BEFORE THE INDEPENDENT HEARING PANEL APPOINTED BY THE QUEENSTOWN LAKES DISTRICT COUNCIL

UNDER	the Resource Management Act 1991 (RMA)
IN THE MATTER	of the Te Pūtahi Ladies Mile Plan Variation in accordance with section 80B and 80C, and Part 5 of Schedule 1 of the Resource Management Act 1991.

STATEMENT OF REBUTTAL EVIDENCE OF SUSAN MICHELLE FAIRGRAY
10 November 2023

PO Box 323 QUEENSTOWN 9348
Tel +64 3 379 7622
Fax +64 3 379 2467

Solicitors: L F de Latour / K H Woods
(lucy.delatour@wynnwilliams.co.nz /
kate.woods@wynnwilliams.co.nz)

WYNN WILLIAMS

Introduction

1 My full name is Susan Michelle Fairgray. I am an Economist and Associate Director at Market Economics.

2 I prepared a statement of evidence on behalf of Queenstown Lakes District Council (**QLDC** or **Council**) dated 29 September 2023 on the submissions and further submissions to the Te Pūtahi Ladies Mile Plan Variation (**TPLM Variation**). My evidence considered the demand for dwellings in Queenstown, current and future dwelling capacity in Queenstown and commercial feasibility, additional dwelling capacity in the TPLM Variation area (the **TPLM Variation Area**), proposed dwelling densities, development opportunity effect of urban form and spatial economic structure and responded to submissions.

3 I have the qualifications and experience as set out at paragraphs 4 to 6 of my statement of evidence dated 29 September 2023.

4 I repeat the confirmation given in my evidence that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023, and that my evidence has been prepared in compliance with that Code.

Scope of rebuttal evidence

5 In preparing this rebuttal statement, I have read and considered the evidence filed on behalf of submitters as that evidence relates to my evidence. I attended the expert conferencing session on 31 October 2023 for economics experts and have also read and considered the Joint Witness Statement (**JWS**) produced at that expert conferencing session dated 2 November 2023.

6 In this evidence I respond to the:

(a) Statement of Evidence of Philip Osborne on behalf of the Anna Hutchinson Family Trust (107) dated 20 October 2023.

(b) Statement of Evidence of Timothy Health on behalf of the Anna Hutchinson Family Trust (107) dated 20 October 2023.

(c) Statement of Evidence of Adam Thompson on behalf of Glenpanel Development Ltd (73) dated 20 October 2023.

(d) Statement of Evidence of Tamba Carleton on behalf of the Ladies Mile Property Syndicate (77) dated 20 October 2023.

(e) The JWS on economics, dated 2 November 2023.

(f) Statement of Evidence of Cameron Wallace on behalf of Ladies Mile Property Syndicate (77) dated 20 October 2023.

7 The key issues covered in this rebuttal evidence are:

(a) TPLM Variation proposed and alternative proposed dwelling densities within the High Density Residential (**HDR**) and Medium Density Residential (**MDR**) precincts;

(b) Feasibility and provision for higher density residential development;

(c) Alternative approaches to density minima in the HDR precinct;

(d) The proposed western extension area sought for inclusion in the TPLM Variation by the Anna Hutchinson Family Trust (**AHFT**) submission (**Extension Area**);

(e) Provision for residential visitor accommodation within the HDR precinct.

Summary

Dwelling Densities and Approaches

8 I consider that the dwelling mix required with the Council proposed density minima in the HDR precinct would be beneficial for long-term community housing need. Most of the land area could be developed at densities that are currently commercially feasible, with a minor portion of land needing to develop at higher densities, which may become feasible in the long-term.

9 I am also able to support a reduction in the minimum density of the HDR precinct to 50 dwellings per gross hectare. I consider this range (50 to 60 dwellings per gross hectare) would also produce a mix of dwellings that are well-suited to long-term community demand and would be within a reasonable range of potential long-term feasible dwelling development patterns. I consider it would be likely to produce a similar mixture of medium density dwellings (to the originally proposed 60 dwellings per gross hectare), but have a reduced component of higher density dwellings.

10 However, I consider that there are some changes that should be made to the proposed density minima approach. In my view, it is important to enable these areas of the precinct to develop at medium densities in the short to medium-term without being limited by the concurrent requirement to achieve the overall Council proposed density minima. As there is less certainty of the higher density dwellings becoming feasible for the commercial market, I therefore consider the areas that would be required to develop as higher density apartments should be enabled to develop at medium densities if higher density apartments do not become viable in the future.

11 I do not support any changes to the Council-proposed minimum dwelling densities in the MDR precinct. I therefore consider that any change to a calculation of minimum density on a *net* basis would need to correspond to a gross density of 40 dwellings per hectare. Based on my calculations, a density of around 53 to 62 dwellings per *net* hectare (depending upon the level or development efficiency) is likely to correspond to a density of around 40 dwellings per *gross* hectare.

12 In my view there are many areas of agreement among the economic experts that form a useful basis for ongoing revision. There are also some key areas that were not agreed at the conferencing. I set these out in my rebuttal statement.

13 There is general agreement (JWS issue 2) among the economic experts that TPLM forms an appropriate location for urban growth, with support for a development pattern that increases the range and types of dwellings in the Queenstown housing market and eastern corridor.

14 Medium density dwelling typologies (including duplexes, terraced housing and low-rise 2-3 level walk-up apartments) are currently well established within the Queenstown market. The experts agree (JWS issue 2) these are currently commercially feasible for development at TPLM and are likely to be realised in the short-term.

15 The experts (except for Mr Thompson) agree (JWS issue 4) that the development pattern of 80% to 90% of the HDR precinct land area would be similar under either the density minima proposed by Council or the alternative lower density minima sought by the landowners. Under either scenario the majority of the land in the HDR precinct would be likely to develop as a range of medium-density dwellings, which the

experts agree are currently commercially viable and suited to patterns of community demand.

16 The disagreement relates to the appropriateness and viability of the development pattern required on the remaining 10% to 20% of the HDR precinct land area that would be required to overall achieve the proposed density minima. This area would be likely to need to develop as higher density apartments, which are not feasible currently but may become feasible in the long-term. A related concern among the experts is that the required higher density development may limit the ability to develop the rest of the precinct.

17 The key differences relate to higher density apartments (4+ storeys) and their likely feasibility in the TPLM Variation location. The experts (except for Mr Thompson) agree (JWS issue 1) that higher density dwellings (4+ storey apartments) currently make up a smaller share of the Queenstown market, with the share likely to increase in the future as the market becomes more established. There is disagreement (JWS issue 2a) over the likelihood of higher density apartments becoming commercially feasible at TPLM in the long-term. I consider that they are not currently feasible in this location, but may become feasible for the commercial market in the long-term, and potentially sooner from other parts of the market.

