IN THE MATTER OF the Resource Management Act 1991

AND

IN THE MATTER OF Private Plan Change 95 Pencarrow Estate Pongakawa to the Western Bay of Plenty District Plan

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STATEMENT OF EVIDENCE OF KEVIN COUNSELL (ECONOMICS)
ON BEHALF OF KEVIN AND ANDREA MARSH

Introduction

1. My full name is Kevin Geoffrey Counsell.

2. I am an economist and Director at NERA, a global economics consulting firm. I am based in Wellington. I have been employed as a professional economist for nearly twenty-four years.

3. I have a Master of Commerce degree (with Distinction) in economics, a Bachelor of Commerce degree with Honours (First Class) in economics, and a Bachelor of Science degree in mathematics, all from Victoria University of Wellington. I am a member of the Resource Management Law Association of New Zealand, and a member of the Law and Economics Association of New Zealand, in which I currently hold the position of President.

4. I am currently a member of the Housing Expert Advisory Group, providing advice to Ministers and government officials on housing policy. I am also a member of the Resource Management Reform Expert Advisory Group, providing advice to Ministers and government officials on matters related to the Resource Management Act 1991 (**RMA**) reform.

5. Broadly my consulting work involves the application of economic analysis to legal and business issues, including urban development, resource management, and environmental issues. I have appeared as an expert before the Environment Court and independent hearings panels. I have also authored or co-authored papers relating to economic analysis of urban development, resource management, and environmental issues, including in *New Zealand Journal of Environmental Law*, *Planning Quarterly*, *Resource Management Journal*, *Resource Management Theory & Practice*, and *Policy Quarterly.*

6. Of relevance to the issues in the present proceeding, my experience includes economic analysis for planning and consenting of residential, commercial and

industrial developments, including private plan changes. I have assessed supply and demand and the sufficiency of capacity for urban developments. I have also analysed the economic benefits and costs of urban developments, and more generally undertaken cost-benefit analysis in a variety of settings, including for environmental policy and plan changes. In relation to the geographic scope of housing markets, I have extensive experience analysing the nature and extent of markets across a variety of goods and services (including housing) in respect of competition assessments before authorities such as the New Zealand Commerce Commission and the Australian Competition and Consumer Commission.

7. In March 2024, I was engaged by Kevin and Andrea Marsh to provide economic analysis for Private Plan Change 95 (**PC95**). I have prepared two outputs in respect of PC95:

   (a) A memorandum, dated 8 April 2024, with an economic appraisal of PC95, with specific consideration of the provisions of clause 3.6(1) of the National Policy Statement for Highly Productive Land (**NPS-HPL**) and the economic viability of the proposed Commercial zone in PC95; and

   (b) A memorandum, dated 22 August 2024, with an economic assessment of a 'housing market' and an assessment of the geographic extent of such a market in relation to PC95.

8. To avoid repetition, my evidence includes a summary of my findings from my 8 April 2024 and 22 August 2024 memorandums. Given that my evidence only presents a summary of these memorandums, my evidence should be read in conjunction with those memorandums.

9. I have also reviewed two Technical Memos from Insight Economics, dated 10 May 2024 (which is a peer review of my 8 April 2024 memorandum) and 10

October 2024 (which is a peer review of my 22 August 2024 memorandum). I incorporate comments in response to Insight Economics throughout my evidence where it is relevant.

Code of Conduct for Expert Witnesses

10. I confirm that I have read the Environment Court's Code of Conduct for Expert Witnesses, as contained in section 9 of the Environment Court's Practice Note 2023, and I agree to comply with it.

11. The data, information, facts and assumptions that I have considered in forming my opinions are set out in my evidence that follows. The reasons for the opinions expressed are also set out in the evidence that follows.

12. I confirm that the matters addressed in this brief of evidence are within my area of expertise, with the exception of where I confirm 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 my opinions expressed in this brief of evidence. I have specified where my opinion is based on limited or partial information and I have identified any assumptions I have made in forming my opinions.

Scope of evidence

13. My evidence will cover:

    (a) Background to the proposed plan change of relevance to my economic analysis;

    (b) A summary of my assessment of the geographic scope of the locality and market in which the proposed PC95 site is located;

(c) A summary of my assessment of the potential economic effects of the proposal, with a particular focus on the economic effects in the context of the NPS-HPL;

(d) A summary of my assessment of the economic viability of potential commercial uses at the PC95 site;

(e) Response to matters raised in submissions; and

(f) Response to matters raised in the Western Bay of Plenty District Council's (**WBOPDC**) section 42A report.

14. I have read and am familiar with the private plan change application, the submissions, the section 42A report, and the proposed plan change.

Executive summary

15. PC95 is a proposed re-zoning of land in Pongakawa from Rural to a mixture of Residential and Commercial. A summary of my evidence regarding the relevant economic matters that I have assessed in respect of PC95 is set out in the following paragraphs.

16. I have considered whether the PC95 site at Pongakawa is in the same 'housing market' as Te Puke using an economic framework which assesses the extent of substitution across these two geographic areas. I find that the PC95 site and Te Puke:

(a) at 15km distance, are within the radius typically considered to establish the boundaries of a housing market;
(b) have similar accessibility to amenities;
(c) have similar accessibility to employment opportunities; and

(d) have house prices which are strongly and meaningfully correlated.

17. When these factors are taken together, I conclude that home buyers would consider the PC95 site at Pongakawa and Te Puke to be strong substitutes, and thus the PC95 site at Pongakawa and Te Puke lie within a single housing market.

18. I have assessed PC95 against clause 3.6(1) of the NPS-HPL. In respect of clause 3.6(1)(a), I find that PC95 is required to provide sufficient development capacity to meet demand for housing. My quantitative analysis shows that PC95, which is intended to supply 120-130 dwellings, will go towards meeting the demand for housing, of at least 137-266 households (or 85-162 accounting for rural subdivision) in Pongakawa in the next 5-10 years. Various contextual factors, including growth in horticultural employment in the region and new employment opportunities from the Rangiuru Business Park, along with housing constraints and affordability concerns in nearby areas and across New Zealand more generally, support my empirical finding of strong demand for housing in Pongakawa.

