SGS Economics & Planning

MORNINGTON PENINSULA PLANNING SCHEME AMENDMENT C219MORN – EVIDENCE OF ANDREW SPENCER ON HOUSING CAPACITY

JANUARY 2023

Prepared for
Mornington Peninsula Shire Council

Independent insight.

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SUMMARY

1. Overall, I find that the approach Council has used to estimate housing capacity in residential areas and activity centres is sound. Although I have identified a number of additional consideration or investigations that might have been included, their omission does not constitute a critical failure in the approach and techniques used.
2. The absence of mapping of the capacity analysis findings has limited my ability to undertake a detailed interrogation of the accuracy of the analysis. I have no reason to believe that the analysis is not accurate. The two spreadsheet models reviewed appear well designed, consistent and suggest good attention to detail.
3. I have identified several issues that suggest the housing capacity estimate for the Shire identified in the *Mornington Peninsula Housing and Settlement Strategy: Refresh 2020-36* of 52,895 dwellings may be an overestimate:
   - The minimum lot size assumption of 300 sqm that has been applied to GRZ areas without subdivision controls is lower than has been recorded in recent development.
   - The assumptions for housing capacity in activity centres are somewhat optimistic.
   -
4. To account for these issues and their potential impact on housing capacity I have prepared an adjusted housing capacity estimate, based on Council's capacity analysis, but using alternative assumptions.
5. My adjusted capacity estimate of 26,921 net additional dwellings suggests a lower capacity figure than Council's reported estimate of 52,895 dwellings. However the adjusted capacity estimate still exceeds the 15 year demand projection of 17,746.
6. In considering how much capacity is required to accommodate 15 years' projected dwelling demand it is relevant to consider the manner in which demand 'consumes' capacity over time. Based on the adjusted capacity estimate, in the first year of the planning period, for every dwelling required (demand) there are 23 hypothetical dwelling (capacity) opportunities. After 15 years this ratio is reduced to 9 dwelling opportunities for every dwelling required. This analysis suggests that housing capacity in Mornington Peninsula will exceed demand for the 15 years planning horizon.
7. Furthermore, as Council is required to ensure the capacity to meet the State's projected housing growth over a rolling 15-year horizon, it will need to continue to review housing capacity and may be required to make future changes to its planning scheme.
8. Although my adjusted capacity estimates of 26,921 dwellings varies from Council's report capacity estimate of 52,895 dwellings this difference does not imply a critique of Council's *approach* to the capacity assessment. It reflects the fact that the application of more conservate assumptions affects the capacity results. It is conceivable that the 'true' value for housing capacity in the Mornington Peninsula falls in-between Council's capacity estimate and my own.

1. EVIDENCE STATEMENT

A. Background

Amendment c219morn

9. Amendment c219morn proposes changes to the zones, overlays and policies affecting the residential areas of the Mornington Peninsula. The amendment implements the following two documents:
   - *Mornington Peninsula Housing and Settlement Strategy: Refresh 2020-36,* prepared by Council and dated July 2020 (HSS Refresh), and
   - *Mornington Peninsula Neighbourhood Character Study and Guidelines*, September 2019, prepared by Ethos Urban and adopted by Council in October 2019
10. The amendment also removes permit triggers and simplifies provisions in the Design and Development Overlay (DDO) to simplify the permit application process for constructing a building or constructing or carrying out works for one dwelling on a lot.
11. In March 2019 Council prepared a housing capacity analysis to help inform the HSS Refresh and to ensure planning would adequately address the requirement of the Planning Policy Framework "to accommodate projected population growth over at least a 15-year period" (PPF, Clause 11.02-1S).
12. Council's capacity analysis was initially based on the current planning controls[1] however, I understand that as the amendment does not propose to modify any existing minimum lots size requirements or introduce new minimum lot size requirements (with one minor exception[2]), the capacity analysis has been taken to also reflect capacity under the amendment. As such, capacity would be largely unaffected by the amendment. This matter is discussed further at below (see paragraph -859257392.427 and -859257392.427).

Prior involvement in the amendment

13. SGS Economics and Planning were previously instructed to provide a peer review of Council's housing capacity analysis. I undertook this peer review and the report of my findings is attached at Appendix B.
14. The report's findings are summarised in this evidence statement and updated as relevant.

Structure of evidence statement

15. The remainder of my evidence statement has three sections:
16. The first considers the matter of whether Council's housing capacity analysis is "sound, accurate and consistent with the approach set out in the Planning Policy Framework at Clause 11.02-1S and Planning Practice Note 90 – Planning for Housing (PPN90)".

[1] "The [housing and settlement strategy] reviewed all residential areas as well as activity centres to ascertain the Shire's housing capacity *based on current planning controls*". From Mornington Shire (2022) Amendment C219morn: What, Where, Why and How? p2 (emphasis added).

[2] For the area subject to the Neighbourhood Residential Zone Schedule 36 (the 'Dromana Hillside') a new minimum lot size requirement is proposed of 650 sqm. In this location housing capacity would conceivably be reduced by the amendment compared to the current controls. However, given the small extent of this area, the impact on total capacity of this specific change would be very modest.

17. The second considers whether the findings of the capacity assessment suggest the amendment will provide sufficient housing capacity to accommodate 15-years of projected housing demand.

18. The final section briefly considers the impacts of the proposed post-exhibition changes on my findings.

B. Council's housing capacity analysis

19. I have been instructed to consider whether Council's housing capacity analysis is "sound, accurate and consistent with the approach set out in the Planning Policy Framework at Clause 11.02-1S and Planning Practice Note 90 – Planning for Housing (PPN90)".

20. Dr Marcus Spiller of SGS Economics and Planning will provide expert evidence with respect to the impact of the amendment on housing affordability.

Peer review of Council's capacity analysis

21. These matters have been addressed in my previous peer review of Council's capacity analysis (Appendix B). This report describes in some detail the specific features of housing capacity assessment approach and will not be repeated here.

22. My main findings concerning Council's housing capacity analysis are as follows:

Overview

23. The mechanics of Council's housing capacity analysis consists of three main elements:

    - (i) 31 GIS files which were used to identify residential zoned land that might accommodate additional dwellings.
    - (ii) An Excel spreadsheet summary of the residential land capacity analysis that incorporates the outputs from the 31 GIS files which include estimates of potential dwelling yields for different categories of land.
    - (iii) An Excel spreadsheet for activity centre housing capacity that has been used to estimate the housing capacity on land that is zoned CZ1 and PUZ6 in seven activity centres (Baxter, Dromana, Hastings, Mornington, Rosebud, Rye and Somerville).

Council's capacity analysis for residential land

24. Residential land potentially available for new housing development was assessed using the following criteria:

    - Land with a residential zoning (i.e. currently GRZ and LDRZ), excluding Council owned land and common-title lots within existing residential subdivisions (e.g. driveways and common areas)
    - Lots with an area at least double the minimum lot size assumption applied in that location

25. The approach used by council to identify residential land that is available for additional dwellings appears appropriate and robust.

26. No mapping was provided to accompany the capacity assessment. I understand this was because Council did not keep a static GIS model as a 'snapshot' in time from which the capacity analysis was calculated. To gain a better understanding of the workings of Council's capacity model, and to see evidence of the mapping and calculations that underpinned the capacity analysis, I attended Council's offices on 21 September 2022 and viewed a small sample of the 'dynamic' GIS maps on screen.

27. However, as I have not reviewed mapping in any detail, I am not in a position to comment on the specific results of the application of this approach (e.g. is it plausible that the particular lots deemed available for new residential development will be developed and achieve the nominated dwelling yields).

28. I noted that some matters may warrant further consideration by Council in assessing whether sites are likely to be available to accommodate more housing in the next 15 year: heritage status; the age of the existing housing stock; and strata-title. Council Officers have considered these matters and are of the view that excluding sites on account of these issues is unlikely to significantly impact the findings of the capacity analysis as relatively few lots with capacity of additional housing would be subject to these constraints. I am not sufficiently familiar with the details of these matters across the Mornington Peninsula Shire, however it is plausible that only a small number of lots are subject to these constraints.

29. A minimum land area per dwelling was used to estimate dwelling potential of any given site as follows:

    - For areas subject to a minimum lot sizes control for subdivision these controls were used to estimate the housing capacity.
    - For LDRZ areas without a DDO Schedule a minimum lot size of 2,000 sqm was used.
    - For GRZ areas without minimum lot size controls dwelling capacity was estimated under different scenarios using a range of minimum lot size assumption between 200 sqm and 500 sqm in increments of 50 sqm. For the purposes of reporting on the results of the capacity analysis the minimum lot size of 300 sqm was chosen.[3]
    - When calculating the potential number of dwellings on a lot based on minimum subdivision area thresholds, the potential number of dwellings was rounded down to the nearest whole number.

30. Where planning controls set out minimum lot size requirements, this is a robust method for estimating the potential capacity for new dwellings. For areas without minimum subdivision controls the use of 'informed assumptions' that reflects the likely average lot size of new dwellings is appropriate.

31. During the preparation of the peer review Council provided me with information on recently approved housing developments on GRZ zoned land without subdivision controls for the period 2017 to 2022. This data suggests that the average lot size per dwelling of all approved housing developments between 2017 and 2022 was 366 sqm. There is some variation in this average between suburbs however for most the average land area per dwelling falls within the range of 320 sqm to 420 sqm.

32. As recent permit data suggested that the average lot size for recent development on GRZ land without subdivision controls has been consistently higher than 300 sqm, I have considered the impact of changes to this key assumption on the findings of the capacity analysis. This adjusted capacity estimate is discussed in Section C below.

