BEFORE A PANEL OF INDEPENDENT HEARING COMMISSIONERS IN THE WAIKATO REGION

I MUA NGĀ KAIKŌMIHANA WHAKAWĀ MOTUHEKE WAIKATO

UNDER the Resource Management Act 1991 (RMA)

AND

IN THE MATTER of Proposed Variation 3 to the Waikato Proposed District Plan (PDP)

STATEMENT OF FURTHER REBUTTAL EVIDENCE OF SUSAN MICHELLE FAIRGRAY FOR WAIKATO DISTRICT COUNCIL (Urban Economics)

Dated 25 AUGUST 2023

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INTRODUCTION

1. My name is Susan Michelle Fairgray and I am an associate director at Market Economics Ltd. I have worked there as an urban economist for the past 7 years and, prior to this, was a Senior Research Economist at Auckland Council. I have a BSc and MSc (First Class Honours) in geography, specialising in economic geography, and including urban economics.

2. My qualifications and experience are set out in my statement of evidence in chief (EIC) dated 20 June 2023.

3. I reaffirm the commitment in my EIC to adhere to the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023.

4. Vacant minimum lot formation within the current and future urban areas was considered during the Variation 3 hearing process. The Waikato District Council (WDC) Section 42A Addendum report circulated prior to the hearing proposed a vacant minimum lot size of 300m2 together with a mechanism, such as an average lot size, to encourage a range of initial vacant site sizes to be formed. I supported the suggested approach within my first rebuttal evidence.

5. Discussions on the vacant minimum lot size have occurred relatively recently within the Variation 3 process. Several submitters responded to this proposal in the 42A Addendum report at the hearing and have included further information to set out their positions. These include Mr Wallace, Mr Tollemache, Mr Munro and Mr Thompson.

6. This further rebuttal statement responds to the additional information provided by the submitters on the vacant minimum lot size and clarifies my position on several aspects of the proposed approach.

7. I have also responded to further discussion on the issue of proposed height increases within the Huntly Town Centre and Commercial Zones.

EXECUTIVE SUMMARY

Minimum and Average Vacant Lot Sizes

8. In my view, the initial vacant minimum lot sizes for housing development have an important influence on the short and long-term future pattern of dwelling supply, especially to meet the needs (including affordability) of the community. This is because the initial lot size that occurs prior to dwelling construction affects the dwelling mix (size, typology, price), the economic feasibility of constructing different dwelling options and therefore the range of opportunities and preferences within the market.

9. I support a vacant minimum lot size of 300m2 applied together with an average vacant lot size of 375m2 in greenfield areas within the vacant lot control area[1]. The proposed vacant average lot size mechanism is set out in the section 42A closing statement from Ms Hill.

10. I have tested a range of potential average vacant lot sizes to understand the subdivision development patterns that could be achieved through applying different provisions. I have considered:

    (a) The potential distribution of vacant lot sizes that could be achieved when applying these parameters. This includes the share of lots able to be developed at the minimum lot sizes; and

    (b) The potential mixture of dwellings (by typology and size) that are able to be delivered on the subdivision pattern of vacant lots.

11. In my view, the proposed 300m2 minimum vacant lot size together with a 375m2 average vacant lot size is likely to provide flexibility to the

[1] I understand the name of this area may change in the final version of the provisions.

market. It would enable a pattern of initial vacant lots that achieves an appropriate balance between the benefits of:

(a) a smaller minimum vacant lot size for the lower parts of the market; and

(b) a sufficient share of larger lots that are likely to enable the feasibility of a more diverse mix of dwellings that better aligns to medium and long-term community need as well as the mid parts of the market.

12. The proposed provisions increase the level of development opportunity and flexibility for the market from that enabled under the current provisions of a 450m2 minimum site size. For example, they would enable half of the vacant lots to be formed at the minimum site size of 300m2, with the balance of lots formed at 450m2. Developers also have the option to form larger lots, which would consequently increase the share of lots able to be formed at the minimum lot size. Application of a 375m2 average lot size could increase the total number of lots formed in a subdivision by 20% from those formed under the existing 450m2 minimum lot size.

13. I have also considered an alternative mechanism to encourage a range of lot sizes where a share (percentage) of vacant lots are required to form above a certain size. In my view, this alternative mechanism would provide less flexibility to the market and would be less likely to encourage a diversified dwelling mix than an average minimum vacant lot size approach.

14. I have conducted further investigation of subdivision development patterns and processes in response to further information provided by the experts during the Waikato Variation 3 hearing. I have analysed the market conditions and lot size structures in subdivisions within Auckland that produce a diversified range of dwelling types that are likely to align

with patterns of long-term community demand. I have also investigated the local market conditions within the Pookeno and Tuakau markets to understand the propensity for the market to deliver a diversified range of dwelling types that aligns with patterns of community demand.

15. I consider that the different market conditions within Pookeno and Tuakau mean that commercial market alone is unlikely to deliver range of dwellings that align with long-term community need. My assessment has found that the market is characterised by smaller annual releases of properties mainly supplied as vacant lots to the market by land developers, with subsequent development of detached dwellings at one dwelling per lot.

16. The Pookeno and Tuakau market conditions contrast with other subdivisions within Auckland where there is a greater focus on the delivery of *dwellings* and consequent greater mix of dwelling types and sizes. My assessment has found these markets have greater integration between the land and property development parts of the market, which occurs to more limited extent within Pookeno and Tuakau.

17. Analysis of the development patterns and processes within subdivisions producing a greater range of dwelling types confirms the reliance on a greater range of initial vacant lot sizes, particularly for the delivery of attached dwellings.

18. I have undertaken detailed assessment of examples of greenfield development in Auckland along with Tuakau and Pookeno. My assessment has found that there are substantive differences between the initial vacant lot and final lot size distributions once dwellings have been constructed. The development of dwellings on initial larger lots with subsequent division into smaller lots is critical to the feasibility of the production of attached dwellings.

19. In my view, a minimum lot size of 300m2 is likely to improve housing affordability at the lower end of the market. I consider that a 300m2 vacant minimum lot size is likely to produce patterns of dwelling development that are more closely aligned with demand over the medium to long-term than a smaller vacant lot size of 200m2 to 250m2.

20. I consider that a reduction in the minimum vacant lot size by itself, when applied within the Pookeno and Tuakau markets, may result in subdivisions that consist of large shares of smaller lots that are dominated by individual detached dwellings. In the context of a greater focus on the production of lots rather than dwellings (due to limited integration with the property development part of the market), there is an increased incentive for the land development part of the market to maximise the number of lots produced.