19. Clause 3.6(1)(b) requires consideration of reasonably practicable and feasible options for providing sufficient development capacity within the same locality and market. I comment only on some economic matters in respect of feasibility, while I understand that other aspects of this matter beyond my expertise as an economist are addressed across the evidence of Mr Murphy, Mr Coles and Mr Perry.

20. Alternative options for adding development capacity are likely to include kiwifruit orchards. However, of relevance to the feasibility of developing on orchard land:

(a) Plan Change 92 and the Smartgrowth Strategy have not allowed for any urban growth on orchard land in the short or medium-term;

(b) Orchard land consists of fragmented ownership of relatively small land parcels, making it difficult to assemble sufficient land for a commercially viable residential development; and

(c) The opportunity cost of converting orchard land (being the lost value of the land in kiwifruit production) would be materially greater than that for dairy land, making the feasibility of residential development of the former much less likely.

21. Clause 3.6(1)(c) of the NPS-HPL requires an assessment of the environmental, social, cultural and economic benefits and costs of rezoning highly productive land. My analysis is predominately in respect of the economic benefits and costs. In this regard, PC95 will expand the supply of housing and release the supply constraint, benefiting purchasers through lower prices and more housing choice. I have quantified this benefit at $8m. A cost of PC95 is the cost associated with the loss of the productive capacity of the land being re-zoned, which I have quantified at $555,000. Accordingly, the quantified benefits materially exceed the quantified costs.

22. Other unquantified benefits of PC95 include its proximity to existing residential housing, which will bring benefits from better utilisation of existing infrastructure and providing new facilities currently lacking in the community, and the proposed Commercial zone, which will bring employment opportunities to local residents and reduce vehicle kilometres travelled.

23. Lastly, I have assessed the economic viability of the proposed Commercial zone that is part of PC95. By benchmarking against the population servicing stores in nearby areas, I find that the existing population in Pongakawa, combined with the additional population enabled by PC95, is likely to be sufficient to support the economic viability of the proposed PC95 grocery store.

Background to the proposed plan change

24. PC95 proposes to re-zone 10.03ha of land at 1491 State Highway 2, Pongakawa from Rural to a mixture of Residential and Commercial. A total of 9.66ha of land is proposed as Residential (which includes multiple reserve spaces, overland flowpath, and roading and utility corridors), with the remaining 0.37ha proposed as Commercial. This is expected to enable delivery of a maximum of 120-130 dwellings and a small commercial area accommodating a local shop/café/community health hub or flexible use space for community services. I understand that the proposed wastewater treatment system and disposal area north-east of areas to accommodate development would remain zoned Rural.

25. The plan change is proposed to enable supply of housing and community/social infrastructure to the Pongakawa residential community, responding to growth in intensive horticulture and the establishment of the Rangiuru Business Park in the area. Full details of the particulars of the proposal are covered in the planning evidence of Mr Coles and Mr Murphy.

26. The proposed PC95 site is located approximately 15km from Te Puke, and approximately 8km from the Rangiuru Business Park, which is currently selling titles for Stage 1. The Rangiuru Business Park is expected to attract up to 4,000 employees when it is fully operational.[1] There are also many horticultural farms in the broader rural area around Te Puke and Pongakawa. In 2023, there were 1,250 people employed in horticulture in the Western Bay of Plenty district, with the majority of these employees in Pongakawa (390), Rangiuru (260), and Otawa (120).[2]

[1] NZIER (2021), "Economic impact assessment of the Rangiuru business park", NZIER report to Quayside Holdings Limited, April.

[2] Data is Statistics NZ Business Demography employee count data by Statistical Area 2 for the "fruit and tree nut growing" industry, sourced from Aotearoa Data Explorer.

Geographic scope of the locality and market

27. In my 22 August 2024 memorandum, I considered whether the PC95 site in Pongakawa is in the same locality and market as Te Puke. I approached this issue from an economics perspective, in that I focussed my assessment on the concept of a 'housing market', and how economists think about defining the geographic extent of such a market.

28. A summary of my findings from my 22 August 2024 memorandum is set out in the following paragraphs (including responses to Insight Economics' 10 October 2024 memorandum where relevant).

29. An economic framework that is widely used to determine the boundaries of a market involves assessing the extent of substitution by buyers and sellers across potential products or geographic areas. Applying this framework to housing, and assessing whether the PC95 site in Pongakawa is in the same housing market as Te Puke, involves an assessment of whether home buyers would consider the PC95 site in Pongakawa and Te Puke to be sufficiently substitutable.

30. I analyse four factors which I consider are relevant to an assessment of substitutability: geographic proximity; access to amenities; access to employment opportunities; and relationship between house prices.

31. First, regarding geographic proximity, the proposed PC95 site is 15km from Te Puke, which is within the radius typically considered to establish the boundaries of a housing market. I base this radius on two findings by overseas competition authorities as to the geographic extent of housing markets. Insight Economics states (10 October 2024 memo, p.2) that these findings are "dated". However, one finding is an ongoing investigation in 2024 in Australia. The other finding, although older (from 2014), is consistent with the 2024 finding. I therefore maintain the view that the basis for the radius is

appropriate. Insight Economics states also that it is inappropriate to rely on such rules of thumb, and other geographic aspects should be considered, such as attributes of the surrounding environment. I have considered other factors, such as amenities in the surrounding environment, as noted in my 22 August 2024 memorandum and summarised in later paragraphs.

32. Insight Economics also notes that Statistics New Zealand does not classify Pongakawa as part of the Te Puke "functional urban area". While this may be the case, my focus is on the reference to a "housing market" in the definition of an "urban environment" in the National Policy Statement on Urban Development 2020 (**NPS-UD**). As an economist, I consider it appropriate to utilise an economic framework for my assessment of the extent of a housing market, rather than rely on Statistics New Zealand's classifications.

