BEFORE HEARING COMMISSIONERS
FOR THE PALMERSTON NORTH CITY COUNCIL

I MUA NGĀ KAIKŌMIHANA WHAKAWĀ
MO TE KAUNIHERA O PAPAIOEA

IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER	of proposed Plan Change I: Increasing Housing Supply and Choice to the Palmerston North District Plan

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SECTION 42A TECHNICAL REPORT OF STACEY ANDREWS
ON BEHALF OF PALMERSTON NORTH CITY COUNCIL

ECONOMICS

Dated 25 July 2025

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City Council

Prepared by Stacey Andrews

PALMY.
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PALMERSTON
NORTH
CITY

TABLE OF CONTENTS

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City
Council

Prepared by Stacey Andrews

A.   EXECUTIVE SUMMARY

1.   The key conclusions of my s 42A technical report are:

(a)   Plan Change I ("**PC:I**") contributes to the requirement to provide for development capacity to respond to demand for infill residential development.

(b)   PC:I provides for market choice by enabling higher density development in parts of the city that are infrastructure-enabled and connected to employment nodes and public and active transport networks.

(c)   While PC:I does not provide for total demand for infill development capacity in the city, it does make a meaningful contribution to supply capacity, reducing barriers to medium density development to meet market demand.

2.   In my view, the conclusions reached in this statement of evidence support the adoption of PC:I.

B.   INTRODUCTION

3.   My name is Stacey Andrews.

4.   I am the City Economist for Palmerston North City Council ("**the Council**"). I hold a Bachelor of Applied Economics, a Postgraduate Diploma in Business Administration (Management), a Postgraduate Certificate in Planning, and a Master of Business Studies (Economics) from Massey University. I am a member of the New Zealand Association of Economists and hold professional qualifications as a business case practitioner (APMG).

5.   I have worked in local government since 2007, undertaking a variety of roles, including economic analysis and the preparation of population and household projections to support strategic and spatial planning processes. I have worked in four Councils: Taupō District Council, Whanganui District Council, Manawatū District Council and the Council. In my previous role as Economic Analyst at Tāupo District Council, I was involved in the analysis and preparation of evidence for the Waikato Regional Plan Change 7 (2011).

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City Council

PALMY.
PAPAIOEA
PALMERSTON
NORTH
CITY

Prepared by Stacey Andrews   1

6.   My role as City Economist at the Council includes undertaking economic analysis and reporting to elected members and community groups; economic modelling, including population and household projections as a foundation for strategic and spatial planning processes; and economic research to support a range of Council functions. I was a contributor toward the 2023 Housing and Business Needs Assessment for the Council, providing high level population and household projections for the city, and undertaking housing market and economic analysis to support the development of the 2023 Housing and Business Development Capacity Assessment ("**the HBA**").

7.   I have been involved in PC:I since October 2024, providing oversight of the previously prepared development capacity and demand modelling outputs. I prepared the qualified 'Economic Assessment' for the s 32 report and contributed to the preparation of the 'Development Capacity Assessment – NPS UD'. I was not involved in preparing the original model for determining theoretical or feasible and reasonably expected to be realised development capacity.

8.   I have been involved in two pre-hearing meetings between the Council and Horizons Regional Council ("**the Regional Council**") officers. The main purpose of my involvement in these meetings was to explain the differences between the assessments of 'feasible and reasonably likely to be developed' dwellings for infill development included within the HBA relative to the PC:I. This includes the difference in methodology that led to the variance in outputs, as well as sensitivity analysis to assess the significance of the differences.

C.   CODE OF CONDUCT

9.   I confirm that I have read and agree to comply with the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023. I confirm that I have stated the reasons for my opinions in this report and have considered all the material facts that might alter or detract from those opinions.

10.   Statements expressed in this report are within the scope of my expertise. I do not rely on the evidence or technical advice of other Council experts.

11.   I have all the information necessary to assess the application within the scope of my expertise and am unaware of any gaps in the information or my knowledge.

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City Council

Prepared by Stacey Andrews   2

D.   SCOPE

12.   My s 42A report addresses 'theoretical supply capacity' and the methods used for estimating the number of 'feasible and reasonably expected to be realised' dwellings that may be delivered through residential intensification in the proposed Medium Density Residential Zone ("**MRZ**").