21. In my view, a large focus on detached dwellings reduces housing choice available to the lower end of the market and reduces affordability in comparison to that achieved with a more diversified range of dwellings. A narrower provision of dwelling types reduces the level of demand substitution into more affordable attached dwellings.

22. I therefore consider that minimum and average vacant lot size provisions are likely to be required to encourage a greater dwelling mix. In my view, this is important to enable the feasibility of a range of dwelling types over the medium to long-term that better align with patterns of community demand and increase housing affordability.

Proposed Building Heights in Huntly

23. I consider that if higher density residential development occurs within the Commercial Zone areas adjacent to the Huntly town centre, it is still likely to function together with and support the viability and vitality of Huntly's town centre.

REVISED APPROACH TO MINIMUM VACANT LOT SIZE AVERAGE MECHANISM

24. I support an approach which has both a minimum lot size and an average lot size. This is to help ensure that the initial subdivision of land for housing provides for a mix of lot sizes, and consequently a mix of dwellings (type, size, value), in order to better meet the varied needs and preferences of households. Providing for an average lot size as well as a minimum lot size helps ensure that not all of the lots are initially developed at the same, minimum lot size.

25. Subsequent development commonly means some lot sizes will change over time. That may be in the initial phase when some further subdivision of large super-lots with multiple dwellings occurs in order to better match the dwellings with the lot structure. Or it may occur later in the economic life of the initial dwellings, when redevelopment or replacement becomes viable.

26. However, the opportunity to provide for a dwelling mix which can better meet the needs of the community through the initial subdivision and development pattern should be recognised and provided for.

27. The size of the minimum lot, and the average size in relation to the minimum, are both important. The minimum lot size needs to reasonably cater for a substantial share of market preferences. From that base, a large difference between minimum and average sizes will typically mean greater diversity in lot sizes, but with fewer lots at or near the minimum size. A small difference between minimum and average sizes will typically mean limited diversity in lot sizes, and more lots at or near the minimum size.

28. At the hearing I supported a vacant minimum lot size of 300m2 applied together with an average vacant lot size such as that of 450m2. I still support a vacant minimum lot size of 300m2. However, having considered the average lot size further, I now support a reduced average

vacant lot size of 375m2 (instead of 450m2) within the vacant lot control area. The proposed vacant average lot size mechanism is set out in the section 42A closing statement.

29. The rule would apply to the initial vacant lots formed through subdivision involving the formation of five or more vacant lots. Developers are able to determine the distribution of vacant lot sizes to achieve the required average vacant lot size. Further subdivision of initial lots could occur at the time of dwelling construction (or after), which would not affect the achievement of the subdivision vacant lot average.

30. I consider that the application of the average vacant lot size where five or more vacant lots are formed is appropriate. In my view, it provides a distinction between larger scale subdivisions within greenfield areas, and small scale developments. It therefore enables the flexibility for small scale developments to achieve the minimum net vacant lot sizes.

ASSESSMENT OF AN ALTERNATIVE MECHANISM TO ENCOURAGE A RANGE OF VACANT LOT SIZES

31. I have also considered an alternative mechanism to achieve a range of initial vacant lot sizes within greenfield subdivisions. An alternative mechanism would require a share (percentage) of vacant lots to be formed above a certain lot size.

32. I have considered both of these options (i.e. average vacant lot size and the alternative mechanism), and, in my view, an average vacant lot size is more likely to achieve a range of vacant lot sizes that enables the feasibility of a range of dwelling types and encourages a dwelling mix that better aligns with long-term patterns of community demand and housing need (with consequent effects on housing affordability).

33. The reasons why I prefer an average lot size mechanism over the alternative mechanism include:

(a) I consider that the average lot size mechanism provides greater flexibility to the market to deliver a more diversified range of lot sizes within the lots that are formed above the minimum lot size.

(b) The differences in the types of dwelling mix that are encouraged by each option (for attached dwellings) are likely to become greater in the medium to long-term.

(c) In relation to point (b), the incentive to provide larger lots is reduced in the alternative mechanism as the formation of larger lots would have no bearing on the number of lots able to be formed at smaller sizes. It may incentivise a lot structure where the maximum permitted lots are formed at the minimum lot size, with the remainder formed at the larger required lot size for the specified share of lots.

(d) In contrast, the average lot mechanism may incentivise the formation of a number of larger lots (that could accommodate multiple attached dwellings) as they would contribute to the share of lots that are able to be formed at closer to the minimum lot size (which generally increases returns for land developer parts of the market).

CLARIFICATION OF PROPOSED AVERAGE VACANT LOT SIZE MECHANISM

34. There are different views held by submitters experts relating to the vacant lot sizes, some of which may have arisen from a misunderstanding of the average vacant lot size approach that I supported. In this section I therefore provide clarification in response to those matters. This further rebuttal evidence does not cover in detail the reasons why I consider

having a range of lot sizes is important. These are already covered within my first rebuttal evidence, and summarised above.

Vacant Lot Size Average vs. Final Lot Size Distribution

35. First, it is important to clarify that the average lot size is calculated in relation to the initial pattern of vacant lots produced in a subdivision prior to the construction of dwellings. These lots include any that may accommodate more than one dwelling. These initial vacant lots may potentially be larger than their final distribution if they are subsequently subdivided into separate titles once dwellings are constructed. As an example, a subdivision may contain several large super-lots each intended to accommodate integrated developments of multiple units such as terraced housing. These lots are typically developed as a whole with attached dwellings constructed simultaneously. As/once the dwellings are constructed, then the super-lot is often further subdivided into separate titles for each dwelling to be sold separately in the market.

36. The final or eventual distribution of lot sizes, once the multiple dwelling lots are further subdivided into separate titles, is likely to differ from the initial vacant lot distribution. The final distribution is likely to contain a greater number of smaller lots (containing smaller, mainly attached, dwellings) than the initial vacant lot structure prior to dwelling construction. The final or eventual average lot size may be less than the initial vacant lot average depending upon the eventual dwelling mix which drives the further subdivision to provide individual titles for dwellings.

Initial Round of Dwelling Construction

37. Second, it is important to clarify that the primary aim of the averaging rule is to increase the potential for initial dwelling development to offer a range of dwelling types and sizes, and lot sizes, which is better able to meet the market's mix of preferences, and which is likely to last for some time even though it will progressively change. The averaging approach

has not been proposed in order to preserve potential for future redevelopment or infill of the initially constructed dwelling stock. Encouraging a broader initial dwelling mix does not rely on or assume any further redevelopment of lots subsequent to the first round of dwelling construction, even though this commonly occurs in the longer term as towns and cities grow. It instead assumes that dwellings, once constructed, are likely to have an economic life of several decades, so that the initial pattern has some longevity. In most cases, relatively new dwellings or those with substantial remaining economic life are unlikely to be demolished and replaced to generate higher economic returns.