33. Also in respect of geographic proximity, Insight Economics states that PC95 falls outside the enrolment zone for most schools located in Te Puke. I acknowledge that access to school enrolment zones may be one relevant factor in an assessment of the geographic extent of a housing market. However, it is but one factor, and I consider the other factors I assess in this section of my evidence, when taken together, weigh more strongly towards the PC95 site at Pongakawa and Te Puke lying within a single housing market.

34. Second, regarding access to amenities, the proposed PC95 site, as modified by the plan change, and Te Puke have similar accessibility to amenities such as commercial services, parks, schools, community facilities, and natural amenities.

35. Insight Economics disagrees with this conclusion, and states that Te Puke offers a more extensive range of amenities (10 October 2024 memo, p.2). I note, however, that Pongakawa residents can still access the same amenities at Te Puke, even if this requires vehicle access. Insight Economics also does not consider the additional amenities that will be added by the proposed PC95 site,

including a convenience store, space for community services such as health or educational services, a playground, and natural reserves.

36. Third, regarding access to employment opportunities, the proposed PC95 site and Te Puke have similar accessibility to employment opportunities such as the Rangiuru Business Park, horticultural farms, and employment in Te Puke and Tauranga.

37. Insight Economics disagrees with this conclusion, and argues using Census 2018 employment data that people living in Te Puke and Pongakawa tend to work in different industries (10 October 2024 memo, p.3). However, of the 27 different industries shown in the employment data presented by Insight Economics, only five are identified by Insight Economics as being "the most obvious differences". The remaining 22 industries have very similar proportions of employees across Pongakawa and Te Puke. I therefore have a different interpretation of this data that Insight Economics presents – in my opinion, it shows a very similar distribution of employment across industries between Te Puke and Pongakawa residents, strengthening my argument that these residents have similar access to employment opportunities.

38. Insight Economics also presents data that it argues shows Pongakawa and Te Puke residents tend to work in different locations (10 October 2024 memo, pp4.-5). I agree this data shows that a large share (60%) of Pongakawa residents work in Pongakawa. However, it also shows that Pongakawa residents travel elsewhere for work, with the main areas travelled to being Te Puke, Rangiuru and Mount Manganui. A large share of Te Puke residents also work in Te Puke, Rangiuru and Mount Manganui. I interpret this evidence as showing that a material share of workers in Te Puke and Pongakawa are in fact accessing similar employment opportunities.

39. Fourth, regarding house prices in Pongakawa and Te Puke, I find that these house prices are highly correlated and this correlation is not spurious (it is

based on an underlying long-run relationship). This is indicative of strong substitution between the two locations.

40. In response to this analysis, Insight Economics states that house prices in most regions are highly correlated, because they are influenced by the same macroeconomic factors, and gives the example of a high correlation (of 0.94) between prices in Auckland and Gore (10 October 2024 memo, p.6). However, Insight Economics has not tested if this correlation is spurious. A spurious correlation occurs when a correlation is shown despite the variables not being causally linked – for example, because the two variables both follow the same upward trend. A common example of this is that there is often a strong correlation between ice cream sales and beach drownings, but this does not imply that ice cream sales cause drownings. Rather, there is a common underlying factor (in this case, hot summer weather) that is likely the cause of both variables.

41. I have tested if Auckland and Gore house prices have a spurious relationship by using the same cointegration test set out in my 22 August 2024 memorandum (at [23]).[3] I find that Auckland and Gore house prices are *not* cointegrated, which means that these house prices do not have an underlying long-term relationship, and any correlation found is spurious. In contrast, in my 22 August 2024 memorandum I was careful to test for a spurious correlation between Pongakawa and Te Puke house prices, and I found that these prices were cointegrated i.e., the correlation between Pongakawa and Te Puke house prices is not spurious, and therefore the two house price series are meaningfully correlated.

42. The point of this discussion is that while house prices in many regions may be highly correlated (such as those in Auckland and Gore), it is only where this correlation is *not* spurious (such as for Pongakawa and Te Puke) that we should

[3] The test is known as the Johansen test for cointegration.

consider this high correlation to be meaningful and evidence of strong substitution between two locations.

43. Insight Economics also states (10 October 2024 memo, p.6) that "economists don't generally consider two goods or services to be substitutes just because their prices follow similar trends. Instead, price levels must be similar too." Insight Economics goes on to note that Pongakawa prices are much higher than Te Puke prices. However, contrary to Insight Economics' assertion, economists have found that price levels do *not* have to be similar for products to be substitutes.[4] For example, Motta (2004, pp.109-110) states that "using price differences as a criterion to define the relevant market is unsound" and "[p]rice differences are not a good indicator for the purposes of market delineation".[5] This is because price differences can reflect differentials in quality or other factors, and consumers may well be willing to substitute to a higher priced product, because in doing so the consumer obtains a material increase in quality. The difference in house prices between Pongakawa and Te Puke may simply reflect differences in the value consumers place on different attributes of the two areas, but this price difference does not necessarily imply consumers will not substitute between the two areas.

44. Based on my aforementioned findings regarding geographic proximity, access to amenities, access to employment opportunities, and relationship between house prices, when taken together, I conclude that home buyers would consider the PC95 site at Pongakawa and Te Puke to be strong substitutes, and thus the PC95 site at Pongakawa and Te Puke lie within a single housing market. While I have not assessed other areas in detail, the settlement at Paengaroa, which lies between Te Puke and Pongakawa, is also likely to be within the same housing market.

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4 This has also been reflected in New Zealand case law. In *Brambles New Zealand v The Commerce Commission*, HC AK CIV2115-03 [24 October 2003], the High Court states that a difference in prices is not a necessary condition for close substitutability, and that "[t]his is especially so when products are differentiated…and where there are agreed advantages and disadvantages of each" (at [125]).