18 There is consequently disagreement over the viability of the proposed minimum densities (60 dwellings per gross hectare) within the HDR precinct as well as the implementation approach. This is because it would require a share of development to occur at higher densities. The landowners within TPLM are generally seeking a reduction in the minimum densities in the HDR precinct from 60 dwellings per *gross* hectare in the Council proposal to 60 dwellings per *net* hectare (equating to 40 to 45 dwellings per gross hectare).

19 The experts (except for Mr Thompson) agree (JWS issue 4) that higher density apartment development would be beneficial in the TPLM Variation Area if it were able to be delivered by the market. The experts agree it is therefore appropriate to provide the opportunity for it to occur, but there is disagreement in relation to any *requirement*.

20 I agree that there is less certainty as to the future ability for the commercial market to deliver higher density apartments in TPLM. I

consider they are more likely to become feasible in the long-term (rather than the short or medium-term) with market growth and a likely expansion in the range of locations where apartments are viable in Queenstown, but I also agree that there is a risk they may not become viable.

21 I consider that a dwelling mix with a component of higher density apartments would be more beneficial for long-term community housing need. However, the difference in timing and certainty to other dwelling typologies means that it is important that any provision for higher density development does not limit medium density development that could occur in the short to medium-term.

22 In my view, it is therefore important to provide for development opportunity for apartments and in a way that does not forego this opportunity. The provision needs to be commensurate with the likely scale and timing of realisable market demand, but responsive to changes in market conditions if they do not become viable within the development period of TPLM.

23 In paragraphs 66 to 77 of my rebuttal evidence I have considered an alternative approach for higher density residential development within the HDR precinct. I consider an area of up to 2 hectares (gross) in part(s) of the HDR precinct preserved for higher density apartments up to 6 to 8 storeys is likely to be efficient, with the ability for this area to develop at medium densities if higher density apartments do not become viable in the long-term.

Residential Visitor Accommodation in Higher Density Developments

24 I support enabling residential visitor accommodation (**RVA**) to occur in higher density apartment dwellings (as outlined in paragraphs 105 to 107) to increase the commercial feasibility of these dwellings and therefore increase the number of apartment dwellings delivered by the market for resident households.

Proposed Western Extension Area

25 I support the urbanisation of the AHFT-proposed western Extension Area. In my view, long-term development of this area at a medium-density scale is likely to be an efficient pattern of development. However, if this area is urbanised at a medium-density scale in the short

to medium-term or within a timeframe that coincides with the development of the rest of TPLM, then it may initially dilute intensification of residential development in areas surrounding the TPLM commercial centre.

Dwelling Density and Mix

26 There is general agreement (JWS issue 2) among the economic experts that TPLM forms an appropriate location for more intensive residential development. The experts generally support the TPLM Variation objectives to achieve a dwelling mix (typology, size and price) that increases the range of dwellings available to the Queenstown housing market, including within the eastern corridor.

High Density Residential Precinct Densities – Density Minima and Dwelling Mix

27 The proposed intended dwelling mix within the HDR precinct, and the proposed provisions to achieve this mix, have formed an important area of discussion among the economic experts. The landowner developers have generally sought a reduction of the density minima. Ladies Mile Property Syndicate (77) (**LMPS**) supports a reduction to 60 dwellings per hectare to be applied on a *net* basis. Based on my calculations, this equates to a gross density of around 40 to 45 dwellings per hectare (depending upon the development efficiency). Alternative mechanisms involving a maximum site size have been suggested by Mr Thompson, which I address in paragraphs 87 to 92.

28 I have examined the potential dwelling development patterns enabled by the alternative densities supported by LMPS (i.e. 60 dwellings per net hectare). This includes an examination of the potential dwelling mix provided in the evidence of Mr Wallace and my own dwelling mix calculations. I have then compared these potential development patterns with those in the TPLM Masterplan document (pages 104 - 105) and my initial calculations contained in my Appendix B of my evidence in chief (**EIC**) (both at 60 dwellings per gross hectare). These results of my review can be summarised as the following:

(a) I consider that both proposed densities would be likely to result in a range of medium density dwellings across most (80% to 90%) of the land area;

(b) The dwelling mix modelled by Mr Wallace (at paragraph 29 in his evidence) contains a similar mixture of typologies to those modelled in my primary evidence, but have a slightly larger size distribution. This means that there are fewer dwellings that are produced at medium density overall, therefore slightly increasing the share of land area needed to develop at higher densities to achieve an overall minima of 60 dwellings per hectare gross. I agree with Mr Wallace that increasing the range of dwelling sizes within these typologies is likely to increase the level of demand substitutability to attached dwellings from detached dwellings;

(c) Despite these differences in dwelling mix, I consider that the medium density dwellings modelled by Mr Wallace are also likely to increase the range and mix of dwellings in the eastern corridor and also be well suited to patterns of community demand and housing need.

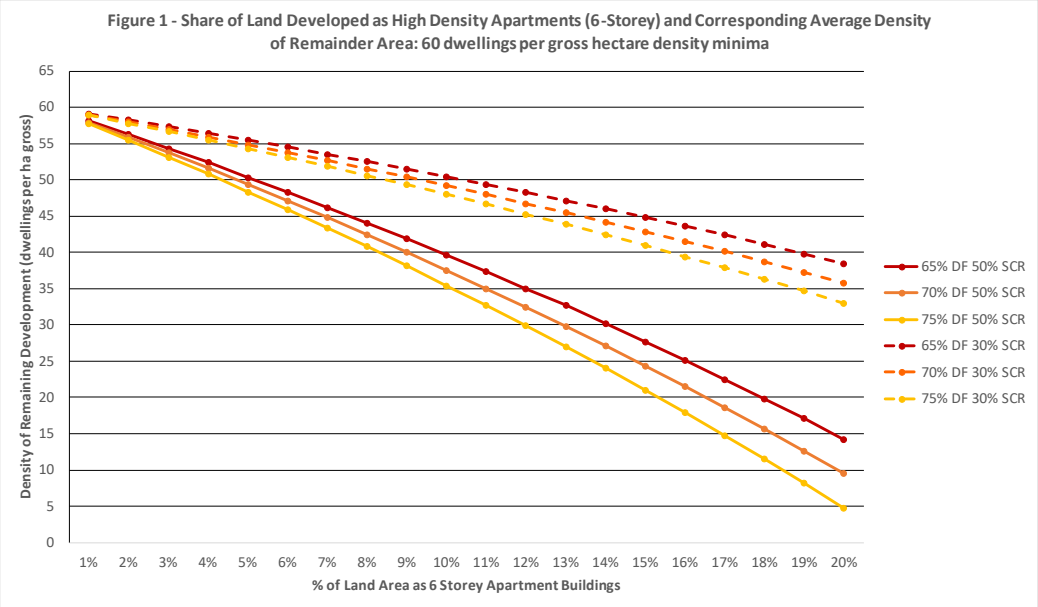
29 I note that Mr Wallace (at paragraph 28 of his evidence) considers that a change in approach to a *net* density calculation will produce only a small difference in dwelling yield within the HDR precinct. He appears to calculate this by comparing his calculation of density across the net area (once public roads, stormwater and reserves are removed) with my calculation of dwelling yield in my EIC across the HDR precinct. However, this comparison is inconsistent as the *gross* density calculation already excludes 15% of land area for stormwater, with the calculation applying net of this exclusion. It appears that Mr Wallace has instead applied his development efficiency (of 65% to 75%) to the gross area (where stormwater areas have not been removed). This appears to be inconsistent with his approach in Table 1 of his EIC and would therefore leave only 15% to 20% of the gross area for roads and local reserves and any other areas of undevelopable land. In my view, the difference in yields is more likely to equate to around 300 to 400 dwellings within the HDR precinct area.