38. The reference to further subdivision relates to the further division of larger lots into separate titles upon the completion of initial dwellings (likely to be attached dwellings) as set out in paragraphs 55 to 60.

39. The averaging approach does not assume or rely on any future infill development of sites to encourage a diversified dwelling mix. When I use the term infill development I mean the construction of additional dwellings on vacant portions of already developed parcels without demolition of existing dwellings (e.g. backyard subdivision).

40. In my view, infill development typically occurs within existing urban areas that have been developed for several decades. Some of these areas tend to have lower ratios of dwelling size to land areas and greater physical opportunity for infill development. In my experience of analysing development patterns, more recent greenfield areas instead tend to have larger floorspace to land area ratios due to smaller sites and larger dwellings. There is consequently less opportunity to accommodate further infill dwellings on these sites.

Proportion of Sites Containing Multiple Dwellings

41. Third, the averaging approach does not assume that most sites will be initially developed to contain multiple dwellings. My analysis of this

approach instead assumes that, in the context of the Waikato towns, most or many sites will initially be developed at one dwelling per lot. I have assumed that a minor portion of the initial vacant lots formed will be developed into multiple dwellings, with some further subdivision to then provide for separate titles for these dwellings.

Number of Lots Formed at Minimum Lot Sizes

42. Fourth, in nearly all greenfield areas, the proposed averaging approach allows for significantly more than two lots to be formed at the minimum lot size. The proposed averaging approach does not limit the number of lots formed at the minimum lot size to two. The share of lots able to be formed at the minimum lot size is demonstrated further in paragraphs 47 to 50. This may be 50% to 60% of the lots.

Clarification of My Stated View on Lot Size

43. I consider that several submitters may have not understood my stated position on an appropriate minimum lot size. They have variously stated that I either support a 450m2 minimum lot size or a 450m2 average lot size. Neither of these reflect the position set out in my rebuttal evidence.

44. My rebuttal evidence discusses the advantages and disadvantages of different lot sizes. I did not assess an average vacant lot size within my first rebuttal evidence. In my summary statement presented at the hearing on 26 July 2023 (paragraph 29) I have stated that I support a minimum lot size of 300m2 together with an appropriate mechanism to ensure that a range of lot sizes are achieved. An average lot size was one such mechanism. I stated that an average lot size such as that suggested by Ms Hill (450m2) may form an appropriate mechanism, and that it would be useful to consider this issue further as it has arisen during a later stage of the Variation 3 process (paragraph 32).

45. As indicated, I have considered further an appropriate average lot size. In my view, it is important to consider appropriate minimum and average

lot sizes together. When a 300m2 minimum lot size is applied, I consider that an average lot size of 375m2 is likely to be appropriate. In my view, an average lot size of 450m2 is likely to be too large. The rationale for my views is set out further below.

APPLICATION OF PROPOSED PROVISION: VACANT LOT SIZE DISTRIBUTION

46. In response to the confusion (as outlined above) and to try to avoid any further misunderstanding about the proposed averaging approach, I have undertaken further testing of different minimum and average lot sizes. I have considered:

    (a) The potential distribution of vacant lot sizes that could be achieved when applying provisions for both a minimum vacant lot size and an average vacant lot size together. This includes identifying the share of lots able to be developed at the minimum lot sizes; and

    (b) The potential mixture of dwellings (by typology and size) that would be able to be delivered on the subdivision pattern of vacant lots.

47. Figure 1 below shows the effect of applying different average lot sizes together with a 300m2 minimum site area. It provides an indication of the share of lots that can be formed at the minimum size with respect to an overall achievable pattern across the remainder of lots. In my view this forms a useful metric as it indicates the proportions of the lots that can be formed relative to different parts of the market. I recognise the trade-offs of different lot sizes to different parts of the market, where a share of the market is likely to benefit from smaller lot sizes, while other parts of the market (including attached dwellings) are likely to benefit from larger initial vacant lot sizes.

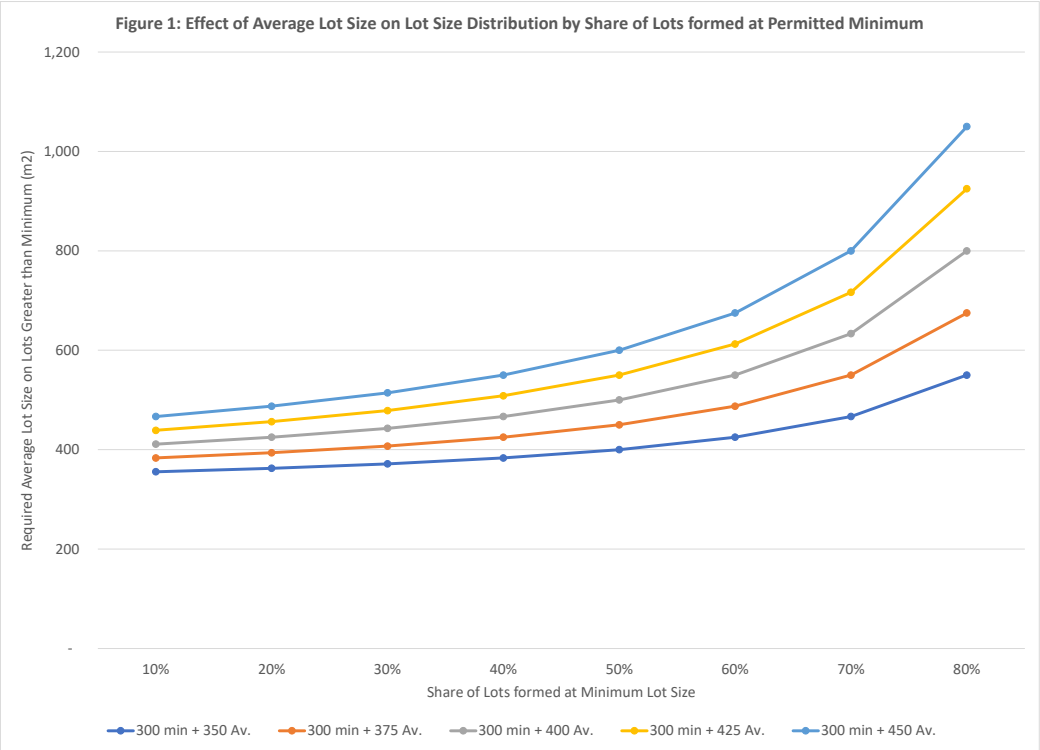
48. Each line on the graph denotes a different average lot size, ranging from 350m2 to 450m2. The horizontal (x) axis shows the share of total lots formed at the minimum lot size of 300m2. The corresponding point of each line on the vertical (y) axis then shows the average lot size across the remainder of lots that would need to occur to achieve the overall required average. For example, if a 450m2 average is applied and 30% of the lots are formed at the 300m2 minimum, then the remaining lots would need an average lot size of 514m2 to achieve an overall 450m2 average.