13.   In preparing this report, I have:

(a)   Reviewed the concerns raised by submitters in relation to the ability for PC:I to meet the total assessed demand for infill (as determined by the HBA); and

(b)   Assessed demand for infill development.

14.   In particular, I have reviewed the modelling of theoretical supply capacity within the proposed MRZ, and the estimation of 'feasible and reasonably expected to be realised' dwellings that may be delivered within the MRZ.

15.   I have also reviewed the modelling that was undertaken in the assessment of the HBA, as compared to the modelling for PC:I.

16.   I have considered the relevant submissions and further submissions on PC:I. In doing so, I have identified several issues related to my expertise, which I address in detail below. My assessment of relevant submissions and the themes or topics they raise is informed by my analysis of the relative methodologies applied in preparing the PC:I and the HBA, in addition to the 'Development Capacity Assessment' included as part of the s 32 reporting for PC:I. This is relevant because the Regional Council (SO194.1) raised concerns about the ability of PC:I to contribute to meeting the Housing Bottom Lines in the Regional Policy Statement.

E.   COMPARISON OF THE HBA AND PC:I CAPACITY METHODOLOGIES

17.   The assessment of demand for infill development included within the HBA was based on projected population and household projections and the trend toward a higher proportion of residential development being catered for within infill development in the existing urban area of the city. This method resulted in an assessed demand for infill development of 4,251 dwellings over the 30-years

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City
Council

PALMY
PAPAIOEA
PALMERSTON
NORTH
CITY

Prepared by Stacey Andrews   3

to 2054. When the demand would be supplied was determined by applying a ratio of 55% scaling down to 40% over the 30-year period.

Methodology for estimating theoretical development capacity

18. The HBA determined the theoretical development capacity of the Residential Zone (which included the area now proposed for rezoning to MRZ) as being 12,789. Determining the theoretical development capacity was based on whether the area was plan-enabled (see Table 22 in the HBA). The HBA modelling did not apply the lot size or LCV condition when determining theoretical capacity.

19. The modelling underpinning PC:I determined theoretical capacity based on application of a condition requiring lots to be at least 700m2 and with a Land to Capital Ratio of 0.87-0.99. This resulted in a theoretical development capacity within the proposed MRZ of 3,594 dwellings (Table 5 in the Development Capacity Assessment).

Calculation of feasible and reasonably expected to be realised capacity

20. 'Feasible and reasonably expected to be realised' capacity has also been calculated differently between the HBA and PC:I. The HBA determined the commercially feasible supply for infill development by applying the lot size and LCV conditions, which resulted in an estimated feasible capacity of 7,762 dwellings.

21. In contrast, to determine feasible capacity, the PC:I modelling applied a further condition by basing the estimated supply for infill development on historical development trends, specifically the annual average building consents for infill development over the period 1999 to 2023. While this approach follows the MfE guidance for implementing the National Policy Statement for Urban Development ("**NPS-UD**"), in my opinion this method of estimation ignores the trend for higher density development over time as a result of residential infill enablement. This additional layer of analysis resulted in assessed 'feasible and reasonably likely to be realised' development of 3,450 medium density dwellings across the city to 2053. The modelling estimated that 1,427 of these medium density dwellings would be developed within the MRZ.

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City Council

Prepared by Stacey Andrews

4

Commentary

22. Both the HBA and PC:I limited application of the development capacity model to lots above 700m^2 (equivalent to the Palmerston North District Plan ("**District Plan**") controlled activity subdivision lot size of 350m$^{2)}$. In my opinion, only considering lots over 700m^2 in the MRZ (where there is no proposed minimum lot size) artificially constrained the assessment of theoretical capacity volumes in the MRZ, as lots of at least 300m^2 are realistically able to be subdivided to enable further infill development in the MRZ.