Council's capacity analysis for activity centres

33. Land in activity centres potentially available for new housing development was assessed using the following criteria:

    - All land zoned C1Z and PUZ6 in seven activity centres at Mornington, Rosebud, Hastings, Dromana, Rye, Somerville and Baxter
    - Excluding land with site-specific heritage listings
    - Excluding recently developed sites (e.g. newly constructed upper-storey apartments at the time of the analysis).

34. The density of potential new housing development in activity centres was based on the built form requirements, including building heights and setbacks, as set out in the existing Design and Development Overlays (DDOs) for each Activity Centre. Specifically:

    - A maximum of three storey development in Mornington, Hastings, Dromana, Rye, Somerville and Baxter; and three and four storey development in Rosebud

[3] As reported in the Mornington Peninsula Housing and Settlement Strategy - Refresh 2020-36, July 2020, p33.

- All levels above ground allocated to residential development
- Building site coverage of 70% (i.e. ratio of site area to build area)
- In most activity centres additional setback requirements for the third storey resulted in 5% to 15% reduction of the building footprint at that level compared to the second level (rate varies by activity centre and precinct)
- In precincts with four storey development in Rosebud additional setbacks for the fourth storey resulted in even further reductions of the building footprint at that level (rate varies by precinct)
- A building efficiency rate of 80% (the ratio of the gross to net floor space)
- The average floor space per dwelling was 80 sqm.

35. Existing dwellings on site deemed available for development were netted off the total capacity estimates for the Hastings, Dromana and Rye activity centres (45, 5 and 5 dwelling respectively to provide net capacity estimates).

36. Given the absence of mapping of the capacity analysis findings it was difficult to form a definitive view of the suitability of the approach used to determine the land in activity centres that is available for residential development

37. While heritage items and recent development (criteria unknown) have been excluded, all other land zoned C1Z (and in some case land zoned PUZ6) is available to be redeveloped. This may be a plausible assumption. Although consideration might have been given to excluding land on the basis that it is unlikely to be redeveloped in the next 15 years because it is strata-titled or features significant existing capital improvement or smaller and/or isolated lots that are difficult to amalgamate for redevelopment.

38. The inclusion of PUZ6 land – being Council-owned land currently used as public car parks – implies that these sites might be made available for residential development in the next 15 years. While it may be technically possible to redevelop Council car parks for housing, there are significant practical, political and financial barriers to replacing public parking with private development.

39. The modelled assumptions concerned the building scale, site coverage, building efficiency and dwelling size appear appropriate. I note that the average apartment size assumption of 80 sqm is taken from a study of housing capacity undertaken for Boroondara.[5] It is conceivable that the average size of newly constructed apartments in the Mornington Peninsula may be larger than 80 sqm if the mix of new apartments has a higher share of larger two and three bedroom dwellings compared to the inner-middle ring context of Boroondara. If this were to be the case this capacity for new housing in activity centres may be an overestimate.

40. An important element of the dwelling capacity analysis for activity centres is to demonstrate that the forms of development permitted – in this case 3 and 4 storey apartment developments with non-residential ground floors – are likely to be viable. While there is significant 'theoretical' development capacity for housing development in Mornington Peninsula's activity centres, some effort should be made to demonstrate that this capacity is likely to be realised. This might be done by simply referring to precedents for these forms of development in the activity centres. If there are few or no examples of recent apartment developments in activity centres, development feasibility analysis of hypothetical developments might be undertaken to provide evidence that these forms are viable, or at the very least are likely to become viable during the 15-year period.

Other comments

41. There does not appear to be a static version (electronic or hardcopy) of the base mapping used to produce the capacity analysis. However, I did view a small sample of

[5] SGS Economics and Planning (June 2015) *Boroondara Housing Capacity Analysis - Technical Report*

the 'dynamic' GIS maps on screen at Council's offices. While this mapping is not *essential* for the purposes of estimating housing capacity, retaining a snapshot in time of the spatial data that informed the capacity analysis would provide greater transparency and facilitate internal and external review. While I have no reason to believe that there are errors or omissions in Council's capacity analysis, it was not possible to review and 'spot check' mapping of the analysis and findings.

42. I also note that for the residential land capacity analysis a significant amount of data has been manually transferred from 31 GIS files to hundreds of formulas in an Excel spreadsheet, as opposed to an automated process. This manual process introduces an element of risk that data may not have been entered accurately. Once again, I have no reason to believe errors have been made in this process, but this is a possible weakness in the mechanics of the capacity analysis approach and it was not possible to verify the accuracy of the transferred data.

Conclusion

43. Overall, I find that the approach that Council has used to estimate housing capacity in residential areas and activity centres is sound. Although I have identified a number of additional consideration or investigations that might have been included, their omission does not constitute a critical failure in the approach and techniques used.

44. As to the question of the accuracy of the approach, I have found it difficult to form a view of this matter without the benefit of mapping of the capacity analysis findings that might permit more detailed interrogation. I have no reason to believe that the analysis is not accurate. The two spreadsheet models reviewed appear well designed, consistent and suggest good attention to detail.

45. I have identified several issues that could suggest the reported housing capacity of 52,895 dwellings is an overestimate.

46. .

47. To account for these issues and their potential impact on housing capacity I have prepared an adjusted housing capacity estimate, based on Council's capacity analysis, but using more conservate assumptions, which are described Section C.

Consistency with Planning Practice Note 90

48. PPN90 does not address the matter of housing capacity other than to make explicit references to the Planning Policy Framework requirement that planning authorities should "accommodate projected population growth over at least a 15-year period" (PPF, Clause 11.02-1S).

49. The discussion in section C below considered this requirement.

C. Will the amendment provide sufficient housing capacity?

50. I now turn to the question of whether the findings of the capacity analysis suggest the amendment will provide sufficient housing capacity to accommodate 15-years of projected housing demand.

Council's capacity estimates and my adjusted capacity estimates

51. Council have reported a housing capacity estimate of 52,895 net additional dwelling across the municipality, comprising of 32,658 dwelling on residential land without subdivision controls, 8,757 dwellings on residential land with subdivision controls and 11,360 dwellings in Activity Centres (see Table 1).

52. However, this could be an overestimate as:

- the minimum lot size assumption for GRZ zoned areas without subdivision controls land of 300 sqm is smaller than the average lot size of recent development in these areas, and
- the assumptions for the activity centres capacity analysis are somewhat optimistic.

53. I have therefore produced an adjusted housing capacity estimate to account for these issues, using the following assumptions:

    - A minimum lot size assumption for areas GRZ land without subdivision controls of 400 sqm, and
    - Halving of Council's housing capacity estimate for activity centres.

54. As Council's capacity analysis spreadsheet for residential areas included a range of minimum lot assumption for areas without subdivision controls and corresponding capacity results, I was able to directly extract capacity estimates based on a 400 sqm minimum lot size assumption for areas without a minimum lot size for subdivision.

55. There is no corresponding 'graduation' built into the capacity analysis for activity centres, and thus to develop a revised capacity estimate for these areas I have simply applied a crude discount. A 50% discount was chosen as a simple method of taking a more conservative view on the net housing capacity in activity centres.

56. To bring the timeframe of capacity analysis and VIF demand projections into rough alignment, I have also 'updated' the March 2019 capacity estimate to account for the fact that roughly two years of capacity will have been consumed between March 2019 and July 2021 (the nominal date of the 2021 projections in VIF 2019). To estimate the supply of new dwellings in that period I have relied on dwelling completions data for the years 2019 and 2020.[6]

57. Council's reported capacity estimate and my adjusted capacity estimate are compared in the table below. My adjusted capacity estimate gives a total of 26,921 net additional dwellings or 51% of Council's reported capacity estimate (52,895) (see Table 1).

TABLE 1: COUNCIL'S REPORTED CAPACITY ESTIMATE AND ADJUSTED CAPACITY ESTIMATE

Capacity by type	Council's reported capacity estimate*	Adjusted capacity estimate**
Residential land (without subdivision controls)	32,658	13,985
Residential land (with subdivision controls)	8,757	8,757
Activity Centres	11,360	5,680
"Adjustments" (see note)	120	120
Total (March 2019)	52,895	28,542
Estimate of new housing 2019 and 2020***		1,621
Total (July 2021)		26,921

Sources: *Mornington Council capacity analysis, March 2019; ** SGS adjustments to Council's capacity analysis; *** Based on idcommunity dwelling completions data for the years 2019 and 2020.

Note: This line item reflects Column BC in the 'Summary' tab of Council's residential areas capacity analysis spreadsheet. It is unclear why these adjustments were made – and they are not explained in the method report – however as they are relatively minor adjustments compared to the total capacity, it is of little consequence

idcommunity dwelling completions data for Mornington Peninsula: 2019 – 859 dw; 2020 – 762 dw;: total – 1,621 dwellings.[8] VIF 2019 is the most recent official government population and dwelling growth projections.

Official demand projections and housing capacity compared

58. The table below compares both housing capacity estimates with dwelling demand for the period 2021 to 2036 from the state government's 2019 VIF projections[8]. Council's housing capacity estimate of 52,895 dwellings is more than double the 15 years demand projection of 17,746 for Mornington Peninsula for period 2021 to 2036. My adjusted capacity estimate of 26,921 net additional dwellings suggests a lower capacity figure, however it also exceeds the 15 year demand projection.

TABLE 2: CAPACITY VS DEMAND AT THE MUNICIPAL SCALE

Capacity estimate	Total capacity: residential land and ACs	Dwelling demand (2021-2036)***	Difference	Share of capacity remaining at 2036
Council's estimate	52,895	17,746	35,149	66%
Adjusted estimate	26,921**	17,746	9,175	34%

Sources: *Mornington Council capacity analysis, March 2019; **Mornington Council capacity analysis, March 2019 with SGSEP calculations; ***VIF2019.

59. More recent population forecasts suggest the *population* of Mornington Peninsula by 2036 will be 181,097[9] which is somewhat lower than the VIF 2019 population projection of 200,365. This is likely to indicate that the growth trajectory for the Mornington Peninsula has changed in recent years. Future government projections may also be revised downwards for future releases.