30 In Appendix A (Figure A-1) I have provided an estimated conversion between net and gross density for clarification of the approach. In accordance with the structure plan, the gross density has been calculated across the land areas that exclude the schools, identified roads, building exclusion areas and stormwater allowance (approximately 15% of the area excluding roads, schools and main

reserves). I note Mr Wallace's observation that gross density is ordinarily calculated prior to the removal of the stormwater and reserves areas, but I have applied this approach to remain consistent with the calculations within the TPLM Structure Plan and proposed provisions. To calculate net density, a percentage of the remaining land area is then removed, with the dwellings instead expressed across this area. This is consistent with the approach at paragraphs 15 to 16 of Mr Wallace's evidence. Each line on the graph represents a different level of development efficiency, with the range (65% to 75%) reflecting that broadly outlined in the submitter evidence. As an example, a gross density of 50 dwellings per hectare generally converts to a net density of 67 to 77 dwellings per hectare, depending upon developable yield.

31 In response to the Mr Wallace's evidence, I have also undertaken further assessment to understand the effect of the proposed alternative density minima on the overall development pattern required to achieve the transport dwelling yields. I have estimated the proportion of HDR precinct land area required to develop at higher densities (approximately 6 storey residential apartment buildings) to result in different average densities across the remainder of the precinct land area to achieve the overall proposed TPLM Variation density minima of 60 dwellings per gross hectare. I consider this provides a useful basis to understand the land areas needed to develop more intensively to achieve the required masterplan transport densities with the remaining land area developing at densities the landowners consider as feasible.

32 My assessment is summarised in Figure 1. The horizonal axis (x) shows the share of HDR precinct land developed at high density. The corresponding point on the vertical (y) axis shows the resulting average density across the rest of the HDR precinct land area. I have produced different lines to incorporate a range of scenarios that reflect a combination of different development efficiencies, as suggested in the evidence of Mr Wallace (paragraph 23) and Mr Thompson (paragraphs 8 to 11), within the precinct and the intensity (building coverage) of higher density development on the land area.



33 Figure 1 shows that:

(a) Higher shares of land developed as high density apartments lowers the required average densities across the remainder of the land area to achieve the Variation proposed densities;

(b) I estimate around 12% to 19% of the HDR precinct land area would need to be developed as high density apartments to achieve an average density of 60 dwellings per *net* hectare across the rest of the precinct. This amounts to between 2.4 ha and 3.7 ha, which is 5% to 7% of the developable land area of the TPLM overall;

(c) If these areas containing higher density apartments were developed more intensively (i.e. with a 50% building coverage), then this would reduce to a land area of 1.3 to 2.0 ha. This equates to 6% to 10% of the HDR precinct land area, or 2% to 4% of the overall TPLM developable area.

34 Based on my assessment, I consider that the proposed alternative minimum density (60 dwellings per *net* hectare) would encourage a similar development pattern across 80% to 90% HDR precinct land area to that required with the TPLM Variation proposed densities (60 dwellings per *gross* hectare). This would consist of medium density dwellings, ranging in intensity from larger duplex pairs, terraced and town housing, up to low-rise 3 level walk-up apartments. I consider that this development pattern would form an appropriate and efficient

dwelling mix across this share of the HDR precinct area. It would be well suited to patterns of community demand and increase the range and type of dwelling mix in the eastern corridor area.

35 The economic experts also generally agree (JWS issue 2) that these dwelling typologies are currently feasible in the Queenstown market. They consider these typologies are likely to be able to feasibly develop at this location from the short to medium-term.

36 In my view, the differing economic viewpoints therefore relate to the type of development required on the remaining 10% to 20% of the HDR precinct land area (notwithstanding the identified issues with the proposed minima application as discussed in this rebuttal statement). My calculations suggest that the remaining 10% to 20% of the land area would be required to develop as higher density dwellings to achieve the TPLM Variation proposed minima (60 dwellings per gross hectare). The landowner developers instead support development of this area also at a medium density scale of 60 dwellings per net hectare.

37 I note that the calculations contained in Mr Lowe's EIC (at paragraphs 29 to 34) show a smaller land area is required for higher density development to achieve the proposed overall density minima and is similar to the calculations contained in Appendix B of my EIC. This occurs due to modelled differences in the medium density dwelling mix where medium density dwellings are developed more intensively and with higher development intensities applied across the higher density sites.

38 In my rebuttal evidence, I have taken a more conservative approach in relation to understanding the effects on feasibility. I have assessed the larger land area required when allowing for a less intensive medium density dwelling mix as well as reduced development intensity on higher density development sites.

39 In a following section (paragraphs 50 to 61) I consider the economic costs and benefits of requiring higher density development on these areas to achieve the TPLM proposed minima.

Current and Future Viability of Higher Density Residential Development

40 The experts generally agree (JWS issue 1) that higher density residential development (4+ storey apartments) currently make up a

small share of the Queenstown property market. There is agreement (except for Mr Thompson) (JWS issue 1) that, at the general Queenstown-wide market level, that the market for apartments is likely to increase through time and account for a larger share of the future housing market.

41 The experts (except for Mr Thompson) also generally agree (JWS issue 3) that the feasibility of higher density apartment buildings will be increased through allowing RVA to occur within these buildings. On this basis, the experts generally support the provision for RVA in apartment buildings in the TPLM Variation area, particularly if they are required to meet minimum densities.

42 The disagreement relates to whether higher density residential dwellings are likely to be viable at TPLM in the future. Ms Carleton considers (JWS issue 2a and paragraphs 25 to 28 in her evidence) that apartments are unlikely to ever be feasible in this location as the future commercial centre is likely to offer lower amenity than other larger centres within Queenstown's urban centres hierarchy, and the location does not offer high levels of natural amenity.

43 I agree with Ms Carleton that apartments tend to locate in larger areas of higher amenity, including areas within and around higher value commercial centres and areas of natural amenity. I disagree with Ms Carleton's certainty that apartments will never be feasible within the TPLM Variation Area. I consider that TPLM Variation Area may form a viable location for the profit-driven commercial market to provide apartments in the long-term, and may form a viable location sooner for other parts of the market to deliver apartments.