23. The PC:I modelling included a Land to Capital Ratio condition (i.e. a commercial feasibility calculation) within the calculation of theoretical development capacity.[1] The HBA modelling applied this condition to determine feasible capacity. The land to capital ratio of 0.87-0.99 was included as a means of identifying where the incentive for redevelopment exists. On sites with low capital investment relative to land value, the benefit of redevelopment is higher. For the HBA modelling, including this measure of commercial feasibility within the calculation of feasible development capacity resulted in a reduction of the total theoretical development capacity across the city from 12,789 (in the HBA) to 8,687 using the PC:I approach (3,679 dwellings within the proposed MRZ and 5,008 outside the MRZ).

24. The comparative assessment of the methodologies used to determine development capacity in the PC:I and the HBA clearly indicates the limitations associated with both methods. I acknowledge that there are definite improvements that should be adopted for the following HBA and, it follows, for future plan change processes. I am addressing these limitations in the next version of the HBA modelling.

25. In my opinion, the method for assessing 'feasible and reasonably likely to be realised development' capacity within PC:I is highly conservative and is likely to understate actual development capacity. It is my opinion that the assumptions and approach applied within the HBA result in a more robust indication of 'feasible and reasonably likely to be realised' development capacity for infill housing across the city over the 30-years to 2053.

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[1]   Plan Change I: Development Capacity Assessment – NPS-UD Clause 3.2, section 3.4.

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City Council

PALMY
PAPAIOEA
PALMERSTON
NORTH
CITY

Prepared by Stacey Andrews   5

Revisiting the underlying assumptions

26.   The estimations of 'theoretical supply capacity' and 'feasible and reasonably likely to be developed' dwellings are also constrained by underlying assumptions applied within the PC:I modelling.

27.   For example, dwelling units were estimated based on the assumptions of a land area of 150m^2 for each additional dwelling in the MRZ. However, there is no minimum lot size proposed for the MRZ. I consider this assumption to be overly conservative, placing limitations on the assessment of theoretical development capacity and feasible and reasonably likely to be developed assessments.

28.   Conversely, the estimation of development outside the MRZ has been artificially boosted by the assumption that the average lot size per additional dwelling would be the same as within the MRZ (150m^2). PC:I does not change the minimum lot size in the Residential Zone – this will remain at 350m^2. As such, the PC:I Development Capacity Assessment is likely to overstate capacity outside the MRZ, as it does not consider:

(a)   The potential for behaviour change due to the lowering of barriers to medium density development in the MRZ; and

(b)   That development intensity outside the MRZ would not be equal to those areas where medium density development is enabled.

29.   The PC:I modelling and the HBA modelling resulted in the following estimates of supply capacity and feasible and reasonably likely to be realised infill development for the 30-years to June 2053. The HBA assessed demand for infill is 4,251 dwellings.[2]

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[2]   Table 26 – Housing and Business Needs Assessment.

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City
Council

PALMY
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NORTH
CITY

Prepared by Stacey Andrews   6

Table 1: PC:I and HBA supply capacity and feasible infill development estimates

Modelling	Theoretical supply – Residential Zone	Feasible and reasonably likely to be realised infill development (citywide)	MRZ infill development
PC:I	8,687	3,450	1,427
HBA	12,789[3]	7,672[4]	N/A

Sensitivity testing

30. I undertook sensitivity testing to understand the impact of differing average lots sizes within the MRZ alongside an updated underlying assumption of 350m² per additional dwelling outside the MRZ. All lots in the MRZ >300m² have also been included within the sensitivity analysis to assess the impact of the underlying assumptions (assuming an average lot size of 150m²). The table below indicates the amended assumptions as a result of the sensitivity analysis versus the original modelling.

Table 2: Sensitivity testing assumptions versus PC:I

Assumption	PC:I	Sensitivity modelling	Comment
Lot size included in capacity assessments	>700m²	300m²	The MRZ does not have a minimum lot size therefore lots of well under 700m² are theoretically able to be subdivided/developed for infill housing. The 300m² assumption is still relatively conservative but also reflects the reality of reduced lot sizes under the MRZ rules.
Lot size outside the MRZ	150m²	350m²	Lots outside the MRZ are still subject to the 350m² Residential Zone minimum lot size

31. Table 3 below provides the updated results for theoretical development capacity in the MRZ arising from this sensitivity analysis. Please note an additional supply of 85 lots have been identified at specific sites in Summerhays, Huia Street, and Cook Street as these are proposed for rezoning to MRZ via PC:I.[5] These lots

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[3] Table 23 – Housing and Business Needs Assessment.
[4] Table 25 – Housing and Business Needs Assessment.
[5] plan-change-i-rezoning-report.pdf.