60. I am not aware of any empirical evidence of the relationship between housing capacity, housing demand and housing supply that describes an ideal or preferred relationship between these quantities.

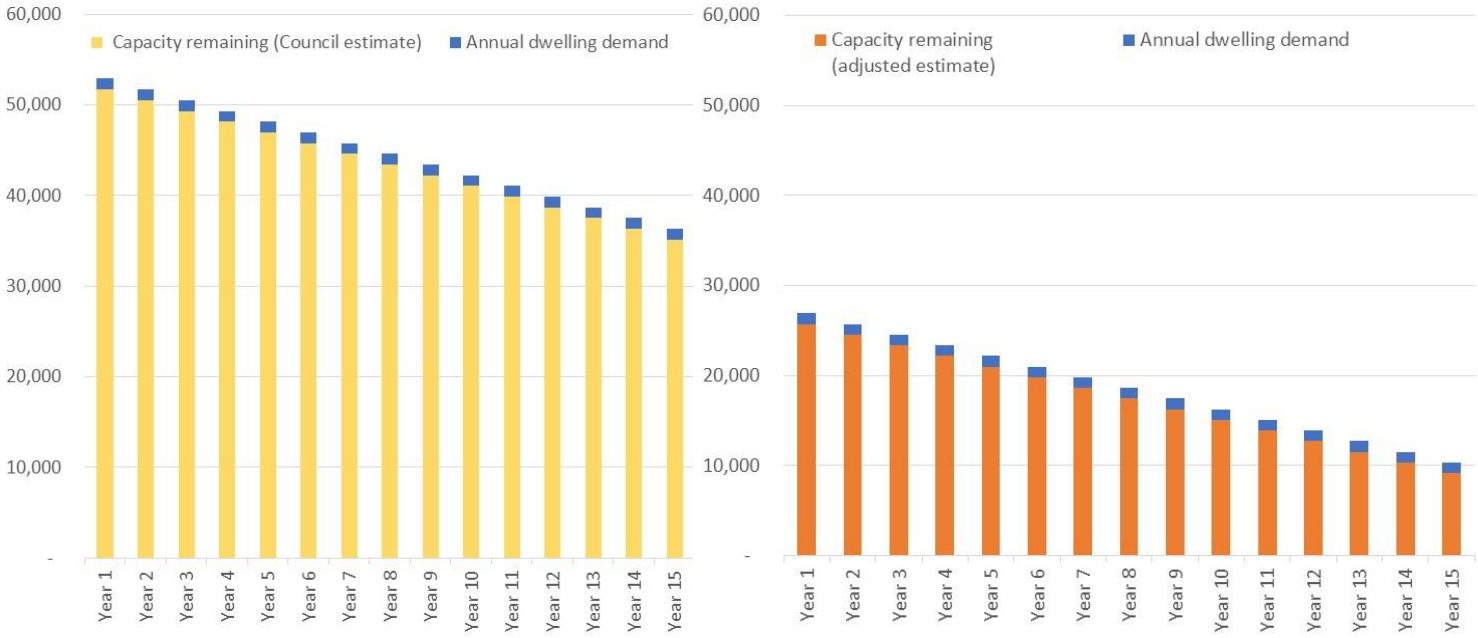
61. In considering how much capacity is required to accommodate 15 years' dwelling demand it is relevant to consider the manner in which demand 'consumes' capacity over time. Specifically, at the start of the planning horizon, there will be a large amount of capacity compared to total demand. Each year a share of the capacity is consumed as new dwelling are realised, reducing the housing capacity available in subsequent years.

62. This is shown graphically using the annualised dwelling demand for Mornington Peninsula with Council's housing capacity estimate and my adjusted capacity estimate, over a 15 year period. In these charts the annualised dwelling demand (1,183 dwellings) is shown in blue and the capacity remaining in shown in yellow (Council's capacity estimate) and orange (adjusted capacity estimate). In both cases the capacity consumed in any one year represents a modest share of the total identified capacity.

63. This visualisation demonstrates how the ratio of capacity to demand will decreases each year. The specific numerical elements of this process are shown in Table 3 below. Based on Council's capacity estimates, for every dwelling needed to meet demand in 'Year 1' there are approximately 45 potential dwelling opportunities (a ratio of 45:1). After 15 years, and assuming that no additional capacity is identified during this period, that ratio is reduced to approximately 31:1. Based on the adjusted capacity estimate, for every dwelling required to meet demand in 'Year 1' there are approximately 24 opportunities for new dwellings (a ratio of 23:1). By 'Year 15' the ratio is reduced to 9:1.

[8] VIF 2019 is the most recent official government population and dwelling growth projections.
[9] https://forecast.id.com.au/mornington-peninsula (Dated December 2021)

FIGURE 1: DEMAND AND CAPACITY: COUNCIL (LHS) AND ADJUSTED CAPACITY (RHS)



Source: SGS Economics & Planning Pty Ltd

TABLE 3: RATIO OF HOUSING CAPACITY TO DWELLING DEMAND OVER 15 YEARS

(A) Year	(B) Annual dwelling demand	(C) Capacity remaining (based on Council's capacity estimate)	(D) Ratio of annual demand to capacity (Council capacity estimate) [C ÷ B]	(E) Capacity remaining (based on adjusted capacity estimate)	(F) Ratio of annual demand to capacity (adjusted capacity estimate) [E ÷ B]
Year 1	1,183	52,895	45:1	26,921	23:1
Year 2	1,183	51,712	44:1	25,738	22:1
Year 3	1,183	50,529	43:1	24,555	21:1
Year 4	1,183	49,346	42:1	23,372	20:1
Year 5	1,183	48,163	41:1	22,189	19:1
Year 6	1,183	46,980	40:1	21,006	18:1
Year 7	1,183	45,797	39:1	19,823	17:1
Year 8	1,183	44,614	38:1	18,640	16:1
Year 9	1,183	43,431	37:1	17,457	15:1
Year 10	1,183	42,248	36:1	16,274	14:1
Year 11	1,183	41,064	35:1	15,090	13:1
Year 12	1,183	39,881	34:1	13,907	12:1
Year 13	1,183	38,698	33:1	12,724	11:1
Year 14	1,183	37,515	32:1	11,541	10:1
Year 15	1,183	36,332	31:1	10,358	9:1

64. A recent report by the Committee for Sydney has suggested the ratio of opportunities for new dwelling to dwelling demand (as shown in the table above) should be between 7 and 10.[11] Based on this proposition the adjusted housing capacity estimate suggests

[11] Committee for Sydney (2022) *Planning for Growth*.

there is sufficient housing capacity within the Mornington Peninsula to exceed the 10:1 threshold until 'Year 14'; and the threshold of 7:1 is exceeded throughout the 15 year period (at 'Year 15' the ratio is 9:1). On this basis there is sufficient housing capacity to meet projected demand for the next 15 years.

65. This analysis shows housing capacity in Mornington Peninsula will exceed demand for the 15 years planning horizon. Furthermore, as Council is required to ensure the capacity to meet the State's projected housing growth over a rolling 15-year horizon, it will need to continue to review housing capacity and may be required to make future changes to its planning scheme,

66. potentially increasing housing capacity in the future. The effect of this hypothetical planning work on capacity is show graphically in the chart below which shows an increase in housing to capacity in Years 11 and 21 assuming capacity-enhancing planning scheme changes are implemented every 10 years.

FIGURE 2: DEMAND AND CAPACITY – HYPOTHETICAL LONGER TERM SCENARIO

Source: SGS Economics & Planning Pty Ltd

Official demand projections and capacity compared for housing sub-markets

67. *Planning Practice Note 90 – Planning for housing* states that "Residential land supply will be considered on a municipal basis, rather than a town-by-town basis". However, it is conceivable that even where municipal-wide housing capacity exceeds municipal-wide demand (as is the case here), there may still be some misalignment between supply and demand in particular sub-markets that could inhibit the efficient operation of housing markets more broadly. It is worthwhile considering the alignment between capacity and demand at the 'sub-market' scale.

68. To compare the distribution of housing capacity and projected demand I have compared these data at the ABS Statistical Area 2" (SA2) scale. I have chosen SA2s as the VIF projections are provided for this geography and they provide a means for dividing Mornington Peninsula Shire into nine notional housing submarkets. The details and

mapping of this analysis are contained in section H of my Capacity Analysis Peer Review Report (see Appendix B).

69. Based on Council's capacity analysis, this comparison suggests that for all SA2, capacity for new housing exceeds projected demand for the 15-year period 2021 to 2036. There also appears to be a reasonable alignment between demand and estimated capacity at the submarket level as the capacity in each SA2 exceed demand.

70. In the case of the adjusted estimates most SA2s have sufficient capacity to accommodate their 15-year demand projections. Two SA2s that do not appear to have sufficient capacity: Dromana and Hastings – Somers. However, in both cases the additional capacity in the submarkets immediately adjoining (i.e. Rosebud – McCrae, Mount Martha, Flinders and Sommerville) is sufficient accommodate these shortfalls.

D. Impact of post-exhibition changes

71. Council has proposed post-exhibition changes to the amendment. These are set out in the documents *Post-exhibition Changes to Amendment C219morn* and *Letter to Panel - Sea Level Rise Mapping (FINAL) - 17.11.2022*

72. These changes do not impact my opinions set out above.

E. Concluding comments

73. Although I have broadly endorsed Council's approach to the capacity analysis, my adjusted capacity estimates of 26,921 dwellings varies considerable from Council's reported capacity estimate of 52,895 dwellings. The significant difference does not imply a critique of Council's *approach* to the capacity assessment but rather reflects the fact that a more conservative approach to particular assumptions can significantly affect the capacity results. I would characterise Council's assumptions as typically optimistic (e.g. with respect to land that is available for new housing development; or with respect to the land area per dwelling in areas without subdivision controls) whereas I have applied more conservative assumptions to ensure capacity is not overestimated.