44 In my view, the range of locations suited to higher density development typically increases through time with market growth and changes with the relative positioning of an area within the total urban extent (due to further expansion of the urban edge). In my experience of the Auckland market, many of the locations shown in Ms Carleton's map of Auckland apartment developments (Appendix map 1 of her evidence) have not historically experienced higher density apartment development. If an equivalent map were produced illustrating the distribution of apartment developments 20-30 years earlier, then it would likely produce a considerably different picture with reduced apartment development concentrated into fewer locations. I therefore consider that the range of

locations where apartments are viable within Queenstown is likely to also increase through time and be substantially greater than what is currently observed in the market. This is likely to occur in the long-term with growth in the market size for apartments.

45 In contrast to the other experts, Mr Thompson considers (JWS issues 1 and 2) that apartments will only increase as a proportion of the future market if house prices continue to increase and remain unaffordable. Together with all of the other economic experts, I disagree with Mr Thompson as there are other factors (e.g. increase in market size, and changed relativities within the market) which can also increase apartment feasibility.

46 The demand modelling I have undertaken for the Queenstown Intensification Plan Change Variation (set out in paragraphs 30 to 38 of my EIC) shows that the share of dwelling demand as apartments is likely to increase in the future, therefore increasing the total market size beyond the rate of overall dwelling demand growth. Increases in the size of the annual demand base for apartments are important as each apartment building absorbs a significant share of total demand at each point in time. Increases to the size of the demand base mean that each building constructed absorbs a smaller share of total demand, with an increase in the number of new buildings able to be sustained by the market at each point in time. Increases in the number of buildings able to be sustained is likely to increase the number of potential locations where development can occur as each building in a location attracts a smaller share of total demand.

47 I also consider that the relative attractiveness of a location for apartment development may increase through time. This may occur as a result of the increase in amenity of commercial centres as their range of activity expands in response to growth in catchment demand. Their relative location within the urban area (e.g. level of centrality) may also improve such as with outward expansion of the urban edge through time.

48 I also note that changes in the dwelling distribution structure of Queenstown's housing market have already occurred over the past decade to include an increasing share of attached dwellings. Higher shares of new dwellings are now attached, which is a substantial shift from past patterns of development that were dominated by detached dwellings. This is supported by the evidence of Mr Osborne (Figure 4

and paragraph 20 in his evidence). I consider that there is no basis to assume market shifts will be limited only to part of the market, noting also that it would be contrary to other growing urban economies where apartments typically account for greater shares of dwellings over time.

49 Lastly, on the feasibility of apartments, I clarify my agreement with Ms Carleton in relation to the effect of construction costs on feasibility of two to three level walk up apartments in comparison to higher density four or more storey apartments. At paragraph 40 of her evidence, Ms Carleton considers that my view differs to her experience of walk-up apartments as a lower cost typology. To clarify, I agree with Ms Carleton that two to three level walk up apartments have lower construction costs than higher density apartments of four or more storeys. A key aspect of paragraph 117 of my primary evidence is that construction costs (on a per m^2 basis) for vertically-attached apartments that are not walk up apartments are highest for three to four level apartments as additional construction costs are spread across fewer units at three to four storeys than a greater number of dwellings at an increased number of storeys.

Appropriateness of Provision for Higher Density Residential Development

50 In my view, a key area of differing economic viewpoints relates to the requirement for higher density development within the HDR precinct. While the proposed minima do not specify a requirement for this typology per se, analyses of potential development patterns (as above) suggest that a share of the land area would be likely to need to be developed in this way to achieve viable development across the rest of the precinct.

51 There is general agreement among the experts (except for Mr Thompson) (JWS issue 4) that there should be provision for higher density development within the TPLM Variation Area to accommodate any provision of this typology by the market if it were able to occur.

52 Experts disagree however in relation to the mechanism for provision, including whether a level of higher density development should be *required*. It appears that part of this disagreement relates to disagreement as to the likelihood of higher density development viably occurring at TPLM, which I address in the previous section in paragraphs 40 to 48.

53 The experts generally agree (JWS issue 4) that economic costs may arise if land areas are required for higher density development and development is not able to be delivered by the market. This occurs through the holding costs of vacant land areas and likely opportunity cost of alternative medium density residential development on the land.

54 I broadly agree with these costs and note also that a level of cost may still occur in the medium to long-term if the site were developed in the long-term as higher density residential uses. This is because the site may remain vacant for a longer period till development becomes viable than development at a medium-density, which is more likely to become viable sooner. This is primarily a cost to the land owner. However, I note that decisions to delay land development, including for the prospect of a higher dwelling yield, are frequently observed in most growing urban economies.

55 In my view, it is important to consider the costs to landowners together with the costs and benefits of potential dwelling supply and land use outcomes for the Queenstown community. With respect to the TPLM Variation, taking account of the local current and potential future market, I consider that there is a trade-off (across approximately 10%-20% of the HDR precinct land area and 4% to 8% of the TPLM Variation area overall) in timing and eventual dwelling supply between:

(a) Reducing the required densities (to 60 dwellings per *net* hectare) and having a greater number of medium density dwellings in the medium to earlier long-term; vs.

(b) Maintaining notified TPLM Variation proposed densities and potentially having a greater number, and some increase to the range, of dwellings in the long-term, but with a lower certainty.

56 I agree with the other experts that higher density development is less certain than medium-density development and is likely to have significant differences in timing. I therefore agree with the other experts that it is important that any provision for higher density development should be structured in a way that does not restrict medium-density development from occurring within other parts of the precinct. I consider this further below in paragraphs 66 to 77.

57 In my view, it is important to provide the opportunity for higher density development, but not *require* a level of development beyond what can

reasonably be expected to be viable for the market to deliver in the long-term.

58 As stated in my EIC (paragraph 100), the proposed spatial extent of the HDR precinct is large within the context of medium-term development and would require a relatively high share of the future projected market demand size to be met at this location.

59 I understand that the overall precinct dwelling yields are required to achieve a transport mode shift to support the transport functioning of the TPLM. This forms a scenario that I can support, but with the necessary changes as set out at paragraphs 66 to 77 (i.e. to ensure medium density development is not limited in the short to medium-term by any requirement to concurrently develop higher density dwellings to achieve overall density minimums). I consider that this dwelling development pattern would reflect a beneficial dwelling mix that would be appropriately aligned with an intended long-term development timeframe.

60 However, I consider that from an economic perspective, a lower yield, at the appropriate densities and typologies, would also achieve a mixture of dwellings that are suited to community need. In my view, the alternative densities suggested by LMPS (i.e. 60 dwellings per *net* hectare) applied across the full land area (i.e. also across the remaining 10%-20%) would be likely to form an appropriate lower bound dwelling mix if higher density apartments do not become feasible on these areas in the medium to long-term. I consider that this would be an appropriate development pattern if the HDR precinct were intended to develop in the medium to earlier part of the long-term.