5 Massimo Motta (2004), *Competition Policy: Theory and Practice*, Cambridge University Press, Cambridge.

Assessment against clause 3.6(1) of the NPS-HPL

Introduction

45. In my 8 April 2024 memorandum I set out my assessment of PC95 against clause 3.6(1) of the NPS-HPL. Clause 3.6(1) of the NPS-HPL, which applies to Tier 1 and 2 territorial authorities (with WBOPDC being Tier 1), states that urban rezoning of highly productive land may be allowed if:

    (a) "the urban rezoning is required to provide sufficient development capacity to meet demand for housing or business land to give effect to the National Policy Statement on Urban Development 2020"; and

    (b) "there are no other reasonably practicable and feasible options for providing at least sufficient development capacity within the same locality and market while achieving a well-functioning urban environment"; and

    (c) "the environmental, social, cultural and economic benefits of rezoning outweigh the long-term environmental, social, cultural and economic costs associated with the loss of highly productive land for land-based primary production, taking into account both tangible and intangible values."

46. I summarise my findings from my 8 April 2024 memorandum in the following sub-sections.

Clause 3.6(1)(a)

47. I consider first clause 3.6(1)(a). This involves assessing if PC95 provides sufficient development capacity to meet demand for housing to give effect to the NPS-UD.

48. To determine demand for housing, I use Statistics New Zealand (**Stats NZ**) population projections, which are based on a geographic area defined by Stats NZ as "Statistical Area 2" (**SA2**). I focus on the Pongakawa SA2 data. I acknowledge that the Pongakawa SA2 covers a large geographic area, being less granular than SA1 data, as noted by Insight Economics (10 May 2024 memo, at p.2), and that the area of the proposed PC95 site is only a small proportion of this area. However, the Pongakawa SA2 is the most disaggregated level for which Stats NZ's population projections are available, and projections are necessary in order to make an assessment of the *future* demand for housing.

49. I use the high growth Stats NZ population projections for the Pongakawa SA2, given that the *actual* population for the Pongakawa SA2 in 2023 has turned out to be only slightly below the high growth population projection for 2023 and well above the medium growth population projection. I convert these population projections to projections of the number of households using an average household size for the Pongakawa SA2 of 2.8 people per household. The resulting forecast is for the number of households in the Pongakawa SA2 to increase by 114 households in the next 5 years, 221 households in the next 10 years and 507 households in the next 25 years. These numbers are without applying the competitiveness margins set out in the NPS-UD. With the NPS-UD margins added (of 20% in the short-term and medium-term and 15% in the long-term), the projected increases in households are 137, 266 and 583 for the next 5, 10 and 25 years respectively. These results are set out in Table 1 below.

Table 1: Projected increase in Pongakawa SA2 households for different time periods in the high growth scenario, with and without NPS-UD margins

Time period	Increase in households without NPS-UD margins	Increase in households with NPS-UD margins
Next 5 years	114	137
Next 10 years	221	266

Next 25 years	507	583

50. I use the projected increases in households in Table 1 as the estimate of the demand for housing in the Pongakawa SA2. I note, however, that these projections are likely to be an underestimate of housing demand, for the following reasons:

(a) They do not account for income growth. The economics literature finds that an increase in income leads to increased demand for housing,[6] and thus as incomes increase over time there is likely to be further demand for housing;

(b) They do not account for trends of falling household sizes (which are consistent with broader demographic trends of an aging population and lower birth rates). As the size of households fall, more dwellings are required for a given projected population increase; and

(c) They assume that the projected number of households is equivalent to the projected demand for dwellings. However, it may be that demand for dwellings is higher than the projected number of households in the Pongakawa SA2 due to demand from households outside that area such as for houses used for holiday homes or short-term rental accommodation.

51. The above analysis shows that, in the next 5-10 years, there will be demand for *at least* 137-266 households in the Pongakawa SA2. I understand that there are no other sources of planned residential supply in this area that would be expected to absorb this growth in demand for housing. There may be some housing demand in the Pongakawa SA2 that is absorbed by rural subdivision, although this will depend on the relative ease with which rural subdivision is

[6] See, for example, X. Liu (2019), "The income elasticity of housing demand in New South Wales, Australia", *Regional Science and Urban Economics*, 75, 70-84.

accommodated in the Western Bay of Plenty District, and any such subdivision will occur on an ad hoc basis (lacking certainty as to timing of delivery). I note from the latest *Smart Growth Strategy 2024-2074* that rural/lifestyle subdivision in Pongakawa has created 52 new lots over the 5-year period 2018-2023.[7] Assuming the same trend over the next 5 and 10 year periods, this leaves considerable expected demand to be met in Pongakawa (85 in the next 5 years and 162 in the next 10 years).[8]

52. Insight Economics states (10 May 2024 memo, p.3) that historic population growth in the Pongakawa SA2 has mostly been in Paengaroa, while the population in and around the PC95 site has contracted. Based on this data, Insight Economics argues that the Pongakawa SA2 population projections likely reflect growth in Paengaroa. However, historic population growth will reflect the areas where housing supply has historically been provided, and this is not an indication of where it will be demanded in the future. Indeed, I note that the WBOPDC *Smart Growth Strategy 2024-2074* does not appear to include any provision for new housing capacity in Paengaroa in the short-term or medium-term.[9] Thus, it is very unlikely that the Pongakawa SA2 population projections will be absorbed within Paengaroa if there is no planned future housing capacity to accommodate the growth in housing demand.

53. In summary, since PC95 is intended to supply 120-130 dwellings, I find that PC95 will go towards meeting the demand for housing, of at least 137-266 households (or 85-162 accounting for rural subdivision) in the Pongakawa SA2 in the next 5-10 years. Absent PC95, there are no plan-enabled further contributions to delivering sufficient development capacity. PC95 therefore meets clause 3.6(1)(a) of the NPS-HPL, as it is required to provide sufficient development capacity to meet demand for housing.

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7 *Smart Growth Strategy 2024-2074*, p.102.

8 Calculated as 137 households minus 52 households in the next 5 years, and 266 households minus 104 households in the next 10 years.