74. It is conceivable that the 'true' value for housing capacity in the Mornington Peninsula might fall somewhere in-between Council's estimate and my own. In any case, even my more conservative capacity estimate should be sufficient to accommodate projected dwelling demand, as has been demonstrated above.

APPENDIX A: PLANNING PANELS VICTORIA EXPERT WITNESS DECLARATION

a) The name and address of the expert

Andrew Frank Spencer

SGS Economics & Planning Pty Ltd

Level 14, 222 Exhibition Street

Melbourne VIC 3000

b) The expert's qualifications and experience

Qualifications

Bachelor of Science (Geography) University of New South Wales, 2001

Bachelor of Arts (Comparative Development) University of New South Wales, 2001

Master of Urban Design, Sydney University, 2009

Experience

Andrew has over 20 years experience in planning, urban design and urban economics in private and public sector roles. He has contributed to a wide range of assignments spanning planning for housing and employment, economic appraisal, feasibility studies, affordable housing policy, development contributions and value capture.

Andrew has a broad range of analysis and presentation skills: building complex Excel models, mapping and spatial analysis (QGIS), and producing high quality graphics (Illustrator), publications (InDesign) and data visualisations (R, ggplot and plotly).

He has lectured in planning theory and tutored in urban design studies and urban economics at Melbourne University, and regularly provided guest lectures on urban economics and costs benefit analysis at RMIT.

c) The expert's area of expertise to make the report

Andrew has undertaken a number of housing and urban capacity assessment projects for state and local governments including the 2010 Housing Capacity Assessment project, for the Victorian State Government, which developed techniques for assessing potential housing capacity under existing policy settings throughout Melbourne's existing urban areas. Other housing capacity studies include:

- Hawksburn Village Structure Plan (AmC272) – City of Stonington (2020)
- Swann Street Activity Centre (AmC191) – City of Yarra (2019)
- Established areas housing capacity analysis – City of Wyndham (2018)
- Residential Capacity in Activity Centres model – City of Yarra (2018)
- Housing Capacity and Diversity Model – Hume City Council (2018)
- Monash Housing Capacity Assessment – Monash City Council (2016)
- Housing capacity of proposed residential zones – Moonee Valley Council (2015)

- Peer review of City of Yarra Capacity testing methodology – City of Yarra (2014)
- Housing Capacity Assessment – Dept. of Planning and Community Development (2010)
- Housing and Employment Capacity Study – City of Canada Bay (2008)
- Housing Capacity Study – City of Botany Bay (2007)

Andrew has previously provided expert evidence at Victorian Planning Panels on the impact of planning scheme amendment on housing capacity, development feasibility and the supply of employment land for City of Melbourne, Yarra, Maribyrnong, Monash and Moonee Valley Councils.

d) Other significant contributors to the report and where necessary outlining their expertise

None.

e) Instructions that define the scope of the report

My instructions in this matter were provided in a letter from Harwood Andrews dated November 24, 2022.

My substantive instructions were to provide an opinion on:

> *(i). whether the methodology adopted in the land supply and housing capacity analysis underpinning the Amendment is sound, accurate and consistent with the approach set out in the Planning Policy Framework at Clause 11.02-1S and Planning Practice Note 90 – Planning for Housing (PPN90), including the following strategy:*
>
> > *Plan to accommodate projected population growth over at least a 15 year period and provide clear direction on locations where growth should occur. Residential land supply will be considered on a municipal basis, rather than a town-by-town basis*
>
> *or whether any changes to the methodology are recommended;*
>
> *(ii). having regard to the above, whether the land supply and housing capacity analysis underpinning the Amendment demonstrates that the municipality is capable of achieving a 15-year supply of housing and residential land, including consideration of the State government population projections contained in Victoria in Future 2019: Population Projections 2016 to 2056; and*
>
> *(iii). whether the proposed post-exhibition changes to the Amendment impact on your opinion in relation to the above issue.*

f) The facts, matters and all assumptions upon which the report proceeds

All these matters are detailed in my evidence statement.

g) Reference to those documents and other materials the expert has been instructed to consider or take into account in preparing the report, and the literature or other material used in making the report

All these matters are detailed in my evidence statement.

h) Provisional opinions that have not been fully researched for any reason (identifying the reason why such opinions have not been or cannot be fully researched)

These matters are detailed in my evidence statement.

i) Questions falling outside the expert's expertise and also a statement indicating whether the report is incomplete or inaccurate in any respect

These matters are detailed in my evidence statement.

I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Committee.

Name Andrew Spencer

Date January 31, 2023

APPENDIX B: HOUSING CAPACITY ANALYSIS PEER REVIEW REPORT

SGS Economics & Planning

MORNINGTON PENINSULA PLANNING SCHEME AMENDMENT C219MORN – CAPACITY ANALYSIS PEER REVIEW

JANUARY 2023

Prepared for
Hardwood Andrews

Independent insight.

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SUMMARY

Overview

1. Overall, I find that the *approach* that Council has used to estimate housing capacity is sound.
2. As to the question of the *accuracy* of the approach, I have found it difficult to form a view of this matter without the benefit of mapping of the capacity analysis findings that might permit interrogation of the accuracy or otherwise. That said, I have no reason to believe that the analysis is not accurate.
3. As to the question of whether I agree with the *conclusions* of the capacity analysis, I have identified several issues that could suggest the reported housing capacity of 52,895 dwellings is an overestimate.
4. I have therefore prepared an 'adjusted' housing capacity estimate, based on Council's capacity analysis, but using some more conservative assumptions.

Residential land capacity analysis

5. I have queried the use of 300 sqm land area per dwelling assumption across all residential land without subdivision controls. This assumption has a significant impact on the findings of the capacity analysis for residential land. Council data on approved planning permit applications that suggests that the average lot size for developments in these areas since 2017 was 366 sqm. I have subsequently considered the impact of a larger lot size (in GRZ areas without subdivision controls) on total housing capacity (see 'adjusted capacity analysis').
6. A significant amount of data has been manual transferred from 31 GIS files to hundreds of formulas in an Excel spreadsheet. This manual process introduces an element of risk that data may not have been entered accurately. I have no reason to believe errors have been made in this process, but this is a possible weakness in the mechanics of the capacity analysis approach. If this has not been done already, a review or spot check of this process should be undertaken.

Activity centre capacity analysis

7. The assumption that most C1Z and PUZ land in the six activity centres is available for development is somewhat optimistic. Consideration might be given to excluding land in activity centres that is unlikely to be redeveloped in the next 15 year (e.g. already strata-titled, has significant capital improvements, other physical constraints). Council have suggested that recently developed land has been excluded from the capacity analysis. While it may be technically possible to redevelop Council car parks for housing (PUZ zoned land) there are likely practical, political and financial barriers to this taking place.
8. The average apartment size assumption of 80 sqm is taken from another study and it is conceivable that the average apartment size for new apartments in the Mornington Peninsula may be larger than 80 sqm on average.
9. An important element of the dwelling capacity analysis for activity centres is to give some consideration to whether the forms of development permitted – in this case three and four storey apartment developments with non-residential ground floors – are likely to be viable. While there is significant 'theoretical' development capacity for housing development in Mornington's activity centres, some effort should be made to demonstrate that this capacity is likely to be realised. This might be done by simply

referring to precedents for these forms of development in the activity centres. If there are few or no examples, development feasibility analysis of hypothetical developments might be undertaken to provide evidence that these forms are viable, or at the very least are likely to become viable during the 15-year period.

Other comments and observations

10. It would be prudent to keep a static GIS model as a 'snapshot' in time from which the capacity analysis was calculated. As it currently stands Councils GIS files are 'live' (based on available land today) and as such cannot be comprehensively verified against the data in the Excel capacity model spreadsheet from 19 March 2019.

11. The lack of accessible mapping and/or more thorough documentation on the entire capacity analysis exercise (e.g. consolidated documentation of the approach, assumptions, mapping and findings) makes it very difficult for other parties to review and understand the approach and findings. I acknowledge that Council officers have prepared a method report and some documentation was included in the spreadsheets. However, I would suggest that consolidated documentation of the approach, assumptions, maps and findings is produced.

Adjusted capacity estimates

12. I have suggested that Council's reported capacity estimate of 52,895 net additional dwellings could be an overestimate as:

    - the adopted lot size assumption for non-residential land for areas without subdivision controls is lower than the average lot size of recent developments, and
    - the assumptions for activity centres capacity are somewhat optimistic..

13. To account for this I have prepared an 'adjusted' housing capacity estimate, that is based on Council's capacity analysis but uses alternative assumptions. Specially, I have increased the minimum lot size assumption for areas without subdivision controls to 400 sqm (from 300 sqm) and halved Council's housing capacity estimate for activity centres.

14. To bring the timeframe of capacity analysis and VIF demand projections into rough alignment (i.e. 2021 to 2036), I have also discounted the capacity by 1,621 dwellings to account for the capacity 'consumed' since the analysis was undertaken (March 2019).

15. These changes give an adjusted capacity estimate of 26,921 net additional dwellings. The adjusted capacity estimate provides capacity that exceeds demand for the next 15 years at the municipal-scale.

Demand and capacity compared at the municipal level

16. Council's housing capacity estimate of 52,895 dwellings is more than double the 15 years demand projection of 17,746 (official Victorian Government projection for period 2021 to 2036). My adjusted capacity estimate of 26,921 net additional dwellings suggests a lower capacity figure, however it also exceeds the 15 year demand projection.

17. I am not aware of any empirical evidence of the relationship between housing capacity, housing demand and housing supply that describes an ideal or preferred relationship between these quantities.