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City Council

Prepared by Stacey Andrews

7

are therefore added to the theoretical supply capacity assessments. This additional supply of 85 lots does not impact on the calculation of 'feasible and reasonably likely to be realised' development in Table 3.

Table 3: Updated PC:I theoretical development capacity (supply) – Sensitivity modelling

Average land area per dwelling assumption	MRZ sub total	Outside MRZ	Total
100m^2	6,426 + 85 = 6,511	2,183	8,609 8,694
125m^2	5,141 + 85 = 5,226	2,183	7,324 7,409
150m^2	4,284 + 85 = 4,369	2,183	6,467 6,552
175m^2	3,672 + 85 = 3,757	2,183	5,855 5,940
200m^2	3,213 + 85 = 3,298	2,183	5,396 5,481

32. To test the bounds of 'feasible and likely to be realised' infill development, I also applied the revised assumptions to the estimation of 'feasible, and reasonably likely to be realised' dwellings under both the PC:I and HBA modelling parameters.

33. The original PC:I modelling predicted that residential intensification in the MRZ might result in the supply of 1,427 dwellings as a contribution towards the demand for infill identified in Table 22 of the HBA. This represented 33.5% of the demand for infill development identified in the HBA, i.e. 4,251 dwellings. However, as explained above, the modelling approach, including the underlying assumptions, was flawed, resulting in capacity assessments that are both highly conservative and likely unreliable.

34. Applying the updated assumptions for the lot size and correcting for the different district plan provisions within the MRZ and retained in the remaining Residential Zone, results in an updated predicted feasible capacity as set out in Table 4. Table 4 includes the output of the revised modelling assumptions for the PC:I <u>and</u>

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City Council

Prepared by Stacey Andrews

8

HBA methodologies. What this shows is the variability in modelling outputs depending on the parameters that are applied within the modelling.

Table 4: 'Feasible, and reasonably likely to be realised' development - Sensitivity modelling based on the PC:I feasible and reasonably likely to be developed infill development of 3,450 against the HBA assessed demand for infill development of 4,251 dwellings (Table 20, Palmerston North 'Housing and business development capacity' Report, 2023).

Average land area per dwelling assumption	MRZ sub total (PC:I modelling)	MRZ sub total (HBA modelling)	Estimated percentage of supply enabled by MRZ (HBA modelling)
100m^2	2,575	3,173	75%
125m^2	2,422	2,984	70%
150m^2	2,286	2,816	66%
175m^2	2,164	2,666	63%
200m^2	2,055	2,532	60%

35.   Based on the reconsideration of assumptions explained in Table 2 and the updated PC:I and HBA theoretical capacity and 'feasible and reasonably likely to be realised' capacity results in Table 4, I estimate that residential intensification within the MRZ could supply between 2,286 and 2,816 dwellings to meet the demand for infill housing, assuming an average lot size of 150m^2 – this equates to up to 66% of the demand. Should the average lot size per dwelling reduce to 100m^2, I estimate residential intensification in the MRZ could supply between 2,575 and 3,173 dwellings, representing up to 75% of the identified demand.

36.   Based on the estimates of 'feasible and reasonably likely to be realised' medium density development under the PC:I and HBA modelling approaches, the sensitivity testing implies that the residential intensification in the MRZ could provide for between 60% and 75% of total demand for medium density residential development in the city over the next 30-years. This is a significant increase from the originally predicted 1,427 dwellings in the original PC:I modelling.

37.   In my opinion, the HBA modelling provides a more defensible estimate of infill development relative to the PC:I. Modelling, however, is based on a set of

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City Council

Prepared by Stacey Andrews

PALMY
PAPAIOEA
PALMERSTON
NORTH
CITY

9

assumptions that are unlikely to eventuate collectively; rather modelling provides a range of residential development estimates that could be accommodated within the proposed MRZ. On this basis, I conclude that the estimates of feasible and reasonably likely to be developed infill development and demand included in the PC:I and the HBA are theoretical. Actual uptake of development in the MRZ, will be driven by multiple factors that are largely unknown, or difficult to quantify, and all of which are outside the control of the Council.