9 Paengaroa appears to be covered in the SmartGrowth Strategy in the Eastern Corridor as adjacent to the Eastern Centre, which is identified as a potential long-term growth area (see e.g., p.108, and Map 18 of the *Smart Growth Strategy 2024-2074).* As per page 157 of the Smartgrowth Strategy, no dwellings are expected to be brought online in the Eastern Centre until post 2034.

54. The above analysis shows that there is a distinct demand for housing in Pongakawa. This is relevant to Policy 1(d) of the NPS-UD, which I have been asked to consider. Policy 1(d) states:

Planning decisions contribute to well-functioning urban environments, which are urban environments that, at a minimum:
…(d) support, and limit as much as possible adverse impacts on, the competitive operation of land and development markets;

55. Since there is a distinct demand for housing in Pongakawa, which is not being met through other developments (apart from a small amount of rural subdivision), my opinion is that PC95 will not have an adverse effect on other planned developments elsewhere in the Western Bay of Plenty District. That is, PC95 will satisfy its own demand, rather than drawing from the demand for other planned developments. Indeed, within the context of a broader housing shortage, housing markets are not currently subject to excess capacity (supply in excess of demand), so a new housing development like PC95 will not draw away demand from other developments. If anything, there will be a positive impact on competition from PC95, based on the basic principle of economics that new entry into a market leads to other market participants competing harder to offer enhanced service and/or lower prices.

56. In my 8 April 2024 memorandum, I set out as context some qualitative evidence that provides support for a finding of strong demand for housing in Pongakawa. In its 10 May 2024 memo, Insight Economics sets out several criticisms of this qualitative evidence. For ease of reference, in Table 2 I have summarised the different contextual factors I considered in my 8 April 2024 memorandum, the critique from Insight Economics, and my response to Insight Economics. In summary, I remain of the view that the various contextual factors set out in Table 2, when taken together, support my empirical finding above regarding strong demand for housing in Pongakawa.

Table 2: Contextual factors supporting strong demand for housing in Pongakawa

Contextual factor noted in my 8 April 2024 memorandum	Insight Economics critique in 10 May 2024 memo	My response to Insight Economics
A large number of dairy and drystock farms in the surrounding area have recently converted to horticulture, and this is evidenced in shifts in employment numbers, with gains in horticulture employment more than offsetting losses in dairy farming employment, and overall employment in the region increasing. This in turn is likely to have driven strong demand for horticultural workers to live nearby.	The increase in horticultural activity will not necessarily translate into strong demand for additional housing in Pongakawa, because new homes could be located in, for example, Te Puke and Paengaroa, and a significant proportion of horticultural workers are seasonal workers, some of whom will be accommodated onsite.	It is true that new homes "could" be located elsewhere or that some seasonal workers will be accommodated onsite at horticulture farms. However, my analysis is not intended to make subjective judgements on where employees will choose to locate. Rather, my point is that there has been strong growth in horticultural employment in recent years, and this in turn will drive strong demand for housing for those employees. This is consistent with and supportive of other evidence showing strong demand for housing in Pongakawa.
The nearby Tauranga Eastern Motorway was completed in 2015 and robust economic theory shows that accessibility improvements such as new or improved roads can result in increases in housing demand in an area (with reference to a study providing discussion and literature that supports this result).	The reference cited uses two case studies that relate to transport projects in highly urbanized areas, whereas the Tauranga Eastern Motorway terminates at the rural township of Paengaroa. Moreover, the Tauranga Eastern Motorway does not directly serve the subject site and was completed nearly 10 years ago.	Insight Economics has misinterpreted the reference I cited – I cited it not in relation to the two case studies, but rather to the "discussion and literature" in the cited reference. The economics literature is very clear that improving the ease and speed of getting around through transport investment will increase the number of jobs accessible per worker and, as a consequence, result in dynamic effects such as increased housing

		demand. These effects are present for reasonably broad distances (e.g., up to 25km),[10] and across reasonably long timeframes (taking 10-20 years to fully materialise).[11]
The Rangiuru Business Park will bring new employment to the area.	Insight Economics agrees that the Rangiuru Business Park will bring new employment to the area, but this has likely been anticipated elsewhere. Diverting future growth away from areas where infrastructure investments are already made or planned will have negative financial consequences for council.	I do not agree that PC95 will divert future growth away from other areas of existing or planned infrastructure. I have shown above that there is a distinct demand for housing in Pongakawa, and it does not appear that this demand has been planned for elsewhere (e.g., in the *Smart Growth Strategy 2024-2074*). This point is also relevant to Policy 1(d) of the NPS-UD, as discussed earlier.
The Housing and Business Assessment for WBOPDC identified a shortfall in housing in the Western Bay of Plenty Region in the short-term, medium-term and long-term, as well as a specific "urgent need" to investigate housing shortages in the Eastern Corridor.	Insight Economics agrees that there is a pressing need for more housing in the sub-region, but disagrees that this is evidence of strong demand for housing at the subject site.	I reiterate again that my empirical findings show distinct demand for housing in Pongakawa. My point here is just to provide context for this result, and given that there are housing shortages in the wider Western Bay of Plenty Region, I consider that these housing shortages provide this more general context.
House prices and rents have grown strongly in Pongakawa in recent years, indicating that	Insight Economics argues that the high dwelling prices in Pongakawa indicate that	While current dwelling prices in Pongakawa are relatively high, the PC95 development itself intends to provide a diversity of section sizes to

[10] David J. Graham, Stephen Gibbons, and Ralf Martin (2010), "The spatial decay of agglomeration economies: estimates for use in transport appraisal", Final report, Imperial College London – see, in particular, the results in Table 2.