18. In considering how much capacity is 'enough' to accommodate 15 years' projected dwelling demand I have considered the ratio of capacity to demand. This analysis shows that the available housing capacity in Mornington Peninsula will exceed demand each year of the 15 years planning horizon.

19. A recent report has suggested that the ratio of opportunities for new dwelling to dwelling demand should be between 7 and 10. Based on this proposition the adjusted housing capacity estimate suggests there is sufficient housing capacity within the Mornington Peninsula to exceed the 10:1 threshold until 'Year 14'; and the threshold of

7:1 is exceeded throughout the 15 year period (at 'Year 15' the ratio is 9:1). On this basis there is sufficient housing capacity to meet projected demand for the next 15 years.

20. Furthermore, as Council is required to ensure the capacity to meet the State's projected housing growth over a rolling 15-year horizon, it will need to continue to review housing capacity and may be required to make future changes to its planning scheme.

Demand and capacity compared at the 'housing submarket' level

21. To compare the distribution of housing capacity and projected demand I have compared these data for nine notional housing submarkets.

22. There is a reasonable alignment between projected demand and estimated capacity at the submarket scale. In the case of the adjusted capacity estimates some SA2s that do not appear to have sufficient capacity to accommodate projected demand however in each case there is additional capacity in the submarkets immediately adjoining to accommodate these shortfalls.

PEER REVIEW

A. Background

23. SGS Economics and Planning Pty Ltd (SGS) was commissioned by the Mornington Peninsula Shire via Hardwood Andrews to provide advice in relation to Mornington Peninsula Planning Scheme Amendment C219morn.

The Amendment

24. The Amendment proposes changes to zones, overlays and policies affecting the residential areas of the Mornington Peninsula to implement:

    - Housing and Settlement Strategy: Refresh 2020-2036, and
    - Neighbourhood Character Study and Guidelines.

25. As a pre-requisite for authorisation of the Amendment the Minister for Planning required Council to provide a:

    - "Demonstration that the shire is capable of achieving a 15-year supply of housing and residential land as required by Plan Melbourne 2017-2050 and the Planning Policy Framework (PPF) at Clause 11.02-1S, including analysis of how any proposed minimum lot sizes for subdivision are consistent with ensuring this outcome, and including consideration of the Victorian Government population projections and land supply estimates."
    - And "that the proposed residential provisions do not limit the ability of the shire to provide housing diversity as envisaged in Plan Melbourne 2017-2050 and Clause 16.01-3S." (Minister for Planning, 18 September 2019).

26. Council has subsequently prepared a land supply and housing capacity analysis that was "time stamped March 2019 and is based on current controls" (Brief from Hardwood Andrew, p2).

Instructions

27. Against this background SGS was instructed to:

    - prepare a report to Council which provides your expert opinion regarding the following matters:
    - (i) whether the land supply and housing capacity analysis underpinning the Amendment is sound, accurate and fit for purpose;
    - (ii) whether you agree with the conclusions of the land supply and housing capacity analysis underpinning the Amendment or whether any changes to the methodology or assumptions are required;
    - (iii) whether the Amendment will impact on housing affordability in the municipality when compared with current planning controls, having regard to the documents enclosed in your brief and identified under item (1) and discounting macro-economic factors; and
    - (iv) a high level summary of macro-economic factors and their implications for housing affordability

28. This peer review report addresses items (i) and (ii) only. Items (iii) and (iv) will be addressed separately.

Approach

29. To address matters (i) and (ii) above I reviewed Council's land supply and housing capacity analysis as set out in two spreadsheets (for residential land housing capacity and activity centres housing capacity respectively) and the document *Mornington Peninsula Housing Capacity Analysis - Methodology (10 November 2022).*

30. No mapping was provided to accompany the capacity assessment. The absence of mapping showing where capacity for housing has been identified has limited the extent to which the approach and findings of Council's capacity analysis can be interrogated.

31. To gain a better understanding of the workings of Council's capacity model, and to see evidence of the mapping and calculations that underpinned the capacity analysis, I attended Council's offices on 21 September 2022 and viewed a small sample of the GIS maps on screen.

B. Conceptual framework for housing capacity assessment

32. In undertaking this review, I have referred to a three-step framework for housing capacity analysis that I have applied and refined in housing capacity assessment for state and local governments in Victoria and New South Wales over a period 10 years.

33. When undertaking housing capacity assessments, I would typically employ the following three-steps:

    - an assessment of the land that is available for development
    - an assessment of the likely density or form of new development on that land; and
    - an assessment of the likely take up of that development.

34. The available land step identifies sites likely to be available for new housing development in the period in question. This step typically uses GIS analysis to identify lots that might be considered available for redevelopment based on their zoning and other planning controls, their lot size, heritage status, the presence of restrictive covenants, the age of the building stock, and so on.

35. The likely density or form step assigns a specific dwelling capacity to the available land based on planning constraints (which can include minimum lot size requirements, height limits, setbacks and so on) or past development trends.

36. The take up step seeks to ascertain whether the new housing will be realised on the available land (step 1) at the assigned densities or forms (step 2) during the time period in question. This step might include consideration of past supply trends, dwelling demand by location, dwelling demand by dwelling type and/or development feasibility.

37. The specific manner in which each of these steps is implemented in a particular housing capacity assessments will vary depending on the planning context, data availability and resource constraints.

38. This framework has been used to assist me in determining whether Council's capacity analysis is "sound, accurate and fit for purpose".

C. Council's land supply and housing capacity analysis

Overview

39. Council's housing capacity analysis consists of three main elements:

    - (i) 31 GIS files which were used to identify residential zoned land that might accommodate additional dwellings. There is one file for each 'township' area. These maps are hosted on the GeoMedia platform.
    - (ii) An Excel spreadsheet summary of the residential land capacity analysis that incorporates the outputs from the 31 GIS files which include estimates of potential

dwelling yields for different categories of land. In the case of land that is not subject to minimum subdivision controls, the spreadsheet contains net dwelling yields for a variety of minimum lot size assumption from 200 sqm to 500 sqm of land per dwelling. This spreadsheet also includes several summary sheets that combined the capacity estimates for residential land and activity centres for the 31 townships. It also includes estimates of the number of holiday homes in each township.

- (iii) An Excel spreadsheet for activity centre housing capacity that has been used estimates the housing capacity on land that is zoned CZ1 and PUZ6 in seven activity centres (Baxter, Dromana, Hastings, Mornington, Rosebud, Rye and Somerville).

40. As there are differences in the approaches that Council has used to estimate housing capacity for residential land and for activity centres the two components are described and reviewed separately below.

41. Council's housing capacity analysis estimates the number of net additional dwellings that might be constructed not the total constructed dwelling. For example, if a lot has one existing dwelling and the capacity analysis suggest three dwellings could be constructed on that lot the reported capacity is two dwellings (being three new dwellings net of the one existing dwelling). Therefore, the capacity results can be understood as reflect the capacity for net additional dwellings and there is no need to discount the loss of existing dwellings when comparing demand for housing with housing capacity.

Housing capacity analysis for residential land

42. Council's analysis of housing capacity for residential land council has applied the following approach and assumptions:

43. Land potentially available for new housing development has been assessed as:

    - All land with a residential zoning (i.e. currently GRZ and LDRZ)
    - Excluding Council owned land (i.e. non-rateable properties)
    - Excluding common title lots within existing residential subdivisions (e.g. driveways and common areas)

44. There are no static maps of the available land analysis. However, a small sample of the 'dynamic' mapping was viewed on screen at Council's offices on 21 September 2022. This mapping uses the GeoMedia software platform and includes 31 separate files – one for each township.

45. The density of potential new housing development on residential land has been estimated using a series of minimum lots size assumptions, as follows:

    - For areas subject to a minimum lot sizes control for subdivision these controls were used to estimate the housing capacity.
    - For LDRZ areas without a DDO Schedule a minimum lot size of 2,000 sqm was used.
    - For GRZ areas without minimum lot size controls dwelling capacity was estimated using a range of minimum lot size assumption between 200 sqm and 500 sqm in increments of 50 sqm. In Council's reporting on the results of the capacity analysis the minimum lot size of 300 sqm was chosen.[1]
    - When calculating the potential number of dwellings on a lot based on minimum subdivision area thresholds, the potential number of dwellings was rounded down to the nearest whole number. For example, the application of a 300 sqm per dwelling threshold to a lot of 800 sqm would be result in potential for 2.67 dwellings which would be rounded down to 2 dwellings. As a result of this approach the average land area per dwelling used in the capacity analysis would be slightly higher than the nominal thresholds indicate (see Section I: "Impact of rounding on average lot size assumption").

[1] I refer here to the reported capacity figure of 52,895 from page 33 of the document *Mornington Peninsula Housing and Settlement Strategy - Refresh 2020-36* (Mornington Peninsula Shire, July 2020).

46. The available land analysis and housing capacity calculation have been produced using the GeoMedia platform in 31 separate files – one for each township. The results of this analysis have then been transferred manually to the residential land capacity analysis Excel spreadsheet.

Commentary on residential land capacity analysis approach

Available land

47. The approach used by council to identify residential land that is available for additional dwellings as described above is generally robust and fit for purpose. As I have not reviewed mapping of the available land analysis in any detail, I am not in a position to comment on the specific results of the application of this approach (e.g. is it plausible that the particular lots deemed available for new residential development will be developed and achieve the nominated dwelling yields).

48. Notwithstanding my general support for this component of the analysis, there are some matters that may warrant further consideration by Council.

49. The first is consideration of the potential impact of heritage status on capacity. In some cases the heritage status of a property limit development potential. Where this is likely to be the case it would be prudent to exclude such properties from the analysis.