38. The methods used to estimate 'feasible and likely to be realised' medium density development imply that the MRZ is unlikely to provide for total demand for medium density development over the long term. This point was acknowledged in the s 32 assessment. Should market conditions prove supportive of medium density development, then the level of residential development enabled by PC:I may be higher than the range assessed across the modelling approaches and sensitivity testing discussed in this evidence.

F.   RESPONSE TO SUBMISSIONS

39. The discussion above provides the context for my responses to submissions. The submissions I have reviewed can be broadly categorised as addressing one of the following topics:

    (a)   technical methodology;

    (b)   residential market demand; and/or

    (c)   population statistics and projected growth.

40. The Regional Council (SO194.1) requests clarification of how PC:I will enable sufficient infill capacity in the long-term in relation to 'the maximum reasonably practicable and feasible infill capacity'. The submission further requests "*PNCC to resolve the misalignment between PCI and the HBA [and FDS], during the upcoming HBA and FDS reviews*".

41. Grant Binns (SO93.5) raises concerns about the development of infill areas relative to greenfield areas such as Kikiwhenua.

42. Enabling medium density development provides for more affordable housing in areas of high amenity and proximity to neighbourhood services, employment

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City Council

PALMY
PAPAIOEA
PALMERSTON
NORTH
CITY

Prepared by Stacey Andrews   10

nodes, and transport and active transport networks. In my opinion enabling housing development within the existing urban areas reduces the cost of housing, supporting home ownership and rental opportunities for a greater number of people.

43. Chris Robertson (SO75.1) states that the growth predictions for Palmerston North underlying the need for additional housing will not occur, and Steve Allan (SO181) submits that Palmerston North's population is actually in decline.

44. Joanne and Robert Wilson (SO143.2) consider that the population and growth statistics that PC:I was based on do not reflect population growth in Palmerston North over the last 24 years, and they do not take account of migration, immigration and natural attrition, as well as a declining birth rate.

45. I disagree with these submissions. Population and housing growth projections for the city consider levels of net migration, internal migration, the age profile of our community and therefore natural increase relative to natural decline.

46. Monitoring of the Council's population is undertaken by the Strategic Planning function within the Council. This data shows that population and housing growth in the city in recent years has exceeded historical growth. In particular, the rate of population growth in Palmerston North was elevated over the year to June 2024, growing by 1.7%, which is equal to the New Zealand growth rate over the year. In contrast, average annual growth over the 28-years to June 2024 sat at 0.7% (+500 p/a) in the city relative to 1.5% annual average growth nationally.