[11] Eivind Tveter and James Laird (2018), "Agglomeration – How Long Until We See the Benefits?", Scottish Transport and Applications and Research.

there is currently insufficient land supply to meet increasing demand by households.	additional growth in this area is unlikely to provide affordable housing. Insight Economics also considers that the median house price data in Pongakawa may not accurately reflect market trends given only 2-3 dwellings are sold per quarter over the period analysed. Insight Economics does not agree with my conclusion that high prices are consistent with excess demand for housing.	ensure affordability for workers in the horticultural sector.[12] I acknowledge there are only a small number of dwelling sales used to determine the median house price data, however trends in Pongakawa house prices are consistent with trends seen elsewhere with larger datasets, and which have experienced excess housing demand. Indeed, it is widely accepted that there are housing shortages across New Zealand, and excess housing demand is pushing up prices.

[12] PC95 Application for Plan Change, November 2023, at p.14.

Clause 3.6(1)(b)

57. Clause 3.6(1)(b) requires consideration of reasonably practicable and feasible options for providing sufficient development capacity within the same locality and market. This matter is addressed across the evidence of Mr Murphy, Mr Coles and Mr Perry in addition to myself, as it is beyond the expertise of just an economist. I have provided an analysis of the "locality and market", which serves as an input to an assessment against Clause 3.6(1)(b), the results of which were set out earlier in my evidence.

58. Clause 3.6(1)(b) calls for consideration of the feasibility of alternative options for adding to development capacity – these options, in the same locality and market, are focused on in the evidence of Mr Murphy and Mr Perry in particular. Feasibility or feasible is not defined in the NPS-HPL, although it is defined in the NPS-UD as follows:

Feasible means:
for the short term or medium term, commercially viable to a developer based on the current relationship between costs and revenue

for the long term, commercially viable to a developer based on the current relationship between costs and revenue, or on any reasonable adjustment to that relationship.

59. I understand that WBOPDC, having just completed Plan Change 92, has chosen to not expand planned urban growth areas beyond orchards that were previously signalled to accommodate future urban growth. Similarly, the Smartgrowth Strategy allows over 10 years for any houses to come online in the Eastern Centre, which I understand is almost exclusively developed orchard land. This is consistent with there being a considerable impact on feasibility of converting orchard sites to residential housing.

60. The feasibility of utilising orchard land for residential development may also be impacted by fragmented ownership of small land parcels, making it difficult to assemble sufficient land for a commercially viable residential development. The average Zespri kiwifruit supplier holds only 4.14ha of land,[13] while in contrast the average dairy farm size in the Bay of Plenty is 124ha.[14]

61. I note also that orchard land values are materially greater than that for dairy land. The average sales price for dairy land (for New Zealand overall – Bay of Plenty data was not available) is $34,600/ha,[15] while the average value of kiwifruit land in the Bay of Plenty is $449,585/ha.[16] The opportunity cost of converting orchard land (being the lost value of the land in kiwifruit production) would be materially greater than that for dairy land, making the feasibility of residential development of the former much less likely.

Clause 3.6(1)(c)

62. Clause 3.6(1)(c) of the NPS-HPL requires an assessment of the environmental, social, cultural and economic benefits and costs of rezoning highly productive land. My analysis is predominately in respect of the economic benefits and costs, although I also touch on environmental benefits and costs, as there are some economic considerations relevant to these.

63. Insight Economics notes (10 May 2024 memo, at pp.6-7) that the assessment of economic benefits and costs in my 8 April 2024 memorandum does not attempt to quantify the economic costs and benefits of the proposal. I acknowledge that my analysis did not undertake any quantification, which given time and resource constraints, was not a practical option at the time.

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13 Venture Taranaki (2022), "Branching out Blueprint: Kiwifruit – The Opportunity for Taranaki, New Zealand", at p.15.

14 DairyNZ (2023), "New Zealand Dairy Statistics 2022-23", at p.16.

15 DairyNZ (2023), "New Zealand Dairy Statistics 2022-23", at p.59.

16 Venture Taranaki (2022), "Branching out Blueprint: Kiwifruit – The Opportunity for Taranaki, New Zealand", at p.13.

64. However, I have since undertaken some quantification of the economic benefits and costs, which is set out below. The NPS-HPL Guide to implementation recommends that the Total Economic Value (**TEV**) framework be used as a "good starting point" for such an assessment.[17] TEV is a framework for breaking down the net benefit of an action or project,[18] and it covers the range of environmental, social, cultural and economic benefits and costs. My quantification approach measures only the net economic benefit of PC95, which is a component of the TEV framework.

65. In my 8 April 2024 memorandum, I noted that an important economic benefit of PC95 is that it will expand the supply of residential housing, benefiting purchasers of housing by lowering prices and providing them with more housing choice. I have quantified the economic benefit from an expansion in the housing supply, with my methodology for this quantification set out in Appendix A. My approach is to apply an outwards shift of the supply curve, and calculate the additional benefit to consumers from increased availability and affordability of housing. Using the parameters and approach described in Appendix A, I calculate this benefit to be approximately $8m in net present value terms (using a 5% discount rate),[19] calculated over a 20-year period. This value only reflects the benefit of the outwards shift of the supply curve to consumers; there will also be a producer benefit (to developers), but to be conservative I have not quantified that benefit here.

66. A cost of PC95 is the cost associated with the loss of the productive capacity of the land being re-zoned. I have quantified this cost by analysing the profitability of the land in its alternative use, which is dairy farming. For this I utilise data from Dairy NZ, through its "Econ tracker tool",[20] which provides

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17 MFE (2003), "National Policy Statement for Highly Productive Land: Guide to implementation", March, at p.37.

18 See, for example, David Pearce, Giles Atkinson, and Susana Mourato (2006), "Cost-Benefit Analysis and the Environment: Recent Developments", OECD, at p.86.