50. The second consideration is whether the age of the existing housing stock should be taken into account when determining whether land is considered available for new housing development in the next 15 years. Where demolition of an existing dwelling is necessary redevelopment, this is less likely take place on sites with recently constructed dwellings. Exclude land with recently constructed dwellings – say in the last 10 years – would account for this issue.

51. Finally, existing strata-title properties might also be excluded on the basis that they are not commonly redeveloped.

52. Council Officers have considered the matters raised in paragraphs 49 to 51 above (heritage status, age of development and strata-title) and are of the view that excluding sites on account of these issues is unlikely to significantly impact the findings of the capacity analysis as relatively few lots with capacity of additional housing would be subject to these constraints. I am not sufficiently familiar with the details of these matters across the Mornington Peninsula Shire, however it is plausible that only a small number of lots are subject to these constraints.

Dwelling potential

53. Council has used minimum land area per dwelling to estimate dwelling potential on available land. Where planning controls set out minimum lot sizes requirements, this is a robust method for estimating the potential capacity for new dwellings.

54. For areas without minimum subdivision controls the use of 'informed assumptions' that reflects the likely average lot size of new dwellings is also an appropriate approach.

55. As a significant share of all identified housing capacity (around half - see Table 3) is derived from areas without subdivision controls, the dwelling potential assumptions for these areas is an important key input to the capacity analysis. Council's reported housing capacity results are based on a minimum lots size assumption of 300 sqm per dwelling across all GRZ land without subdivision controls. However, the capacity analysis modelling included a range of lot size assumptions for these areas.

56. The question of what evidence or justification might support the choice of 300 sqm or another value was raised during the preparation of this peer review. Council subsequently gathered information on recently approved housing developments on GRZ

zoned land without subdivision controls for the period 2017 to 2022. This data is summarised in the table below by suburb.

57. The data suggests that the average lot size of all approved housing developments between 2017 and 2022 was 366 sqm. There is some variation in this average between suburbs however for most the average land area per dwelling falls within the range of 320 sqm to 420 sqm.

TABLE 1: DEVELOPMENT APPROVED BETWEEN 2017 TO 2022 IN GRZ AREAS WITHOUT SUBDIVISION CONTROLS

Suburb	Count of development projects	Total dwellings	Average dwellings per project	Average land per dwelling (sqm)
Baxter	8	18	2.3	383
Bittern	2	4	2.0	481
Capel Sound	39	94	2.4	339
Dromana	64	138	2.2	363
Hastings	34	118	3.5	372
McCrae	15	41	2.7	415
Mornington	95	215	2.3	356
Mount Eliza	7	17	2.4	380
Mount Martha	5	11	2.2	404
Rosebud	83	227	2.7	371
Rye	5	12	2.4	392
Safety Beach	32	78	2.4	363
Somerville	16	51	3.2	401
Tyabb	7	28	4.0	329
Total / Average	**412**	**1052**	**2.6**	**366**

Source: Council data, supplied 7 November 2022 ("Planning Applications from 2017 – Density Estimates.xlsx").

58. The planning permit data did not include the specific date on which applications were lodged or approved however the application number prefix appears to indicate the year the application was first submitted. The application number prefix has therefore been used as a proxy for the date the planning permit applications were lodged in order to examine whether there are any notable trends in the average land area per dwelling of these residential development over time.

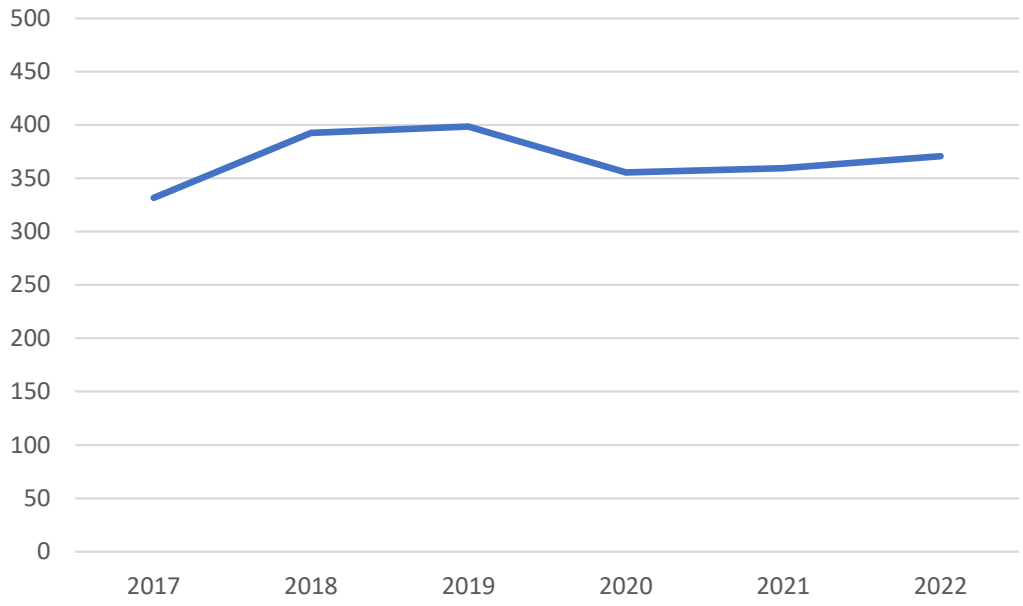
59. Summarising the planning permit data by the inferred year of application (see table and chart below) shows some variation in the average lot size of approved housing developments over time.

TABLE 2: DEVELOPMENT APPROVED BETWEEN 2017 TO 2022 IN AREAS WITHOUT SUBDIVISION CONTROLS

Likely year of application (derived from application number)	Count of development projects approved	Total dwellings	Average dwellings per project	Average land per dwelling (sqm)
2017	48	113	2.4	332
2018	63	155	2.5	393
2019	68	157	2.3	399
2020	73	202	2.8	355
2021	113	310	2.7	360
2022	38	82	2.2	371

Source: Council data, supplied 7 November 2022 ("Planning Applications from 2017 – Density Estimates.xlsx").
*Note: Nine approved permits with application numbers pre-2017 were not included in this analysis. As a result the total projects and total dwellings differ from those in Table 2 by 9 and 33 respectively.

FIGURE 1: AVERAGE LOT SIZE OF DEVELOPMENTS APPROVED BETWEEN 2017 TO 2022 IN AREAS WITHOUT SUBDIVISION CONTROLS (NOTIONAL YEAR OF APPLICATION IS BASED ON APPLICATION NUMBER PREFIX)



60. The preceding analysis of approved planning permit data suggests that the average lot size for recent development on GRZ land without subdivision controls is higher than 300 sqm and approaching 400 sqm.

61. The implications of analysis for the assumption used for the land area per dwelling in the capacity analysis is discussed below (see "F. Adjusted capacity estimates").

Take up of identified housing capacity

62. Council has not undertaken analysis of likely take up of the identified housing capacity. As noted above investigations of 'take up' could include consideration of past supply trends, dwelling demand by location, dwelling demand by dwelling type and/or development feasibility.

63. At the very least it is worthwhile comparing housing capacity estimates with demand projections within notional 'housing submarkets' within the Mornington Peninsula Shire to test the extent to which capacity and demand are aligned at a smaller geographical scale than the entire municipality. I have considered this alignment below (see H. Demand and capacity compared for housing sub-markets).

Other comments

64. Council has used the GeoMedia platform which provides a 'live' connection between the residential capacity analysis base maps and current property data sources held by council. This is a deliberate design feature that is intended to ensure that these base maps are always up to date. However, as a result, there does not appear to be a static version (electronic or hardcopy) of the base mapping used to produce the March 2019 capacity analysis. There are now variations between the data in these base maps and the data that was used to preparation the 15 March 2019 capacity analysis as, for example, any land parcels subdivided and/or redeveloped since March 2019 will have been removed from the maps as they are no longer considered available for new housing development. The lack of static maps associated with the capacity analysis is an unfortunate omission. While this mapping is not *essential* for the purposes of estimating housing capacity, retaining a snapshot in time of the spatial data that informed the capacity analysis would provide greater transparency and facilitate internal and external review. While I have no reason to believe that there are errors or omissions in Council's capacity analysis it was not possible to review and 'spot check' mapping of the analysis and findings. In future Council might consider producing static maps to allow internal external stakeholder review.

65. A further concern with the residential land capacity analysis is that a significant amount of data has been manually transferred from 31 GIS files to hundreds of formulas in an Excel spreadsheet, as opposed to an automated process. This manual process introduces an element of risk that data may not have been entered accurately. Once again, I have no reason to believe errors have been made in this process, but this is a possible weakness in the mechanics of the capacity analysis approach, and it was not possible to verify the accuracy of the transferred data. If this has not been done already, a review or spot check of this process should be undertaken. Ideally this process of populating the capacity analysis spreadsheets with data from the GIS files could be automated, particularly if it is the intention to update the capacity analysis in the future.

D. Housing capacity analysis for activity centres

66. To estimate housing capacity on residential land council has applied the following approach and assumptions:

67. Available land has been determined as all land zoned CZ1 and PUZ6 in seven activity centres at Mornington, Rosebud, Hastings, Dromana, Rye, Somerville and Baxter, excluding land which has a site-specific heritage listings.

68. Council officers advised that recently developed sites (e.g. newly constructed upper-storey apartments at the time of the analysis) were also excluded. The criteria for 'recently developed' are not known. There are no maps of the 'available land' in activity centres.

69. The density of new housing development in activity centres residential has been estimated based on the built form requirements, including building heights and setbacks,

as set out in the existing Design and Development Overlays (DDOs) for each Activity Centre.

