic vision and direction of stormwater services at Auckland Council, reporting directly to the Stormwater Manager. Responsibilities include: preparing the Asset Management Plan, financial reporting of the Business unit, preparation of annual $75 million capital works budget, review and approval of business cases, programming and prioritisation of the 30-year capital works programme, resource management team, resource consents, development of infrastructure funding agreements with developers, communication with stakeholders, Local Boards and Councillors, provide governance on difficult and complex projects and technical issues, and management and development of nineteen staff members, including four managers. I also filled the role as Acting Stormwater Manger during the absence of the Stormwater Manager.

I have a good understanding of stormwater technical issues as well as strong working relationship with key people within Auckland Council. In addition, I was appointed to lead the Takapuna Spatial Priority Area

project within Council, and I coordinated the LGNZ Three Waters data and survey information for the Auckland and Northland regions. As the Takapuna Spatial Priority Area lead, I was able to identify and obtain funding approval for the first Spatial Priority Area project within Council.

Te Motu a Hiaroa Governance Trust (Governance Trust) and Te Motu a Hiaroa Charitable Trust (Island Trust): Trustee and Secretary: Trustee and Secretary, 2011-2014.
Managed the formation of the two Puketutu Island (Te Motu a Hiaroa) charitable trusts as part of the settlement agreement between Watercare Services Limited, Auckland Council and three iwi entities, being Waikato Tainui, Te Kawerau and Makaurau Marae. In addition, I served as inaugural trustee and secretary on both trusts.

Wastewater Planning Manager: Watercare Services Limited.
Overall responsibility for the planning of Auckland's wastewater infrastructure to meet the operational and strategic needs of the company. Responsibilities include preparation of the annual $100+ million and 20 year $2.5+ billion capital works Asset Management Plan, management of the $4 million planning budget, renewal, growth and demand planning, preparation of business cases including risk and financial evaluations for new capital projects, internal and external communication with stakeholders, input into resource consents, expert engineering input to ensure project deliverables/objectives are met, management and development of seven staff members.

Highlights include obtaining Board and/or Management approval for over 300 capital works projects with a combined value of more than $2.0 billion; integration and reprioritisation of Auckland's wastewater planning and capital works programme in 2010, with identified savings of approximately $1 billion (25% saving) over 20 years; successful negotiation and conclusion of the Puketutu Island Rehabilitation Settlement Agreements. I have an excellent understanding of wastewater technical issues as well as strong working relationship with key people within Watercare.

Wastewater Network Planner: North Shore City Council.
As Wastewater Network Planner I was responsible for the Wastewater Strategy and Policy to meet the long-term objectives of Council, division objectives and legal requirements. Responsibilities included: strategic and catchment management planning, setting annual budgets, development of the 10-year Improvement Work Programme for inclusion in the Long-Term Plan, manage external consultants and internal resources, project management, and technical input to ensure project deliverables/objectives are met.

Sinclair Knight Merz and Connell Wagner: Project Engineer / Hydraulic Modeller, Hydrogeologist / Water Engineer.
Prior working experience consists of a variety of consultant roles that have helped me build my experience in project management, engineering, water, wastewater, stormwater, and ground water. I prepared reports, working collaboratively within interdisciplinary teams on a range of projects including landfills, groundwater investigations and modelling, data analysis and manipulation, geotechnical investigations, farmland and drainage improvements, wastewater and stormwater network upgrades and system performance modelling.