19 At the time of my analysis, this was the default discount rate for use in economic analysis recommended by the Treasury. Very recently, the Treasury has increased this discount rate to 8% for commercial projects. To be conservative, I have continued to use the 5% rate, as the benefit result would be higher (and the cost result lower) with a higher discount rate. See https://www.treasury.govt.nz/information-and-services/state-sector-leadership/guidance/reporting-financial/discount-rates

20 https://www.dairynz.co.nz/tools/dairynz-econ-tracker-tool/

data on the average profitability of a representative dairy farm in different regions of the country. In the Bay of Plenty, the profitability (as measured by the "cash operating surplus") of the representative farm is $3,296/ha in 2022/23, and is forecast to be $3,422/ha in 2023/24 and $4,444/ha in 2024/25. To be conservative, I use the higher profitability figure of $4,444/ha/annum in my calculations.

67. At 10.03ha of land to be re-zoned, annual profitability of $4,444/ha translates to total profits of approximately $45,000. Over a 20-year period, using a 5% discount rate, the present value of this annual stream of profits is equal to approximately $555,000.

68. Accordingly, comparing the quantified benefits of PC95 in housing, of $8m, with the quantified costs, of $555,000, shows that the quantified benefits materially exceed the costs.

69. My 8 April 2024 memorandum also noted some other economic benefits and costs of PC95, which I have not quantified, but in summary are as follows:

    (a) There is an economic benefit arising from PC95 due to its proximity to nearby residential housing in Pongakawa, allowing PC95 to better utilize the existing infrastructure, relative to an alternative site that is located further away from the existing residential housing. Insight Economics disagrees with this (10 May 2024 memo, p.7), although the reasoning for this disagreement is not entirely clear. Insight Economics notes only that the PC95 site is located further away from core services than other growth nodes identified in the SmartGrowth Strategy. I note, however, that these growth nodes are not in Pongakawa, so do not provide a means of capturing the demand specific to this area;

    (b) The proposed commercial space that is part of PC95 will bring a benefit by providing employment opportunities for local residents and allow

residents to meet their needs in respect of general grocery items in closer proximity to their home, thereby reducing local vehicle movements; and

(c) PC95 will involve some costs related to the provision of infrastructure, but the infrastructure costs that relate to the development site itself will be incurred by the developer. It is reasonable to assume that the benefits that developers receive will exceed these costs, given that they will make decisions that are in their own best interests, so that there is an overall net (private) benefit.

70. I understand also that, if PC95 goes ahead, the remaining rural zoned area of the farm will be converted from irrigated dairy to dryland sheep and beef farming. Irrigated land use tends to have greater environmental impacts than dryland. For example, the Ministry for the Environment states that an increase in irrigated land may result in increased loss of carbon dioxide to the atmosphere, increased loss of soil carbon, and increased nitrogen leaching.[21] Accordingly, there will likely be environmental benefits from PC95 that arise from shifting the remaining dairy farm to a dryland sheep and beef farm.

71. In summary, the aforementioned economic benefits of PC95 are likely to significantly outweigh any economic costs. This goes towards satisfying the requirements of clause 3.6(1)(c) of the NPS-HPL.

Economic viability of the proposed Commercial zone

72. In my 8 April 2024 memorandum, I considered the economic viability of PC95's proposed Commercial zone, particularly in respect of the population being served by the proposed convenience store. Based on a benchmarking analysis of the population per grocery store of nearby areas, I find that a population of around 900-1,500 is needed to support a given grocery store. With a lower

[21] Ministry for the Environment (2021), "Our land 2021: New Zealand's Environmental Reporting Series", at p.22.

bound of around 600 people in the Pongakawa residential area around Arawa Road and Penelope Place and an upper bound of approximately 3,700 in the Pongakawa SA2, I conclude that the actual population serviced by the proposed PC95 grocery store would be similar to the benchmark range of 900-1,500. Therefore, the population enabled by PC95 along with the existing population in nearby areas is likely to be sufficient to support the economic viability of the proposed PC95 grocery store.

73. Insight Economics states (10 May 2024 memo, at p.8) that "it is highly unlikely that the additional 130 homes provided by the proposal will create sufficient critical mass to support a new grocery store". It is unclear what the basis for this assertion is, as no further detail is provided. Nonetheless, I note that my assessment of the economic viability of the proposed store is based on the total population that would be serviced by the store, not just that provided by the additional 130 homes from PC95.

Submissions on the plan change

74. I have reviewed submissions received on the plan change and in the following sections have addressed matters raised as they relate to economic effects.

Viability of shop or community health hub

75. Several submissions question whether or not the proposed commercial uses providing benefit in terms of closer access to community amenities are in fact economically viable.[22]

76. I refer to my analysis in my 8 April 2024 memorandum and summarised above, which assessed the viability of the proposed commercial zone by benchmarking against the population per grocery store in nearby areas. Based on this analysis, I found that the population in and around the PC95 site is likely

[22] Submitters Mike Maassen, Graeme Gillepsie

to be sufficient to support the economic viability of the proposed PC95 grocery store. I have not seen in submissions any critique of this analysis, nor any alternative analysis that goes towards an assessment of the economic viability of the proposed commercial zone.

Dispersed settlement pattern

77. Several submissions discuss concerns with a dispersed settlement pattern accommodating growth in comparison to existing larger settlements nearby accommodating the growth, particularly in regard to PC95 being an ad hoc/out-of-sequence development that is not provided for in the SmartGrowth Strategy. [23]

78. However, as I have shown earlier in my evidence, there is a distinct demand for housing in Pongakawa, including in the short-term. Without additional housing to meet this demand (which PC95 provides), there will be increased pressure on already high house prices and/or a shift of that demand to nearby areas (placing pressure on house prices and infrastructure in those areas).

79. Furthermore, while there is housing capacity planned in other areas of the district, as identified in the SmartGrowth Strategy, a lot of plan-enabled capacity is from intensification (e.g., in Te Puke and Ōmokoroa). It is unclear if there is demand for intensified housing to meet local housing preferences, and therefore if this plan-enabled capacity will actually be realised. It is also unclear of the extent to which private covenants may be present on existing housing lots that prevents intensified development on that lot. In contrast, PC95 will be realisable supply able to meet demand.