49. In my view, Figure 1 shows that:

    (a) Larger average lot sizes (relative to the permitted minimum) are likely to decrease the share of vacant lots that are able to be formed at minimum lot sizes while still maintaining a viable average lot size across the remainder of lots.

    (b) A relatively high proportion of vacant lots, relative to market demand, are able to be formed at minimum lot sizes (300m2) when the average lot size is around 400m2 or lower.

    (c) Lower average lot sizes may enable subdivisions to form that consist almost entirely of vacant lots at the minimum lot size. This is likely to reduce the range of dwelling typologies and sizes available to the community.



50. In my view, an average vacant lot size of 375m2 together with a minimum lot size of 300m2 is likely to enable a pattern of initial vacant lots that achieves an appropriate balance between the benefits of a smaller minimum vacant lot size for the lower parts of the market and a sufficient share of larger lots that are likely to enable the feasibility of a more diverse mix of dwellings that better aligns to medium and long-term community need as well as the mid parts of the market.

51. I also consider that the potential range and distribution of lot sizes within this combination would provide flexibility to the land and property development parts of the market. For example, over two-thirds (70%) of lots could form at the minimum lot size (300m2), with the required average lot size across the remaining 30% at 550m2.

52. I have further examined how these parameters may be applied to a potential subdivision. My assessment considers the required distribution of vacant lots, the potential patterns of dwelling development across those lots, the final distribution of lot sizes once dwellings are

constructed and sold under individual titles, and then how the resulting pattern of dwelling mix aligns with patterns of demand.

APPLICATION OF AVERAGING PROPOSAL: PATTERNS OF DWELLING TYPE AND SIZE

53. I have provided an example of a stylised[2] subdivision pattern (initial vacant lots and dwelling mix) that could occur with the application of a 300m2 minimum vacant lot size together with a 375m2 average vacant lot size. This is a potential development pattern that I consider may enable a dwelling mix that aligns with patterns of long-term community demand. It forms one potential pattern of vacant lot formation and dwelling mix of a range of options that may be delivered by the market.

54. Table 1 shows a potential vacant lot distribution of a theoretical 7.6ha (net parcelled area) subdivision. There are 202 vacant lots initially formed, producing an average lot size of 376m2. Over half (54%) of lots are formed at the minimum lot size of 300m2. It contains 2 larger lots at 1,000m2 each, designed to be developed into multiple attached dwellings. The remainder of lots are formed at 400m2 to 600m2, with the ability to accommodate different dwelling options.

Table 1: Subdivision Potential Initial Vacant Lot Size Structure

Initial Lot Size (m2)	Number of Lots	Share of Lots	Total Area (ha)	Share of Area
300	110	54%	3.3	43%
400	50	25%	2	26%
500	30	15%	1.5	20%
600	10	5%	0.6	8%
1,000	2	1%	0.2	3%
TOTAL	**202**	**100%**	**7.6**	**100%**

55. Table 2 demonstrates a potential pattern of dwelling development across the initial vacant lot structure produced in Table 1. The first part of the

[2] This is a stylised example applied to conceptually demonstrate the approach. It is not based on an existing specific piece of land.

table shows the dwelling typology in which the lots are developed (for example, 99 of the 110 initial 300m2 lots could be developed at 1 detached dwelling per lot, and 11 of those lots developed as duplex pairs/attached lower intensity).

56. The second part of Table 2 shows the resulting number of dwellings of each type within each lot size category if the lots were developed in this way. For example, if 3 of the 500m2 lots were developed with 2 detached dwellings each (i.e. land area of 250m2 each), then this would produce 6 dwellings.

57. Overall, there are 249 dwellings developed across the 202 initial vacant lots. This potential development scenario has assumed that most (82%) of initial vacant lots will develop as one dwelling per lot, with multiple dwellings developed on a minor share (18%) of vacant lots.

Table 2: Potential Pattern of Dwellings on Initial Lot Size Structure

	POTENTIAL DWELLING DEVELOPMENT PATTERN (Number of Lots)					NUMBER OF DWELLINGS				
Initial Lot Size (m2)	Detached 1 per lot	Detached 2 per lot	Attached - Low Intensity	Attached - Higher Intensity	Total	Detached 1 per lot	Detached 2 per lot	Attached - Low Intensity	Attached - Higher Intensity	Total
300	99	0	11	0	**110**	99	0	22	0	**121**
400	40	0	10	0	**50**	40	0	20	0	**60**
500	21	3	6	0	**30**	21	6	12	0	**39**
600	5	2	2	1	**10**	5	4	4	3	**16**
1,000	0	0	1	1	**2**	0	0	5	8	**13**
TOTAL	**165**	**5**	**30**	**2**	**202**	**165**	**10**	**63**	**11**	**249**

58. The resulting dwelling mix is summarised in Table 3. The colour coding corresponds to Table 2 to show the assumed alignment to dwelling types and sizes. Between two-thirds and three-quarters (70%) of dwellings are detached, with most at the lower end of the market with average land areas of 250m2 to 300m2 per dwelling. Lower market detached dwellings on smaller site sizes form over half (60%) of the dwellings from this potential subdivision. A further 10% of the dwellings are assumed to be larger detached dwellings, but still on sites of a general suburban scale. I note there is still a large market demand for these types of dwellings. The

remainder (30%) are attached dwellings, with most of a lower intensity such as duplex pairs.

Table 3: Potential Distribution of Dwelling Types

Dwelling Type	Total Dwellings	Share of Dwellings
Detached - Smaller	109	60%
Detached - Larger	66	10%
Attached - Low Intensity	63	25%
Attached - Higher Intensity	11	4%
Total	**249**	**100%**

59. I have assumed that once dwellings are constructed, lots containing multiple dwellings will be further subdivided into separate titles to sell on the open market. Applying this process, Table 4 then shows the final pattern of dwelling mix by land area per dwelling potentially produced by this subdivision.

60. Table 4 shows that, under this potential development pattern, 43% of the dwellings are on eventual lot sizes of 300m2. Nearly all of these are detached dwellings, with a small portion (2% of the 43%) as lower intensity attached dwellings. In total, under this scenario, nearly three-quarters (73%) of dwellings are on lots that are 300m2 or smaller. Overall, 10% of the dwellings are medium to larger detached dwellings that are on 500-600m2 sites.