61 In my view, it is important to protect the development opportunity for some higher density apartments (such as through the suggested approach below) to occur in the long-term, with the ability to alternatively develop at medium densities of apartments do not become viable. I hold this view because these areas would otherwise have a tendency to develop more quickly at a medium-density scale in response to incentives for faster returns from developers. If this occurred, the increased range and number of dwellings available to meet community demand over a longer time period would form the opportunity cost. Once developed, there would be limited ability for the land uses of these

areas to change in response to demand (and viability) that emerges over a longer time period.

Medium Density Residential Precinct Densities and Dwelling Mix

62 As stated in my EIC (paragraphs 96 to 99, and 102), I do not support any reduction in proposed densities within the MDR precinct from the notified TPLM Variation proposed density of 40 dwellings per gross hectare. I also do not support the provision for detached dwellings in the MDR precinct for the reasons set out in my EIC.

63 As I do not support any change to the proposed densities within the MDR, I therefore consider that any change to a calculation of minimum density on a *net* basis would need to correspond to a gross density of 40 dwellings per hectare. Based on my calculations, a density of around 53 to 62 dwellings per *net* hectare (depending upon the level or development efficiency) is likely to correspond to a density of around 40 dwellings per *gross* hectare.

64 Although initially sought in a number of submissions, a reduction in densities within the MDR precinct area was not discussed in submitter economic evidence.

65 My calculations show that the proposed densities of 60 dwellings per net hectare for the HDR precinct, compare to a dwelling density of 40 to 45 dwellings per gross hectare and therefore align with the TPLM Variation proposed density minima for the MDR precinct of 40 dwellings per gross hectare. Based on my own calculations (Appendix B of my EIC), and as set out in the evidence of Mr Wallace, development at this density could be achieved with a mixture of medium-density dwellings. I note in the JWS that there is general agreement among the economic experts that these dwelling development patterns are currently commercially feasible and form a viable development option within the precinct in the short to medium-term.

Alternative Approaches to Dwelling Yield and Density within the HDR Precinct

Identifying Sites for Higher Density Apartment Development

66 I agree that the feasibility of development on a site is likely to be reduced in the short to medium-term if a portion of each site is required to

concurrently develop at higher densities to achieve the proposed density minima.

67 I consider therefore that identifying specific areas (within the HDR precinct or within each site) for higher density development may form an alternative approach to the proposed dwelling densities across HDR precinct. The remainder of the precinct/site could then be enabled to develop at densities (such as 60 dwellings per *net* hectare) that are feasible and able to be delivered with more certainty in the short to medium-term.

68 In my view, it is important to provide for higher density dwellings in a way that is commensurate with the level of viable development in relation to the precinct development timing objectives. In this way, the HDR precinct is more likely to deliver a range and mix of dwellings that is better suited to community demand over the intended time period of development.

69 It is important that any areas identified for higher density development are appropriately determined in terms of size (land area), scale (e.g. height) and location.

70 In my view, areas within the HDR precinct that are closer to the commercial centre are likely to form the most efficient locations for higher density development opportunity. Higher density development that occurs in these areas is likely to have greater economic benefit through supporting the commercial viability and vitality of the centre. I note that the HDR precinct is spatially extensive relative to the distances from the centre edge where higher density apartments are generally sustained in other urban economies with similar sized centres and levels of market establishment.

71 While areas closer to the commercial precinct are likely to produce the most efficient locations for higher density development within the HDR precinct, I consider that there is likely to be a cost in relation to the timing of development. As higher density development is more likely to occur in the long-term, preserving these areas for development may result in a significant time period where the commercial town centre has surrounding vacant areas. Therefore, I consider it may also be appropriate to undertake this approach at a site level, providing the

market with the flexibility to identify the location for future potential higher density development.

72 I consider that an upper bound efficient land area provision for higher density development can be guided by my analysis in paragraphs 30 to 33. This approach shows the land area, within the precinct, required to develop at higher densities to achieve an overall dwelling yield that supports the traffic objectives, with the rest of the precinct developing at densities that are current commercially viable. However, as noted in my EIC, the spatial extent of the HDR is large within the medium-term context (EIC paragraph 100) and consequently requires a significant share of the long-term apartment market demand to be met within this location to achieve the dwelling yields related to this spatial extent (EIC paragraph 77).

73 I therefore consider that a land area provision of up to 2 hectares (gross) for higher density apartment development is likely to form an efficient size if an overall density minima of 60 dwellings per ha gross is required. This area would be able to accommodate the lower bound area required for apartment development to achieve overall dwelling yields to meet transport objectives. It would also provide development opportunity to achieve a higher dwelling yield if the sites were developed more intensively, including if the viability of apartments increased in the future at greater rates than currently projected.

74 In my view, it would be efficient to provide development opportunity for higher density apartments at a level of storeys commensurate with levels of feasibility and market demand. As set out in my EIC (paragraphs 116 to 118), I consider that between 6 and 8 storeys would be appropriate as it would enable greater yields to help offset construction costs and align with the scale of market demand.

75 I consider that a density maxima is likely to be less efficient at determining an appropriate development opportunity on these areas identified for higher density development if applied at the individual site scale of these individually formed areas. This is because the relationship between density maxima (expressed as dwellings per hectare) and height can vary significantly as the number of dwellings achieved on a site (and therefore density maxima) varies by the intensity of site coverage and average apartment size.

76 I recognise that this would concentrate costs outlined in paragraphs 53 to 55 into particular parts of the precinct, for particular landowners, and that these sites may remain vacant into the long-term.

77 In my view, it would be appropriate for there to be provision for these sites to alternatively develop at medium densities if the market for higher density development is not viable toward the end of the intended development period of the TPLM or at the point at which other capacity within the TPLM has been utilised within the precinct.

Reduction in HDR Precinct Density Minima

78 I am also able to support a reduction in the minimum density of the HDR precinct to 50 dwellings per gross hectare. I consider this range (50 to 60 dwellings per gross hectare) would also produce a mix of dwellings that are well-suited to long-term community demand and would be within a reasonable range of potential long-term feasible dwelling development patterns.

79 I consider that a density minima of 50 dwellings per gross hectare would be likely to produce a similar mixture of medium density dwellings to the originally proposed 60 dwellings per gross hectare across the land areas which are developed at a medium-density scale. The likely medium density dwelling mix corresponds to patterns of development feasibility and housing demand. I note also that Mr Thompson (at paragraph 19 of his EIC) has supported a higher density minima of 55 dwellings per gross hectare in the HDR precinct area.