[23] Submitters Mike Maassen; Rebecca and Cameron Black; BOPRC

Supporting existing economic drivers in the area

80. Numerous submissions raise the positive economic effects of closer proximity to employment opportunities and the potential for supporting the economic drivers in the locality, specifically the horticultural industry and Rangiuru Business Park soon to come online.

81. I support these points noted in submissions. Indeed, I have noted earlier in my evidence that factors such as the growing horticultural employment in the nearby area and the Rangiuru Business Park provide qualitative context for my quantitative findings of demand for housing in Pongakawa.

Section 42A report

82. I have read the section 42A report dated 11 October 2024. The section 42A report includes two key points of relevance to my economic evidence. My response to these points has been covered in more detail throughout my evidence. However, for completeness, I briefly refer to the two points here:

(a) The section 42A report does not agree that the PC95 site is part of the same housing market as Te Puke (at [9.73] and [10.39]). I have set out earlier in my evidence my findings regarding geographic proximity, access to amenities, access to employment opportunities, and relationship between house prices which, when taken together, show that home buyers would consider the PC95 site at Pongakawa and Te Puke to be strong substitutes. Based on this, I remain of the view that the PC95 site at Pongakawa and Te Puke lie within a single housing market; and

(b) The section 42A report finds that a quantified economic assessment of the costs and benefits of the loss of highly productive land has not been undertaken (at [10.47] and [10.48]). As shown earlier, I have now

quantified these economic costs and benefits, and find that the quantified benefits of PC95 in housing, plus other non-quantified benefits, materially exceed the costs of loss of highly productive land.

Conclusion

83. In conclusion, my economic analysis shows that home buyers would consider the PC95 site at Pongakawa and Te Puke to be strong substitutes, and thus the PC95 site at Pongakawa and Te Puke lie within a single housing market.

84. My analysis also shows that PC95 satisfies, or goes towards satisfying (where there are other inputs beyond my economic analysis) the provisions of clause 3.6(1) of the NPS-HPL. PC95 will expand the supply of housing, satisfying demand for housing in Pongakawa that would not otherwise be met (save for the possibility of a small amount of rural subdivision). PC95 will provide a benefit through lower prices and more housing choice within the context of strong employment demand in the region, along with housing constraints and affordability concerns in nearby areas and across New Zealand more generally. This and other benefits are likely to materially outweigh the costs of the loss of productive land. Alternative options for achieving this benefit through the development of high-value orchard land in nearby areas are less likely to be feasible.

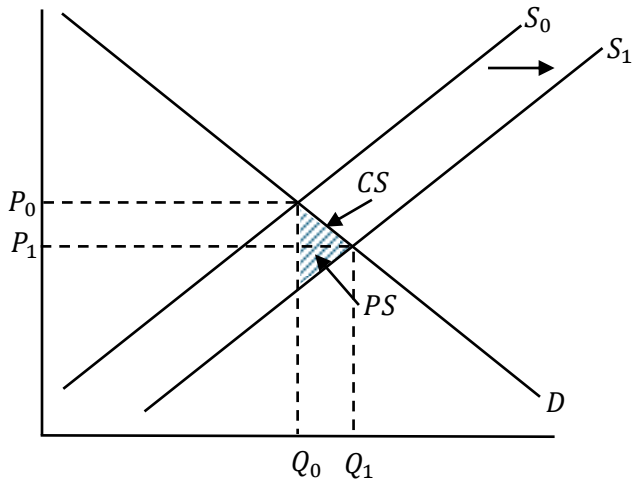
Kevin Counsell
24th October 2024

Appendix A – methodology for consumer and producer surplus calculations

85. In this appendix I set out my approach to calculating the additional consumer surplus benefit from PC95, which is an input into my assessment of the economic benefits and costs of PC95.

86. For my analysis I use a supply-demand framework, as illustrated in Figure 1. This shows an upward sloping supply curve (S_0) representing the (original) supply of residential housing, and a downward sloping demand curve (D) representing the demand for residential housing. The market price (P_0) and quantity (Q_0) are given by the point at which these supply and demand curves intersect.

Figure 1: Supply-demand representation of increase in housing supply from PC95



87. I calibrate the supply and demand curves using the following data:

(a) A market price for Pongakawa of $1,040,000, being the 12-month rolling average of median house sales prices for Pongakawa for the most recent quarter available, December 2023, using data from the Ministry of Housing and Urban Development's Urban Development Dashboard;

(b) A market quantity for Pongakawa of 1,339 dwellings. This is calculated as the Stats NZ high growth population projection for 2023 (of 3,750) divided by an assumed average household size of 2.8 people per household;

(c) An elasticity of supply of 0.517. This was the elasticity calculated for Tauranga (of the elasticities calculated, this was the closest to Pongakawa) in PwC's cost-benefit analysis for the NPS-UD;[24] and

(d) An elasticity of demand of -0.516. This was the demand elasticity used in the aforementioned PwC cost-benefit analysis for the NPS-UD.

88. With the above parameters, I can determine the slope and intercept of the supply and demand curves S_0 and D in Figure 1.

89. PC95 will lead to an increase in the housing supply in Pongakawa, which is shown by an outwards shift in the supply curve in Figure 1, leading to a new supply curve S_1. The new quantity Q_1 is set equal to 1,469 dwellings, which is the original quantity plus the 130 new homes provided by PC95. Based on this quantity, I can calculate the new, lower, price P_1 by utilising the parameterized demand curve as determined above.

90. Lastly, I calculate the intercept of the new supply curve S_1 (assuming the slope remains unchanged from the original supply curve), and the point at which the original quantity Q_0 intersects this supply curve. This then provides all the relevant values to calculate the areas of the shaded consumer and producer surplus triangles, CS and PS respectively. I note that I have calculated only the additional consumer and producer surplus gains above the original quantity, Q_0. I have also not incorporated surplus below this quantity (the area between the two supply curves and below Q_0), and thus my analysis is conservative.

[24] PwC (2020), "Cost-benefit analysis for a National Policy Statement on Urban Development", Final report for the Ministry for the Environment, July – see Table 24.