Table 4: Potential Eventual Lot Size Structure by Dwelling Type

Eventual Lot Size per Dwelling	NUMBER OF DWELLINGS					Share of Total Dwellings				
	Detached 1 per lot	Detached 2 per lot	Attached - Low Intensity	Attached - Higher Intensity	Total	Detached 1 per lot	Detached 2 per lot	Attached - Low Intensity	Attached - Higher Intensity	Total
125	-	-	-	8	**8**	0%	0%	0%	3%	**3%**
150	-	-	22	-	**22**	0%	0%	9%	0%	**9%**
200	-	-	25	3	**28**	0%	0%	10%	1%	**11%**
250	-	6	12	-	**18**	0%	2%	5%	0%	**7%**
300	99	4	4	-	**107**	40%	2%	2%	0%	**43%**
400	40	-	-	-	**40**	16%	0%	0%	0%	**16%**
500	21	-	-	-	**21**	8%	0%	0%	0%	**8%**
600	5	-	-	-	**5**	2%	0%	0%	0%	**2%**
TOTAL	**165**	**10**	**63**	**11**	**249**	**66%**	**4%**	**25%**	**4%**	**100%**

61. I note that it is also possible, with the application of the proposed vacant minimum and average lot sizes, to form a subdivision where no vacant lots exceed 450m2. An example of how this could be achieved is summarised in Table 5 below with a potential dwelling development pattern across these lots. I consider that under this vacant lot structure, a high share of the subdivision is likely to consist of small to medium sized detached dwellings, with a minor share of parcels developed as duplex pairs. In my view, this initial vacant lot structure is less likely to deliver more intensive attached dwellings such as rows of terraced houses that would require larger initial vacant lots.

Table 5: Potential Distribution of Vacant Lot Sizes and Dwelling Development Patterns

Initial Lot Size (m2)	Share of Lots	Share of Dwellings				
		Detached 1 per lot	Detached 2 per lot	Attached - Low Intensity	Attached - Higher Intensity	Total
300	50%	39%	0%	9%	0%	**48%**
450	50%	35%	0%	17%	0%	**52%**
TOTAL	**100%**	**74%**	**0%**	**26%**	**0%**	**100%**

SUBDIVISION DEVELOPMENT PATTERNS AND PROCESSES IN LARGER MARKETS

62. Several of the submitters consider that an average vacant minimum lot size provision is not required as the market is already likely to deliver a range of lot sizes and dwelling typologies through the subdivision process. Their views were informed by their experience in subdivisions within larger markets such as Auckland.

63. In response to the further information, I have undertaken investigation on the subdivision development patterns and processes to assess the likelihood of a similar response occurring within the Waikato towns. I have examined a range of subdivisions within the adjacent larger urban economy of Auckland where a range of dwelling types and sizes have been delivered by the market. I have considered subdivisions (Hingaia, Millwater and Long Bay) within the outer urban edges of Auckland on the

basis of higher potential future similarity to the Waikato towns than development within central urban areas. I have also examined the recent areas of subdivision development more broadly at the southern urban edge of Auckland, including Drury South, Drury West and Hingaia. Within these areas, I have:

(a) Examined the types of patterns produced within these subdivisions in relation to initial vacant lot distribution and final section sizes once dwellings are constructed (i.e. individual land areas of titles per dwelling);

(b) Examined resulting dwelling mix in relation to dwelling typology and size (as indicated by value and land area); and

(c) Investigated the development processes within each subdivision. A key aspect has been to assess whether the subdivision development process has focussed on producing vacant lots vs. dwellings and the combined land and property market sequence in relation to the production of attached dwellings.

64. I have undertaken this analysis across a range of detailed data sources. I have spatially integrated data sources (including at the individual parcel level) within the GIS to identify the process and sequence of development in relation to different locations and typologies. These include:

(a) Current and historic LINZ parcel boundary data to identify initial and final lot boundaries and their size distribution (including in relation to dwelling typology).

(b) LINZ title information data to understand the timing of title formation in relation to initial lot formation, dwelling construction and sale, and to show the annual scale of subdivision development.

(c) Sales record information to show the delivery of vacant lots and dwellings within each subdivision and typology to the market. An important aspect is whether properties are first sold to households as vacant lots or as dwellings produced as part of the subdivision combined land and property development process.

(d) Building consent records to show the timing of dwelling construction in relation to final lot formation and property sales (vacant lots vs. dwellings).

(e) Council rating information to estimate the dwelling mix and value within each subdivision.

(f) Aerial photograph analysis.

65. There are several key findings from my further analysis of subdivision patterns in Auckland. These are important in relation to the appropriateness of the proposed average vacant lot size as a mechanism to achieve a range of lot sizes as well as the parameters applied within this approach.

66. Overall, my assessment found that there are key differences in the development process and market conditions required for different dwelling types. Included within this are corresponding different initial vacant lot size requirements between attached and detached dwellings.

67. Firstly, the analysis showed that the subdivisions examined contained a range of dwelling types and lot sizes. These include attached dwellings at a range of intensities as well as detached dwellings across a range of lot sizes. This is consistent with the experience stated by several of the experts.

68. Secondly, the assessment identified coordination and integration between the land development and property development parts of the market. Nearly all attached dwellings were constructed and delivered to

the final property purchaser (e.g. household) part of the market as dwellings rather than vacant lots (where attached dwellings would then be constructed by the purchaser). I did not identify any instances of vacant lot sales to the final purchaser with subsequent construction of attached dwellings.

69. Larger shares of the detached dwellings were also delivered to the market as house and land package options where it is likely that either larger land areas are initially acquired by property developers or that the land developer has produced dwellings for sale rather than vacant lots. This is indicated through the first sale associated with the property occurring as the sale of a dwelling rather than as a vacant lot. Analysis of LINZ title data shows that in some subdivisions (e.g. Hingaia) a portion of detached dwellings were also constructed simultaneously in groups on larger lots prior to delivery as individual dwellings on separate titles to the market. These development pathways form an important difference to a subdivision where a higher proportion of properties are first sold as individual vacant lots for subsequent individual dwelling construction.