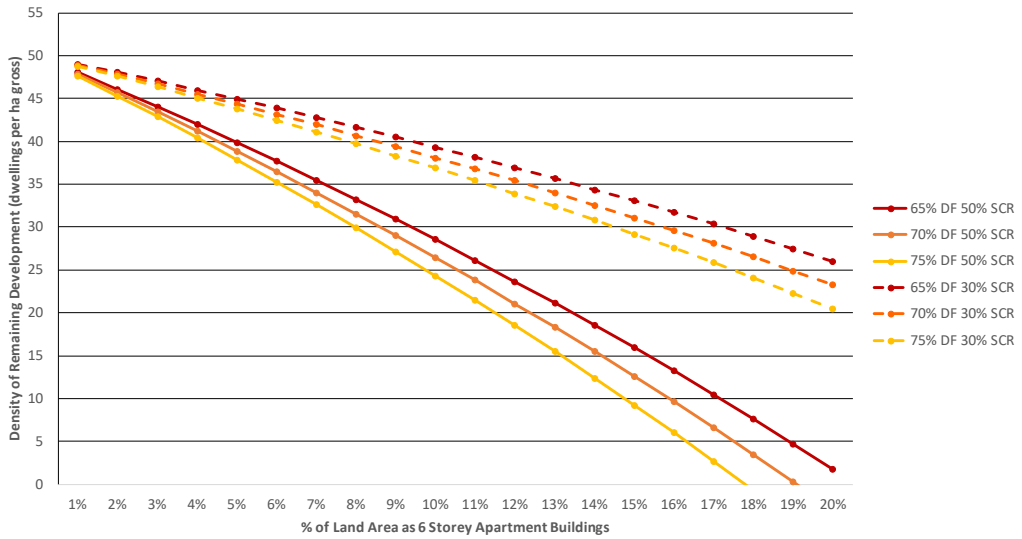
80 In my view, the main difference to the Council-proposed 60 dwellings per gross hectare is likely to be a reduction in the number and share of higher density (6 storey apartments) dwellings constructed. While I understand that this alternative density could be achieved without constructing higher density 6-storey apartment dwellings, this would require a much larger share of dwellings overall to be constructed as 2 to 3 storey walk up apartments. While these are commercially feasible, I consider that the viable number of these dwellings will be limited by the scale of market demand, meaning that higher density apartments would still need to form a share of the overall development.

81 I consider that the changes to the density minima approach (as outlined in paragraphs 66 to 77) would still be required to both prevent the limitations to medium density development occurring in the short to

medium-term and to reduce any costs from land remaining vacant if market demand for higher density dwellings does not occur.

82 I have estimated the required land area required to develop at 6 storey higher density apartments to achieve an overall density minima of 50 dwellings per gross hectare. I have applied the same approach as outlined in paragraphs 30 to 33, which is summarised below in Figure 2.

Figure 2 - Share of Land Developed as High Density Apartments (6-Storey) and Corresponding Average Density of Remainder Area: 50 dwellings per gross hectare density minima



83 With the application of an overall density minima of 50 dwellings per gross hectare, I estimate around 4% to 9% of the HDR precinct land area would need to be developed as high density apartments to achieve an average density of 60 dwellings per *net* hectare (40 to 45 dwellings per gross hectare) across the rest of the precinct. This amounts to between 0.8 ha and 1.9 ha, which is 2% to 4% of the developable land area of the TPLM overall.

84 If these areas containing higher density apartments were developed more intensively (i.e. with a 50% building coverage), then this would reduce to a land area of 0.4 to 1.0 ha. This equates to 2% to 5% of the HDR precinct land area, or 1% to 2% of the overall TPLM developable area.

85 I estimate that a change to a density minima of 50 dwellings per gross hectare would reduce the HDR precinct yield required to achieve the density minima by around 200 dwellings (see Figure A-2 in Appendix A) from that originally proposed by Council (at 60 dwellings per gross hectare). A density minima of 50 dwellings per gross hectare would

result in a total yield (in the HDR precinct) of around 990 dwellings if the 19.8 hectare (net of stormwater) HDR precinct area were fully developed to achieve the density minima. This is reduced from a yield of around 1,188 dwellings (in the HDR precinct) if it were instead fully developed at a density minima of 60 dwellings per gross hectare. Figure A-3 in Appendix A has also been provided to demonstrate the change in dwelling yields with the adoption of different *net* densities.

86 In my view, the actual difference in realised dwelling yield in the HDR precinct is likely to occur in the long-term and may be lower than the difference in required dwellings to meet density minima. This is because most of the difference is likely to occur in the number of higher density apartment dwellings, with patterns of medium-density development likely to be similar over the short to medium-term. I estimate the higher density dwellings are only likely to become feasible in the long-term. I also note that some of these dwellings may not become commercially feasible, which would reduce the difference in realised yield between the density minima scenarios.

Maximum Site Sizes

87 Mr Thompson has alternatively proposed (JWS issue 5 and paragraph 17 of his evidence) the application of a maximum site size within the HDR precinct as a mechanism for achieving an appropriate mixture of dwellings within TPLM. He supports maximum site sizes of around 250m^2 in the MDR precinct and around 200m^2 in the HDR precinct. I calculate that this would result in a density of around 26 dwellings per gross hectare, or 40 dwellings per net hectare in the MDR precinct, or 33 dwellings per gross (51 net) hectare in the HDR precinct.

88 I do not support this approach and consider it would be likely to adversely affect the range and mix of dwellings within the precincts. In my view, it is likely to result in a dwelling mix that is less suited to community needs. This is likely to occur either through encouraging a narrower range of lower intensity dwellings or result in a pattern of land parcels that will limit the future ability to develop sites.

89 I consider that a maximum site size approach may result in landowners subdividing their land into parcels at sizes close to this limit, then providing these to the market as lots for subsequent development through property developers. In my view, landowners may be

incentivised to take this approach as it would provide them with lower risk returns in the short-term.

90 If this occurs, then the remaining lot structure would be likely to limit the development of integrated developments of attached dwellings (e.g. rows of terraced houses). The feasibility of attached multiple dwelling developments relies on initially purchasing larger lots, with subdivision into individual titles at the point of dwelling construction. The proposed maximum lot sizes would also prevent the development of other attached dwellings, such as low-rise apartments, that instead require super lots for development.

91 Mr Thompson, in his evidence at paragraph 19, claims that the proposed density ranges only allow for a 17% variation in site sizes within each development. I consider that this may only occur in instances such as a single development on a small site where the density is calculated within only that development.

92 The calculations I have undertaken on potential dwelling mixes across larger sites as well as those contained within the masterplan document and the urban design EIC of Mr Lowe (paragraphs 29 to 34) show that the proposed density ranges can produce a much wider range of site sizes and dwelling typologies than suggested by Mr Thompson. I consider that, if calculated across wider areas or larger sites, then the approach of proposed densities enable flexibility in the range and size of dwellings.

Proposed Western Extension Area

93 There is general agreement among the economic experts (whom have considered this issue) (JWS issue 3) that the Extension Area, as proposed by AHFT, may form an appropriate area for future urban residential development.