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City
Council

Prepared by Stacey Andrews   11

Figure 1: Palmerston North Estimated Resident Population, annual population growth and 28-year and 10-year annual average growth
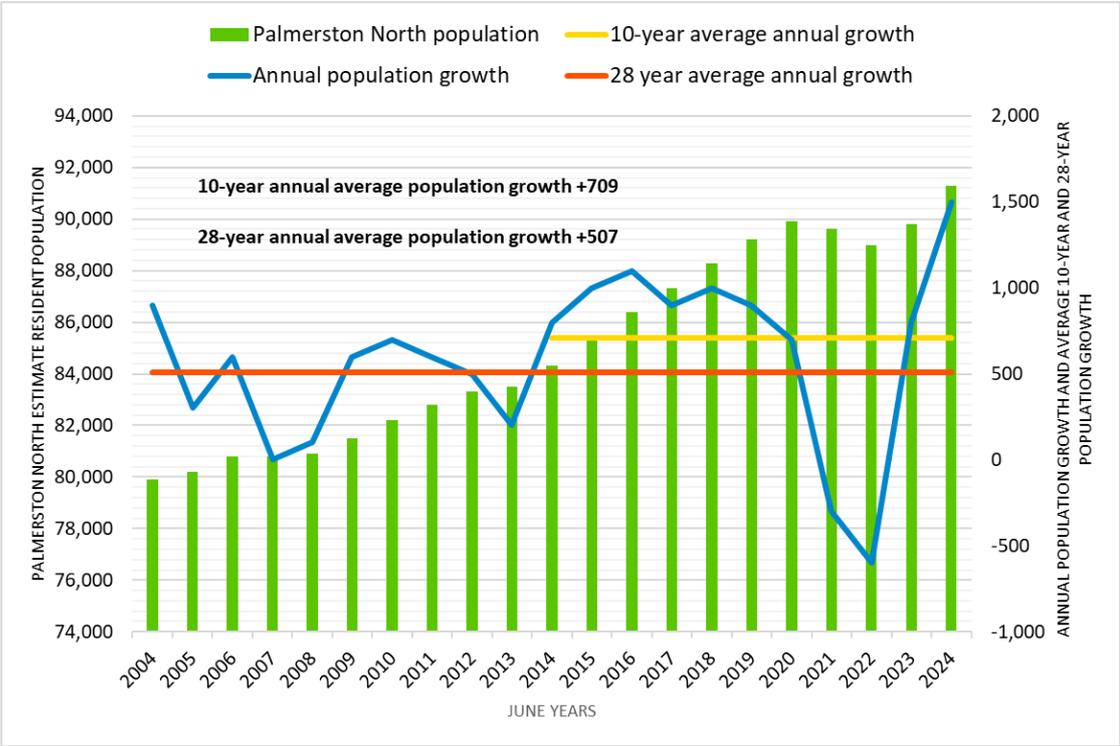
47.   Over the 15-years to June 2024, the Palmerston North population increased by 9,800 residents adding over 650 additional residents per year. This population growth was stronger over the ten-year period from 2014-2024 with an average of 709 new residents moving into the city each year (0.8% annual average growth rate).

48.   As a university city and with a large and growing defence sector in the region, our city has a younger population, and higher levels of natural increase compared with many parts of New Zealand. Our older population also makes up a lower proportion of our total population with 15.7% of residents aged over 65 years compared with 16.6% of the New Zealand population.

49.   The location of city in the extent of the Wellington growth corridor and within one of New Zealand's most productive rural regions is also expected to support population growth and contribute to dwelling demand in the city.

50.   Residential construction investment has also been elevated in the city with an average of 460 new dwelling consents issued on average per year in the five

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City Council

Prepared by Stacey Andrews

12

years to March 2025. This compares with an annual average of 189 new dwelling consents issued in the city over the five years to March 2025.

51. The Council is required to enable development capacity to provide for growth in demand for residential development and across a range of market options. PC:I contributes to the Council's legislative requirement to enable sufficient development capacity to cater for housing choice and affordability.

G. CONCLUSION

52. In my opinion, the growth projections underpinning PC:I consider all the factors that contribute to population and household growth and are a reasonable basis for projecting demand for residential demand in the city over time. Projections are also scenarios of the future based on assumptions that may or may not eventuate. It is for this reason that population and household growth projections are revised every three-years to enable changes in circumstances to be factored into scenarios of future growth. The population and household projections will be reviewed as legislatively required under the NPS-UD and Local Government Act (2002) in preparation for the 2027 Long Term Plan.

53. In addition, the Palmerston North population has continued to grow adding close to 10,000 additional residents over the last 15-years. Short term fluctuations in population growth are inevitable due to economic cycles, policy settings and demographic and international factors. However, due to the economic structure of the city, including defence force capability and as a provider of high quality tertiary and higher education, the population of Palmerston North is projected to continue to grow.

54. Central government legislation requires local government to respond to growth pressures via the zoning and enabling of land for residential and business development. The trends for the city clearly demonstrate demand pressures, with the structure and geographical location of the city at the extension of the Wellington growth corridor.

55. For the reasons outlined above, I recommend that the hearings committee accept my recommendations to accept the growth projections that underpin the PC:I, alongside the assessment of theoretical development capacity and 'feasible and reasonably likely to be realised' infill development included within

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City Council

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PAPAIOEA
PALMERSTON
NORTH
CITY

Prepared by Stacey Andrews   13

the PC:I and the additional rigour provided by the sensitivity testing included within my evidence.

Stacey Andrews

25 July 2025

Section 42A Technical Report – Economics
Plan Change I: Increasing Housing Supply and Choice for Palmerston North City
Council

Prepared by Stacey Andrews

14