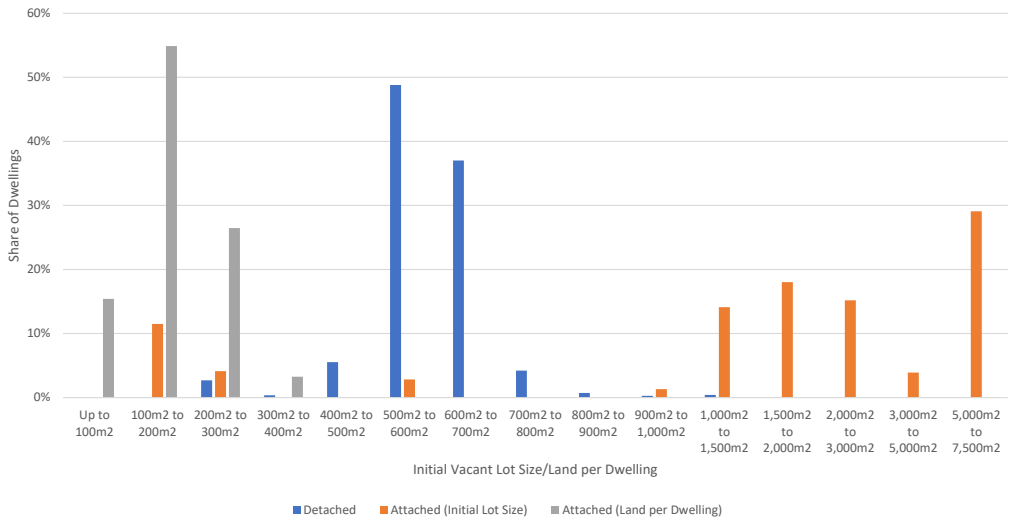
70. Thirdly, the assessment found important differences in development processes between detached and attached dwellings. Examination of LINZ parcel and property title spatial datasets showed that a large proportion of the attached dwellings were constructed simultaneously on initial larger lots, then subsequently further subdivided to be offered to the market on smaller individual titles. It found that all terraced houses followed this development pathway where the construction occurred on larger super lots.

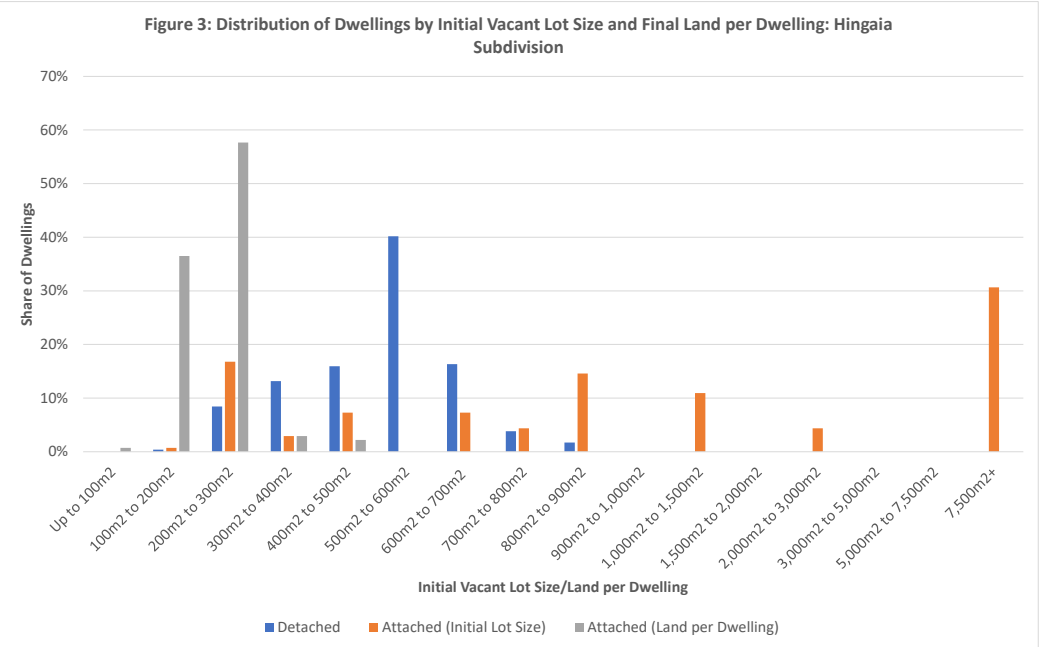
71. Furthermore, these differences in development pathways between detached and attached dwellings correspond to different initial vacant lot sizes. The construction of multiple terraced houses/townhouses all required larger initial vacant lot sizes. In most cases, this also occurred for less intensive attached dwellings such as duplexes. Where final lot sizes

for attached dwellings were formed prior to dwelling construction, this occurred only within the context of the delivery of dwellings rather than vacant lots to final purchasers.

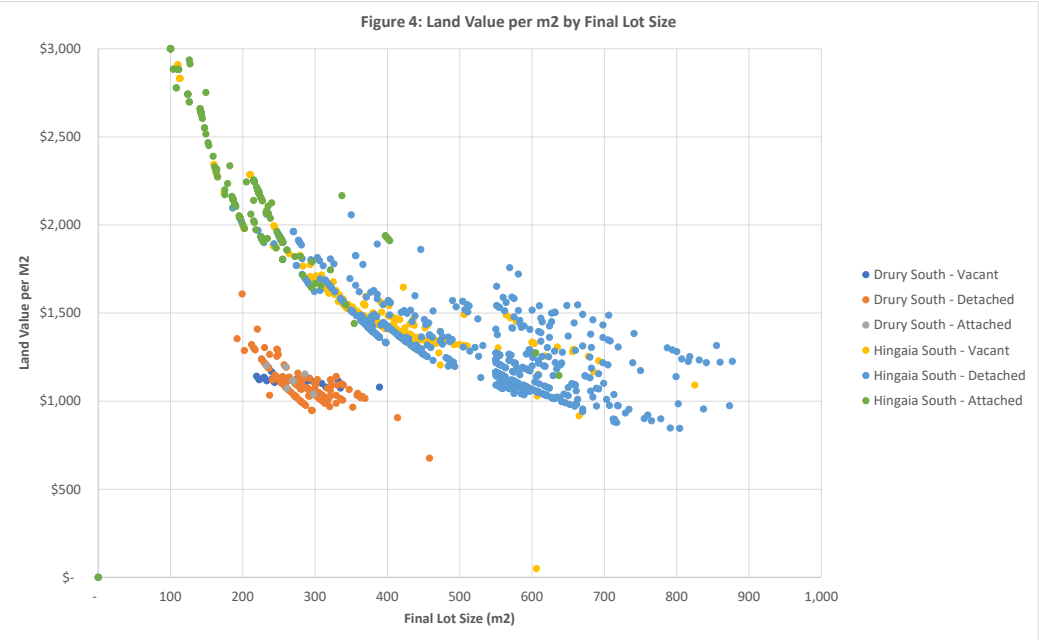
72. The figures below demonstrate the findings for each assessed subdivision. They show the distribution of dwellings by initial vacant lot size vs. the final lot sizes once dwellings are constructed. They show that there are significant differences between the initial vacant lot size and the final developed lot size distribution within each subdivision. The differences occurs almost entirely due to the development processes for attached dwellings.