94 I broadly agree with the reasons for urbanisation of this area set out in the EIC of Mr Heath (paragraphs 48 to 50) and Mr Osborne (paragraphs 9, 22, 24 to 26 and 40) and consider they expand further on the reasons expressed in paragraph 114 of my primary evidence. These include the location relative to the extent of the urban edge in the eastern corridor and to the large employment hub of Frankton. I also agree that, due to its location, urbanisation of this area is likely to form a more efficient outcome than development at rural lifestyle densities. I note that there

may be other factors affecting the appropriateness of urbanisation at this location.

95 Where I disagree with Mr Heath and Mr Osborne is in relation to the density at which it should be urbanised if it were urbanised during the development period of the TPLM. Mr Heath and Mr Osborne support urbanisation predominantly as medium density residential development, while I would support urbanisation at a scale reduced from that of the proposed MDR precinct, such as the QLDC Proposed District Plan Low Density Suburban Residential Zone scale if it were to be urbanised in the short to medium-term. If it were urbanised in the medium to long-term, or beyond the initial development period of the TPLM, then I could support urbanisation at a medium-density scale.

96 In my view, Mr Heath has not properly considered the spatial scales at which the urban economic processes apply as they relate to different residential densities that occur across the urban environment. These refer to the benefits of agglomeration described by Mr Heath, specifically, differentiating between the more general effects of urbanisation vs. the economic benefits that are associated with intensification around commercial centres.

97 I agree that the Extension Area will fall within the catchment area of both the TPLM commercial centre and the larger Frankton area of business activity. I consider these factors are relevant to determining an appropriate location of the urban edge more broadly. This is one of the reasons why I support urbanisation of this area. However, it is also crucial to then consider the patterns of residential development *within* an urban environment and how these generate the benefits of intensification and agglomeration described by Mr Heath and Mr Osborne. I refer to the patterns of intensification within the urban areas (such as in relation to centres) that occur at a more refined spatial scale than a broader assessment of the location of the urban edge.

98 In my view, there are important differences in growth patterns within urban areas (e.g. level of concentration around commercial centres), and their consequent effects. Growth patterns with greater intensification around centres typically better support the viability and vitality of centres than more dispersed patterns of growth. I consider that these spatial differences also apply within centre catchments, where greatest benefit occurs from highest intensification in parts of the

catchment that are closer to the commercial centre vs. areas of the catchment that are further from the centre.

99 Mr Heath's spatial assessment does not appear to have adequately distinguished between the location of the urban edge generally vs. the assessment of development patterns within urbanised areas or within centre catchments. The rationale appears to be that if an area is suitable for urbanisation and falls within the wider catchment of a commercial centre, it is therefore suitable for intensification without further distinction of its location within the urban environment or centre catchment.

100 In my view, it is critical to recognise the differences in development patterns with respect to the level of intensification around commercial centres. It is important to differentiate between development within a centre catchment that is closer to a commercial centre vs. development within the catchment that is further from the centre.

101 On this basis, I only partly support the approach taken by Mr Heath insofar as establishing the proposed Extension Area as an appropriate location for urbanisation. I consider that it is then important to further examine its location within the catchment, taking account of the likely level of intensification supported by market size and timing of market demand.

102 As set out in my primary evidence, I have considered these factors in assessing the proposed Extension Area. In my view, the proposed Extension Area, whilst within the commercial centre catchment, is located further from the centre than other areas suitable for medium density urban development. This is shown in Figure 3 of Mr Heath's evidence.

103 Taking account of market size and timing of demand and distance from the centre, I consider that medium density development within the proposed Extension Area may dilute the intensification from instead occurring in parts of the catchment that are closer to the commercial centre in the short to medium-term or during the development period of the TPLM. I disagree with Mr Heath that there is an unlimited market size for medium density development. In my view, further development opportunity in this location is unlikely to affect rates of household

formation or dwelling demand. It will instead be more likely to affect the timing and distribution of growth within the centre catchment area.

104 In my view, *long-term* development of this area at a medium-density scale is likely to be an efficient pattern of development. If this area is urbanised at a medium-density scale in the short to medium-term or within a timeframe that coincides with the development of the rest of TPLM, then it may initially dilute intensification of residential development in areas surrounding the TPLM commercial centre.

Residential Visitor Accommodation in the HDR Precinct

105 I consider that it would be beneficial to enable a level of RVA to occur in higher density apartment buildings of four or more storeys within the HDR precinct. The economic experts (except for Mr Thompson) support (JWS issue 3) higher density typologies in the HDR precinct containing RVA as it is likely to increase the development feasibility.

106 In my view, increased delivery of these typologies is likely to consequently also increase the supply of these smaller apartment dwellings to resident households. This would occur if a share of dwellings within each development were retained for resident households through limiting the proportion of dwellings able to be used for RVA.

107 In my view, an appropriate share of dwellings as RVA should be set at a level where the number of other dwellings available for resident households is equal to or greater than the number of dwellings likely to alternatively be developed on the site at a reduced density. Based on my analyses of recent higher density apartment development, this would equate to up to 50% of dwellings within a 6 storey apartment building. In my view, this estimate could be refined through further assessment. I also recognise there are other factors that affect the appropriateness and level of any provision for RVA dwellings within a higher density residential building.

Conclusion

108 I consider that a dwelling mix produced by a density minima range of 50 to 60 dwellings per gross hectare in the HDR precinct is likely to produce a range and mix of dwellings that is beneficial for the community and well suited to housing need in the long-term. Most of the land area

would be likely to develop at currently commercially feasible medium-densities, with a small portion required to develop at higher densities.

109 In my view, it would be beneficial for the dwelling mix to contain higher density apartment dwellings. However, I consider these are only likely to become feasible for the commercial market in the long-term and with lower certainty.

110 I therefore consider that the changes to the density minima approach (as outlined in paragraphs 66 to 77) are likely to be required to both prevent the limitations to medium density development occurring in the short to medium-term and to reduce any costs from land remaining vacant if market demand for higher density dwellings does not occur.

111 I support enabling RVA to occur in higher density apartment dwellings (as outlined in paragraphs 105 to 107) to increase the commercial feasibility of these dwellings and therefore increase the number of apartment dwellings delivered by the market for resident households.

112 I support the urbanisation of the AHFT-proposed western Extension Area. In my view, *long-term* development of this area at a medium-density scale is likely to be an efficient pattern of development. If this area is urbanised at a medium-density scale in the short to medium-term or within a timeframe that coincides with the development of the rest of TPLM, then it may initially dilute intensification of residential development in areas surrounding the TPLM commercial centre.