70. The DDOs were translated into the following assumptions:

- A maximum of three storey development in Mornington, Hastings, Dromana, Rye, Somerville and Baxter; and three and four storey development in Rosebud
- All levels above ground allocated to dwellings (i.e. apartments)
- Building site coverage of 70% (ratio of site area to build area)
- In most activity centres additional setback requirements for the third storey resulted in 5% to 15% reduction of the building footprint at that level compared to the second level (the rate varies by activity centre and precinct)
- In those precincts in Rosebud with four storey development, additional setbacks for the fourth storey resulted in further reductions of the building footprint at that level compared to the third level (rate varies by precinct)
- A building efficiency rate of 80% (the ratio of the gross to net floor space)
- The average floor space per dwelling was 80 sqm.

71. Existing dwellings on available land were netted off the total capacity estimates for the Hasting, Dromana and Rye activity centres (45, 5 and 5 dwelling respectively to provide net capacity estimates. The fact that no dwellings were netted off total capacity for the other four centres suggests there are no existing dwellings of land deemed available for new development in these centres.

Commentary on the housing capacity analysis for activity centres

Available land

72. It is difficult to form a definitive view of the approach used by Council to identify land in activity centres available for resident development without reviewing some form of mapping showing land that is included and excluded from the capacity analysis. It is understood that heritage items and 'recent' development (criteria unknown) have been excluded, all other land zoned CZ1 (and in some case land zoned PUZ6) is available to be redeveloped. This may be a plausible assumption

73. Consideration might also have been given to excluding land that is unlikely to be redeveloped in the next 15 years because it is strata-titled or features significant existing capital improvement or smaller and/or isolated lots that are difficult to amalgamate for redevelopment.

74. The inclusion of PUZ6 land – being Council-owned land currently used as public car parks – implies that these sites might be made available for residential development in the next 15 years. While it may be technically possible to redevelopment Council car parks for housing there are significant practical, political and financial barriers to replacing public parking with private development.

Dwelling potential

75. The modelled assumptions concerned the building scale, site coverage, building efficiency and dwelling size appear appropriate. I note that the average apartment size assumption of 80 sqm is taken from a study of housing capacity undertaken for Boroondara.[2] It is conceivable that the average size of newly constructed apartments in the Mornington Peninsula could be larger than 80 sqm if the mix of new apartments has a higher share of larger two and three bedroom dwellings compared to the inner-middle ring context of Boroondara. If this were to be the case this capacity for activity centre may be an overestimate.

[2] SGS Economics and Planning (June 2015) *Boroondara Housing Capacity Analysis - Technical Report*

Take up of identified housing capacity

76. Council has not undertaken any specific analysis of likely take up of the identified housing capacity in activity centres.

77. At the very least it is worthwhile comparing the housing capacity estimates with demand projections within notional 'housing submarkets' within the Mornington Peninsula Shire to test the extent to which they are aligned. I have considered this alignment below (see H. Demand and capacity compared for housing sub-markets).

78. An important element of the dwelling capacity analysis for activity centres is to demonstrate that the forms of development permitted – in this case 3 and 4 storey apartment developments with non-residential ground floors – are likely to be viable. While there is significant 'theoretical' development capacity for housing development in Mornington's activity centres, some effort should be made to demonstrate that this capacity is likely to be realised. This might be done by simply referring to precedents for these forms of development in the activity centres. If there are few or no examples of recent apartment developments in activity centres, development feasibility analysis of hypothetical developments might be undertaken to provide evidence that these forms are viable, or at the very least are likely to become viable during the 15-year period.

E. Summary

79. Overall, I find that the *approach* that Council has used to estimate housing capacity is sound. Although I have identified a number of additional consideration or investigations that might have been included in both the capacity analysis for residential land and activity centres, their omission does not constitute a critical failure in the approach and techniques used.

80. As to the question of the *accuracy* of the approach, the absence of mapping of the capacity analysis findings has limited my ability to undertake a detailed interrogation of the accuracy of the analysis. I have no reason to believe that the analysis is not accurate. The two spreadsheet models reviewed appear well designed, consistent and suggest good attention to detail.

81. As to the question of whether I agree with the *conclusions* of the capacity analysis, I have identified several issues that could suggest the reported housing capacity of 52,895 dwellings[3] is an overestimate.

82. To summarise, these issues include:

- In GRZ zoned areas without subdivision controls the average lot size of recently approved developments is 366 sqm and therefore the minimum lot size assumption of 300 sqm per dwelling that was applied in the reported capacity estimate may be too low.
- In activity centres, there appears to be no attempt to exclude land that is unlikely to be redeveloped in the next 15 years (on the basis that it is strata-titled or features significant existing capital improvement or other physical constraints).
- The average apartment size assumption of 80 sqm may be too large as it is conceivable that apartments in the Mornington Peninsula may be larger than 80 sqm on average.
- Also in activity centres, there is no analysis of precedents or feasibility to demonstrate the likelihood of potential three and four storey developments in these locations.

83. To better understanding the possible implications on the capacity findings I have prepared an adjusted housing capacity estimate that is based on Council's capacity analysis, but using more conservative assumptions, which are described below.

[3] As reported in the Mornington Peninsula Housing and Settlement Strategy - Refresh 2020-36, July 2020, p33.

F. Adjusted capacity estimate

84. To produce an adjusted housing capacity estimate I have:

- Adopted a minimum lot size assumption for areas GRZ land without subdivision controls of 400 sqm
- Halved Council's housing capacity estimate for activity centres.
- .

85. As Council's capacity analysis spreadsheet for residential areas included a range of minimum lot assumption for areas without subdivision controls (from 200 sqm to 500 sqm in increments of 50 sqm) and corresponding capacity results, I was able to directly extract capacity estimates based on a 400 sqm minimum lot size assumption for areas without a minimum lot size for subdivision. There is no corresponding 'graduation' built into the capacity analysis for activity centres, and thus to develop a revised capacity estimate for these areas I have simply applied a crude discount. A 50% discount was chosen as a simple method of taking a more conservative view on the net housing capacity in activity centres.

86. To bring the timeframe of capacity analysis and VIF demand projections into rough alignment, I have also 'updated' the March 2019 capacity estimate to account for the fact that roughly two years of capacity will have been consumed between March 2019 and July 2021 (the nominal date of the 2021 projections in VIF 2019). To estimate the supply of new dwellings in that period I have relied on dwelling completions data for the years 2019 and 2020.[4]

87. Council's reported capacity estimate and my adjusted capacity estimate are compared in the table below. My adjusted capacity estimate gives a total of 26,921 net additional dwellings or 51% of Council's reported capacity estimate (52,895).

TABLE 3: COUNCIL'S REPORTED CAPACITY ESTIMATE AND ADJUSTED CAPACITY ESTIMATE

Capacity by type	Council's reported capacity estimate	Adjusted capacity estimate
Residential land (without subdivision controls)	32,658	13,985
Residential land (with subdivision controls)	8,757	8,757
Activity Centres	11,360	5,680
"Adjustments" (see note)	120	120
Total (March 2019)	52,895	28,542
Estimate of new housing 2019 and 2020**		1,621
Total (July 2021)		26,921

Sources: Mornington Council capacity analysis, March 2019; ** Based on idcommunity dwelling completions data for the years 2019 and 2020.

Note: This line item reflects Column BC in the 'Summary' tab of the residential areas capacity analysis spreadsheet. It is unclear why these adjustments were made – and they are not explained in the method report – however as they are relatively minor adjustments compared to the total capacity, it is of little consequence.

G. Demand and capacity compared

idcommunity dwelling completions data for Mornington Peninsula: 2019 – 859 dw; 2020 – 762 dw;: total– 1,621 dwellings.[5] VIF 2019 is the most recent official government population and dwelling growth projections.

88. The table below compares both housing capacity estimates with dwelling demand for the period 2021 to 2036 from the state government's 2019 VIF projections[5].

89. Council's housing capacity estimate of 52,895 dwellings is more than double the 15 years demand projection of 17,746 for period 2021 to 2036.

90. My adjusted capacity estimate of 25,441 net additional dwellings suggests a lower capacity figure, however it also exceeds the 15 year demand projection.

TABLE 4: CAPACITY VS DEMAND AT THE MUNICIPAL-WIDE SCALE

Capacity estimate	Total capacity: residential land and ACs	Dwelling demand (2021-2036)***	Difference	Share of capacity remaining at 2036
Council's estimate	52,895*	17,746	35,149	66%
Adjusted estimate	26,921**	17,746	9,175	34%

Sources: *Mornington Council capacity analysis, March 2019; **Mornington Council capacity analysis, March 2019 with SGSEP calculations; ***VIF2019.

91. I am not aware for any empirical evidence of the relationship between housing capacity, housing demand and housing supply that describes an ideal or preferred relationship between these quantities. The requirement for land use plans to provide sufficient capacity to accommodate at least 15 years supply is common in planning policy in Australia, although the specific basis or evidence for the use of this particular benchmark is unclear.[6]

92. In considering how much capacity is required to accommodate 15 years' projected dwelling demand it is relevant to consider the manner in which demand 'consumes' capacity over time. Specifically, at the start of the planning horizon, there will be considerable capacity compared to the total demand. Each year a share of the capacity is consumed as new dwelling are realised, reducing the housing capacity available in subsequent years. In effect, the ratio of capacity to demand will decrease each year.

93. The specific numerical elements of this process are shown Table 5 below for the Mornington Peninsula using the annualised dwelling demand and Council's housing capacity estimate and the adjusted estimate over a 15 year period.

94. Based on Council's capacity estimates, for every dwelling needed to meet demand in 'Year 1' there are approximately 45 potential dwelling opportunities (a ratio of 45:1). After 15 years, and assuming that no additional capacity is identified during this period, that ratio is reduced to approximately 31:1.

95. Based on the adjusted capacity estimate, for every dwelling required to meet demand in 'Year 1' there are approximately 24 opportunities for new dwellings (a ratio of 23:1). By 'Year 15', and again assuming that no additional capacity is identified, the ratio is reduced to 9:1.