Figure 2: Distribution of Dwellings by Initial Vacant Lot Size and Final Land per Dwelling: Millwater Subdivision





73. The importance of larger initial vacant lot sizes to the feasibility of attached dwelling construction is indicated by the distribution of land values by lot size. Land costs per m2 are highest for smaller lots as a component of the value of a lot is associated with the ability to accommodate a dwelling. While larger lots are more expensive, value increases at a slower rate than lot size. Lower land costs per dwelling are therefore achieved through purchasing larger property parcels than if a developer were to purchase multiple individual contiguous smaller parcels to construct the dwellings. This is demonstrated in Figure 4 below which shows the distribution of land value per m2 by lot size in different subdivisions (Hingaia and Drury South) close to Auckland's southern edge.



74. I have also examined whether the assessed subdivision development patterns could be achieved with the application of a 300m2 minimum vacant lot size and a 375m2 average lot size. I have considered both the average lot size of the initial vacant lots of each subdivision as well as the proportion of detached dwellings formed on smaller initial vacant lots.

75. The tables below (Table 6 and Table 7) show the size distribution of initial vacant lots and final land areas per dwelling as well as the summary statistics of dwelling type mix and average lot sizes across several subdivisions that I have assessed. The tables show that the subdivisions of Millwater and Hingaia produce a range of different lot sizes and contain a more diversified mixture of dwelling types. These subdivisions have average lot sizes of 600m2 and 552m2, meaning they could be achieved with the application of a 375m2 average vacant lot size.

76. Although a small portion of these vacant lots (6% to 11%) are formed at sizes smaller than 300m2, these lots were provided to the market as developed parcels containing dwellings rather than vacant lots. This means they were likely to be either provided within a vertically integrated structure by the combined land and property development parts of the

market, or were purchased at a larger scale by the property development part of the market and provided as smaller lots containing dwellings.

77. In contrast, Drury South contains a much narrower range of dwelling types and lot sizes. Almost all of the subdivision consists of smaller lots (below 300m2) containing smaller detached dwellings, with an overall average lot size of 276m2.

78. In comparison, the tables show that Pookeno/Tuakau has a distribution of lot sizes larger than the other subdivisions, with a narrower range of dwelling types. Part of this is due to the limited provision for attached dwellings within the Operative Waikato District Plan.

Table 6: Initial Vacant Lot and Final Land per Dwelling Size Distributions by Subdivision

	Initial Vacant Lot Size Distribution (share of lots)				Final Lot Size Distribution (share of lots)			
Lot Size Code	Millwater	Hingaia	Drury South	Pookeno/Tuakau	Millwater	Hingaia	Drury South	Pookeno/Tuakau
Up to 100m2	0%	0%	0%	0%	3%	0%	0%	0%
100m2 to 200m2	3%	1%	1%	0%	10%	6%	1%	0%
200m2 to 300m2	4%	11%	79%	0%	7%	17%	79%	0%
300m2 to 400m2	0%	12%	19%	0%	1%	12%	19%	0%
400m2 to 500m2	5%	16%	1%	3%	5%	15%	1%	3%
500m2 to 600m2	46%	38%	0%	27%	39%	33%	0%	27%
600m2 to 700m2	35%	16%	0%	40%	30%	13%	0%	40%
700m2 to 800m2	4%	4%	0%	8%	3%	3%	0%	8%
800m2 to 900m2	1%	2%	0%	6%	1%	2%	0%	6%
900m2 to 1,000m2	0%	0%	0%	5%	0%	0%	0%	5%
1,000m2 to 1,500m2	1%	0%	0%	9%	0%	0%	0%	9%
1,500m2 to 2,000m2	0%	0%	0%	2%	0%	0%	0%	2%
2,000m2 to 3,000m2	0%	0%	0%	0%	0%	0%	0%	0%
3,000m2 to 5,000m2	0%	0%	0%	0%	0%	0%	0%	0%
5,000m2 to 7,500m2	0%	0%	0%	0%	0%	0%	0%	0%
7,500m2+	0%	0%	0%	0%	0%	0%	0%	0%
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 7: Summary Lot Sizes and Dwelling Type Distribution by Subdivision

	Subdivision			
Measure	**Millwater**	**Hingaia**	**Drury South**	**Pookeno/Tuakau**
Average Initial Vacant Lot Size (m2)	600	552	276	715
Average Final Lot Size (m2)	520	462	276	715
Share of initial lots below 400m2	6%	11%	80%	0%
Dwelling Type	**Share of Dwellings by Type**			
Terraced	11%	6%	0%	0%
Attached	8%	9%	4%	0%
Detached	81%	85%	96%	100%

79. In summary, the analysis I have undertaken of several subdivisions confirms that a range of dwellings is delivered by the market in each location. There are large and important differences in development patterns between attached and detached dwellings, where attached dwellings rely on a range of lot sizes. The delivery of these dwellings is facilitated by integration and interaction between the land developer and property developer markets of the market, particularly for attached dwellings.

80. In my view, interaction between these parts of the market means that a subdivision is likely to have a greater focus on producing dwellings rather than just vacant lots in comparison to a market with less integration between land and property developers.

81. I consider that a subdivision where the land and property development parts of the market are vertically integrated is more likely to focus on producing dwellings than vacant lots. This is because the maximisation of returns occurs through the combined returns from lot formation and from dwelling production. If considered individually, the maximisation of these returns would produce different vacant lot size structures.

82. In my view, a focus only on the land development part of the market would produce greater returns from the maximisation of lots. This would therefore encourage patterns of smaller lot formation suited to individual detached dwellings (as the purchase of contiguous smaller lots for attached dwellings would be less likely to be feasible). A focus instead on the returns from dwelling construction would produce an initial vacant lot structure with a higher proportion of larger lots that would maximise the subdivision dwelling yield, taking into account the level of market demand across different dwelling typologies.

83. The analysis has found that there are significant differences between the initial vacant lot formation and final lot structure of the subdivision once dwellings and constructed and sold on separate titles. These patterns

produced by the market are largely achievable within the combination of a 300m2 minimum vacant lot size together with a 375m2 average vacant lot size. This is both in terms of the detached dwelling distribution (which may be closer to short-term patterns of demand) as well as the increased mix of dwellings enabled over the long-term.