Susan Michelle Fairgray

10 November 2023

APPENDIX A – Dwelling Densities and Changes in Dwelling Yields

Figure A-1: Gross and Net Density Conversion by Developable Area Yield

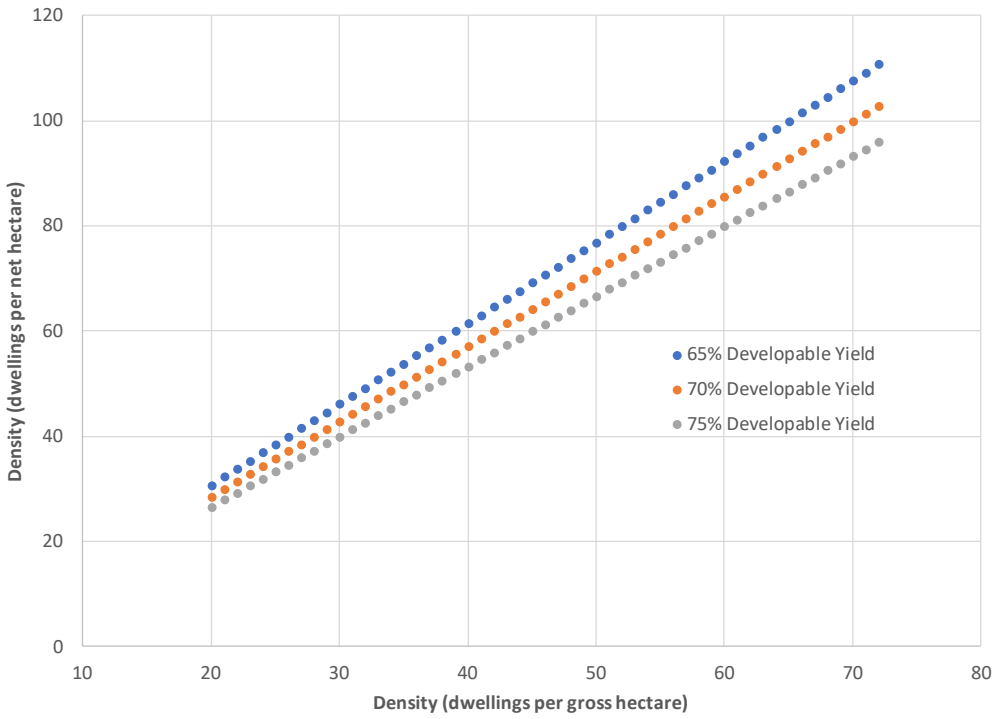
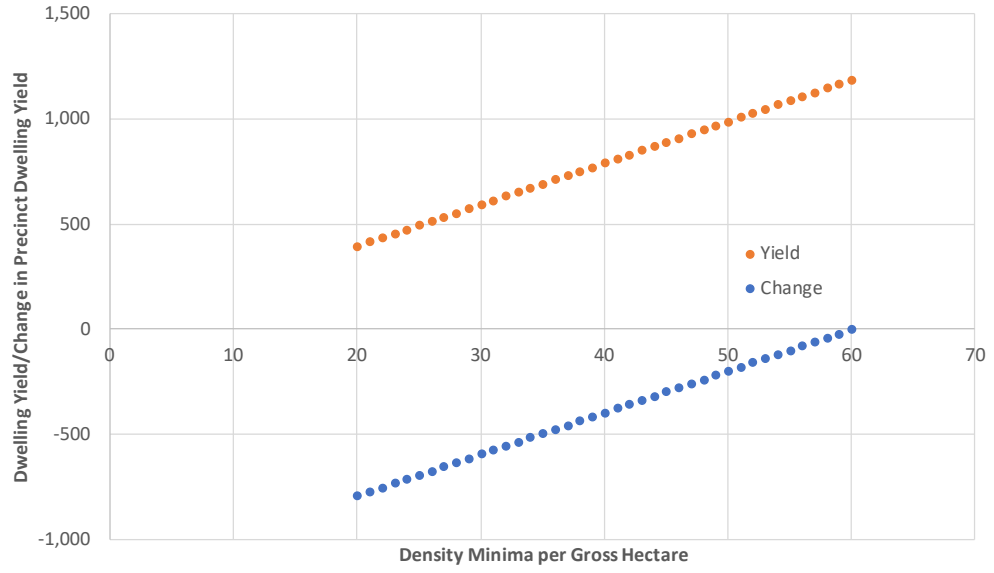


Figure A-2: Change in HDR Precinct Dwelling Yield from Originally Proposed Density Minima of 60 Dwellings per Gross Hectare



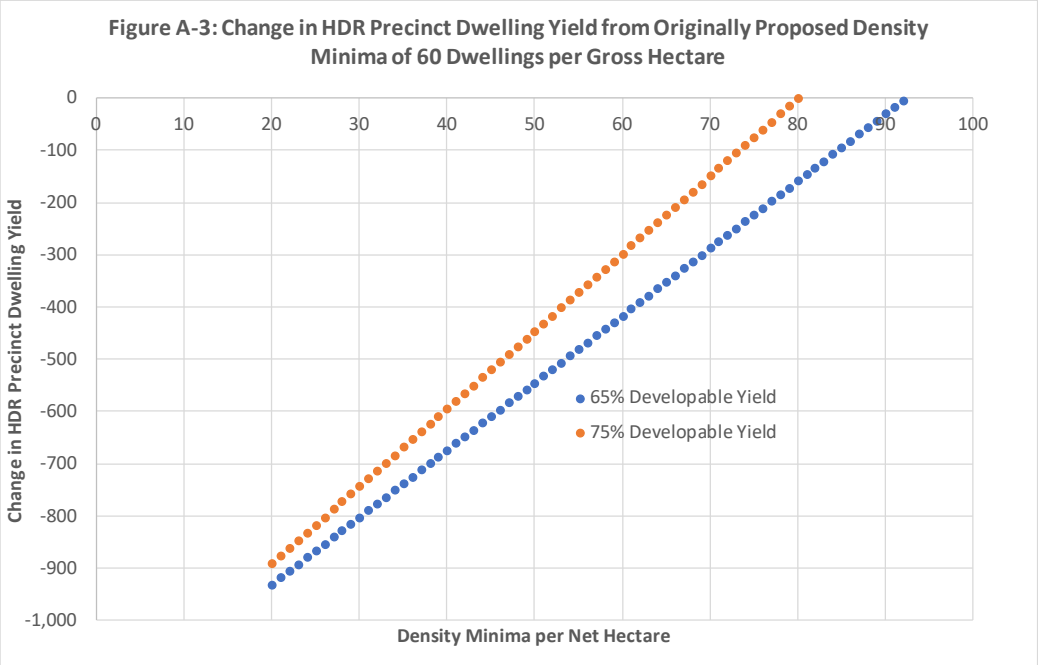


Figure A-3: Change in HDR Precinct Dwelling Yield from Originally Proposed Density Minima of 60 Dwellings per Gross Hectare
Change in HDR Precinct Dwelling Yield
0
-100
-200
-300
-400
-500
-600
-700
-800
-900
-1,000
0
10
20
30
40
50
60
70
80
90
100
65% Developable Yield
75% Developable Yield
Density Minima per Net Hectare