[5] VIF 2019 is the most recent official government population and dwelling growth projections.

[6] A rare discussion of the topic of planning targets and timeframes is contained in the 2017 comparative study of global planning practice by Adjunct Professor of Urban Planning, Leslie Stein. Stein suggests that a 10-year time horizon is more appropriate for planning purposes given the increase in uncertainty with longer time horizons and the need for planning policy to be treated as dynamic and subject of regularly updating, rather than fixed or final. See Stein, L. (2017) *Comparative Urban Land Use Planning*. Sydney: Sydney University Press.

TABLE 5: RATIO OF HOUSING CAPACITY TO DWELLING DEMAND OVER A 15 YEARS TIME HORIZON

(A) Year	(B) Annual dwelling demand	(C) Capacity remaining (based on Council's capacity estimate)	(D) Ratio of annual demand to capacity (Council capacity estimate) [C ÷ B]	(E) Capacity remaining (based on adjusted capacity estimate)	(F) Ratio of annual demand to capacity (adjusted capacity estimate) [E ÷ B]
Year 1	1,183	52,895	45:1	26,921	23:1
Year 2	1,183	51,712	44:1	25,738	22:1
Year 3	1,183	50,529	43:1	24,555	21:1
Year 4	1,183	49,346	42:1	23,372	20:1
Year 5	1,183	48,163	41:1	22,189	19:1
Year 6	1,183	46,980	40:1	21,006	18:1
Year 7	1,183	45,797	39:1	19,823	17:1
Year 8	1,183	44,614	38:1	18,640	16:1
Year 9	1,183	43,431	37:1	17,457	15:1
Year 10	1,183	42,248	36:1	16,274	14:1
Year 11	1,183	41,064	35:1	15,090	13:1
Year 12	1,183	39,881	34:1	13,907	12:1
Year 13	1,183	38,698	33:1	12,724	11:1
Year 14	1,183	37,515	32:1	11,541	10:1
Year 15	1,183	36,332	31:1	10,358	9:1

96. This analysis shows that for the available housing capacity in Mornington Peninsula will exceed demand each year of the 15 years planning horizon.

97. A recent report published by the Committee for Sydney in 2022 has suggested that the ratio of opportunities for new dwelling to dwelling demand (as shown in the table above) should be between 7 and 10.[7] Based on this proposition the adjusted housing capacity estimate suggests there is sufficient housing capacity within the Mornington Peninsula to exceed the 10:1 threshold until 'Year 14'; and the threshold of 7:1 is exceeded throughout the 15 year period (at 'Year 15' the ratio is 9:1). On this basis there is sufficient housing capacity to meet projected demand for the next 15 years.

98. Furthermore, as Council is required to ensure the capacity to meet the State's projected housing growth over a rolling 15-year horizon, it will need to continue to review housing capacity and may be required to make future changes to its planning scheme, potentially increasing housing capacity in the future.

H. Demand and capacity compared for housing sub-markets

99. As noted above, the question of the spatial alignment of dwelling demand and capacity was not addressed by Council in its capacity analysis. While *Planning Practice Note 90 – Planning for housing* states that "Residential land supply will be considered on a municipal basis, rather than a town-by-town basis", it is conceivable that even where municipal-wide housing capacity exceeds municipal-wide demand (as is the case here), there may still be some misalignment between supply and demand in particular sub-

[7] "How much extra capacity needs to be built into the planning System …we estimate that for every 10,000 units of housing needed (forecast in response to projected population growth and household formation rates), the planning system needs to have the capacity for at least 70,000-100,000 houses available to develop. That is, if you think you might need one additional house, the planning system needs to have the capacity for seven to 10 houses that are 'development ready': being zoned, serviced and unconstrained by the planning system." Committee for Sydney (2022) Planning for Growth, pp 12-13.

markets that could inhibit the efficient operation of housing markets more broadly. It is worthwhile considering the alignment between capacity and demand at the 'sub-market' scale. .

100. To compare the distribution of housing capacity and projected demand I have compared these data at the ABS Statistical Area 2" (SA2) scale. I have chosen SA2s as the VIF projections are provided for this geography and they provide a means for dividing Mornington Peninsula Shire into nine notional housing submarkets. The map below shows the spatial extent of these nine SA2s. The table below shows how the 'townships' from Council housing capacity analysis were allocated to the SA2.

101. VIF 2019 dwelling demand projections and aggregate capacity estimates from Council's capacity analysis and my adjusted capacity findings are compared in Table 7 and Table 8 below.

102. Based on Council's capacity analysis, this comparison suggests that for all SA2, capacity for new housing exceeds projected demand for the 15-year period 2021 to 2036. There also appears to be a reasonable alignment between demand and estimated capacity at the submarket level as the capacity in each SA2 exceed demand.

103. In the case of the adjusted estimates most SA2s have sufficient capacity to accommodate their 15-year demand projections. Two SA2s that do not appear to have sufficient capacity: Dromana and Hastings – Somers. However, in both cases the additional capacity in the submarkets immediately adjoining (i.e. Rosebud – McCrae, Mount Martha, Flinders and Sommerville) is sufficient accommodate these shortfalls.

FIGURE 2: ABS SA2 GEOGRAPHIES FOR THE MORNINGTON PENINSULA

Source: SGS

TABLE 6: SA2 AND TOWNSHIP CONCORDANCE FOR AGGREGATE CAPACITY ESTIMATES

SA2 Name	Townships from Council capacity analysis included within SA2
Dromana	Arthurs Seat, Dromana, Safety Beach
Flinders	Flinders, Merricks, Point Leo, Red Hill, Red Hill South, Shoreham
Hastings – Somers	Balnarring, Balnarring Beach, Bittern, Crib Point, Hastings, Merricks Beach, Somers
Mornington	Mornington
Mount Eliza	Mount Eliza
Mount Martha	Mount Martha
Point Nepean	Blairgowrie, Portsea, Rye, Sorrento, St Andrews Beach, Tootgarook
Rosebud – McCrae	Capel Sound, McCrae, Rosebud
Somerville	Baxter, Somerville, Tyabb

Source: SGSEP

TABLE 7: CAPACITY VS DEMAND – COUNCIL'S CAPACITY ANALYSIS

SA2	Total capacity: residential land and ACs*	Dwelling demand (2021-2036)**	Difference	Share of capacity remaining at 2036
Dromana	5,266	2,350	2,916	55%
Flinders	772	432	340	44%
Hastings – Somers	5,782	2,991	2,791	48%
Mornington	9,719	2,661	7,058	73%
Mount Eliza	1,742	700	1,042	60%
Mount Martha	4,950	2,232	2,718	55%
Point Nepean	4,651	2,237	2,414	52%
Rosebud – McCrae	13,153	2,709	10,444	79%
Somerville	6,860	1,433	5,427	79%
Total	**52,895**	**17,746**	**35,149**	**66%**

Sources: *Mornington Council capacity analysis, March 2019; **VIF2019.

TABLE 8: CAPACITY VS DEMAND – ADJUSTED CAPACITY ANALYSIS

SA2	Total capacity: residential land and ACs* (see note)	Dwelling demand (2021-2036)**	Difference	Share of capacity remaining at 2036
Dromana	1,555	2,350	-795	0%
Flinders	735	432	303	41%
Hastings – Somers	2,565	2,991	-426	0%
Mornington	4,323	2,661	1,662	38%
Mount Eliza	1,560	700	860	55%
Mount Martha	3,113	2,232	881	28%
Point Nepean	3,859	2,237	1,622	42%
Rosebud – McCrae	6,232	2,709	3,523	57%
Somerville	2,978	1,433	1,545	52%
Total	**26,921**	17,746	**9,175**	**34%**

Sources: *Mornington Council capacity analysis, March 2019 with SGSEP calculations; **VIF2019.
Note: These figures include the discounting of estimated dwelling supply in 2019 and 2020 of 1,621 dwelling. The distribution of this 'recent supply' to SA2s was estimated using the relatively proportions of VIF housing demand projections by SA2 for the period 2016-2021. This approach may not accurately reflect the actual distribution of dwelling growth by SA2 and therefore these figures should be interpreted as rough estimates only.

ADDITIONAL INFORMATION

I. Impact of rounding on average lot size assumption

Council's capacity analysis has used minimum lot size *rounded down* to the nearest whole number. As a result of this approach the actual average lot size is likely to be larger than the nominal average lot size. This is demonstrated in table below.

In the table the housing capacity of a hypothetical group of 15 allotments has been estimated using this rounding down approach. In this example the application of the minimum lot size requirement of 300 sqm results in an average lot size of 344 sqm. Thus the application of nominal minimum lot size of 300 sqm in the capacity analysis will assess housing capacity based on a slightly higher average lot size.

The actual average lot size will depend on the size and mix of the parent lots. However, in the case of a 300sqm nominal minimal lot size, and assuming parent lot sizes are somewhat randomly distributed, the resulting average is likely to fall with the range of 340 and 360 sqm.

TABLE 9: IMPACT OF ROUNDING ON AVERAGE LOT SIZE ASSUMPTION

Count of lots	Parent lot size (sqm)	Land per dwelling assumption (sqm)	Dwelling capacity estimate	Dwelling capacity estimate rounded down	Actual land area per dwelling (sqm)
1	600	300	2.00	2	300
1	650	300	2.17	2	325
1	700	300	2.33	2	350
1	750	300	2.50	2	375
1	800	300	2.67	2	400
1	850	300	2.83	2	425
1	900	300	3.00	3	300
1	950	300	3.17	3	317
1	1000	300	3.33	3	333
1	1050	300	3.50	3	350
1	1100	300	3.67	3	367
1	1150	300	3.83	3	383
1	1200	300	4.00	4	300
1	1250	300	4.17	4	313
1	1300	300	4.33	4	325
Average land area per dwelling across all 15 lots:					**344**

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