84. I consider that although these parameters enable patterns of high shares of detached dwellings, the growth in the market for attached dwellings is likely to result in higher returns for developers to construct attached dwellings on these sites. This is likely to initially occur through duplex pairs as seen particularly within the southern Auckland urban edge subdivisions.

LAND AND PROPERTY DEVELOPMENT MARKETS IN POOKENO AND TUAKAU

85. I have investigated the dwelling subdivision processes within the Waikato market (Pookeno and Tuakau) in response to further discussion from the submitters. I have investigated the alignment with the market conditions that have encouraged the delivery of a mixture of dwelling types and sizes within the assessed subdivisions. I have considered whether the local Waikato markets are likely to operate in the same way as the examples provided by the submitters from the Auckland market where developers focus on producing a range of dwellings within a more integrated market structure.

86. In undertaking this assessment, I have examined the same data sources as applied in the analysis of Auckland subdivisions above. I have also examined individual sales records on a larger scale across the full greenfield areas of these urban towns for the past 10 years. I have spatially integrated several property-level datasets (sales, LINZ parcels and LINZ titles) within the GIS to track the development pathways within the market.

87. My assessment indicates there are likely to be different market conditions in Pookeno and Tuakau to the development patterns

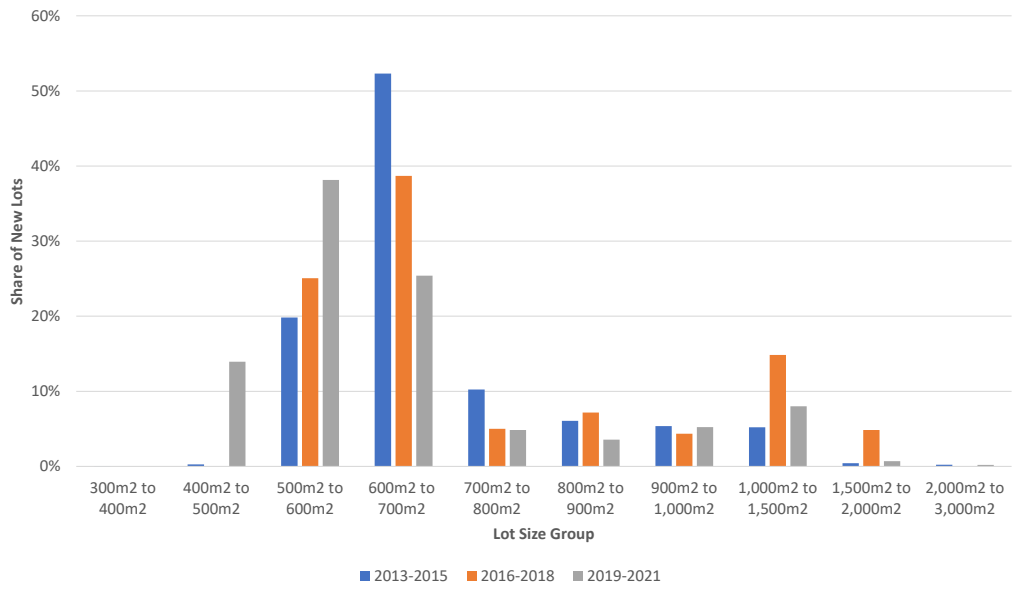
experienced in larger markets such as Auckland where the commercial market has a greater focus on producing subdivisions with a wider range of dwelling types and sizes.

88. I have found that Pookeno and Tuakau's greenfield development over the past ten years has been characterised by subdivisions consisting of lower density detached dwellings. The subdivisions consist of single dwellings on each lot that have been produced across a range of lot sizes. On average, there are around 140 lots produced per year, with annual totals ranging from between 30 to 270 lots per year.

89. More recent patterns of development consist of increased shares of lot sizes closer to the minimum lot size (450m2) enabled by the operative district plan (ODP), but with larger proportions of lots still being formed at sizes significantly larger than the permitted minimums.

90. The distribution of newly formed greenfield lots by size category in Pookeno and Tuakau is shown below in Figure 5. While an increased share of lots are formed close to minimum lot sizes in the past three years (2019-2021), it also shows that most lots are formed across a range of sizes that are significantly larger than the minimum lot size of 450m2. Overall, average lot sizes remain significantly above the 450m2 permitted minimum at an average of 666m2 over the past three years.

Figure 5: Size Distribution of New Greenfield Lots in Pookeno and Tuakau



91. Analysis of property sales information shows that the production of lots forms the greater focus of the greenfield subdivision patterns within Pookeno and Tuakau. Nearly four fifths of the newly produced greenfield lots were sold as vacant lots rather than as lots containing dwellings. Over two-thirds of the vacant lots sold were sold within the same year as title formation.

92. The large focus on the production of vacant lots suggests that there may be less integration between the land development and property development parts of the market than the other subdivisions assessed within the Auckland market.

93. My closer analysis of the structure of subdivision development patterns within Pookeno and Tuakau confirms the market picture described by Mr Thompson during his verbal summary. It is characterised by smaller annual releases of properties mainly supplied as vacant lots to the market by land developers, with subsequent development of detached dwellings at one dwelling per lot.

94. I consider therefore that the focus on the production of vacant lots (rather than dwellings), together with the limited integration between the land and property development parts of the market and concentration into detached dwellings suggests that the commercial market alone is unlikely to deliver a range and mixture of dwelling types. In my view, minimum and average vacant lot size provisions are likely to be required to encourage a greater dwelling mix.

PROPOSED BUILDING HEIGHTS IN HUNTLY

95. Kāinga Ora has raised concerns about the proposed height increases in Huntly. They consider that there is greater provision for height increases in the Commercial Zone adjacent to the town centre, than within the Town Centre Zone.

96. I have read the response of Mr Mead to Kāinga Ora in relation to this issue. I consider that if higher density residential development occurs within the Commercial Zone areas adjacent to the town centre, it is still likely to function together with and support the viability and vitality of Huntly's town centre.

97. In my view there may be differences in the commercial feasibility for higher density residential development between the Commercial and Town Centre zones. It may be easier to develop higher density apartment buildings within the Commercial Zone due to the lower levels of existing development (larger vacant areas) and constraints from existing building stock and parcel structures within the Town Centre Zone.

CONCLUSION

98. I support a vacant minimum lot size of 300m2 applied together with an average vacant lot size of 375m2 in the vacant lot control area.

99. I consider that if higher density residential development occurs within the Commercial Zone areas adjacent to the town centre, it is still likely to

function together with and support the viability and vitality of Huntly's town centre.

Susan Fairgray
25 August 2023