

PLANNING STRATEGY IMPACTS ON HOUSING OPPORTUNITY

GLEN EIRA CITY COUNCIL — OCTOBER 2017



GLEN EIRA
CITY COUNCIL

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I. INTRODUCTION

I.1 PURPOSE

This report provides a preliminary analysis of how alternative planning outcomes may impact the delivery of new housing in the City of Glen Eira.

The report analyses:

- Expected Housing targets.
- Housing Opportunity outcomes based on current planning policy.
- Housing Opportunity outcomes based on a range of alternative planning policy scenarios, including implementation of new Structure Plan and Quality Design Guidelines recommendations.
- An assessment of how each scenario ‘stacks up’ to deliver on expected housing targets.

I.2 CONTEXT

Council is required to review its Planning Scheme on a regular basis. Council adopted the Glen Eira Planning Scheme Review at a Council Meeting on Tuesday 9 August 2016, which included a work plan to improve planning outcomes across the municipality. The work plan was formed based on feedback from community engagement, meetings and written submissions throughout 2016.

Key strategic projects have been undertaken to meet the objectives of the work plan, including the preparation of draft structure plans for key activity centres and the design guidelines to improve built form outcomes through the planning process. This includes up to date at October 2017:

- Structure Plans for Bentleigh, Carnegie, East Village and Elsternwick; and
- Quality Design Guidelines.

These projects will impact on planning strategies across the municipality, and ultimately affect the level of development and foreseeable opportunity for housing in the coming years.

This report provides some background regarding preliminary strategic considerations.

I.3 WHAT IS HOUSING OPPORTUNITY?

Housing Opportunity assesses housing supply in a way that is linked to location attractiveness and likely development uptake. It attempts to quantify how land will be developed in a realistic way for the foreseeable medium-term.

Housing Opportunity differs from Housing Capacity in that:

- Not all land is likely to be developed (for example, existing strata titled units or land that has recently been developed are examples of land that is unlikely to be developed);
- Not all land will be developed to its maximum capacity;
- Some areas will experience higher levels of development based on their relative attractiveness, which affects market demand (development uptake is not exclusively linked to the spatial distribution of land or zoning – i.e. just because something is zoned for a specific residential purpose doesn't mean people will build/purchase new housing there: development trends respond to demand from people who would like to live in an area).

Council should seek to demonstrate adequate Housing Opportunity to ensure that expected housing targets will be met.

2. HOUSING TARGETS

2.1 PLAN MELBOURNE DIRECTION FOR OUR REGION

Plan Melbourne is the metropolitan planning strategy that defines the future shape of Melbourne over the next 35 years. The plan sets a clear direction for housing growth including housing distribution targets for regions across the broader metropolitan area.

The City of Glen Eira is located within Plan Melbourne's 'Inner South East Region', which contains Bayside, Boroondara, Glen Eira and Stonnington (see Figure 1).

The Plan identifies a 2051 housing target for our region of 110,000 additional dwellings, and an aspirational target of 125,000 additional dwellings (see Figure 2).

Plan Melbourne does not specify Glen Eira's share in the 'Inner South East Region' target, however it is expected that this will be determined in the near future through the development of a regional framework plan.

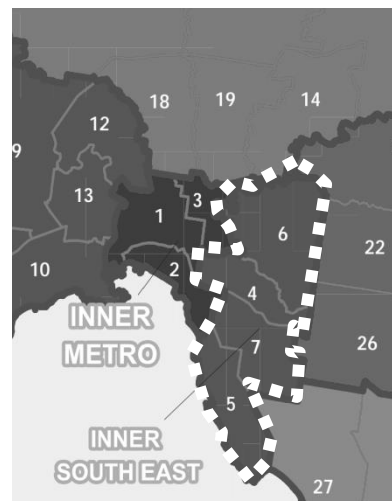


Figure 1: 'Inner South East Region' of Plan Melbourne. No. 7 indicates Glen Eira.

Scenario 1 VIF 2016				Scenario 2 Aspirational scenario			
Region	Net dwelling additions 2015–51			Region	Net dwelling additions 2015–51		
	Total	Established	Greenfields		Total	Established	Greenfields
Inner Metro	215,000	215,000	0	Inner Metro	230,000	230,000	0
Western	385,000	150,000	235,000	Western	365,000	160,000	205,000
Northern	355,000	175,000	180,000	Northern	340,000	180,000	160,000
Inner South East	110,000	110,000	0	Inner South East	125,000	125,000	0
Eastern	175,000	175,000	0	Eastern	190,000	190,000	0
Southern	310,000	185,000	125,000	Southern	300,000	195,000	105,000
Total Melbourne	1,550,000	1,010,000	540,000	Total Melbourne	1,550,000	1,080,000	470,000
	100%	65%	35%		100%	70%	30%

Figure 2: Housing Distribution by region (scenarios), extracted from Plan Melbourne

2.2 ESTIMATING GLEN EIRA'S HOUSING TARGETS

When creating strategies for the future, Council must demonstrate that our plans will deliver on housing targets set by the State Government. To inform current strategic work, Officers have calculated Glen Eira's likely Plan Melbourne housing targets based on the current distribution of growth across our region (see Table 1). It is assumed that regions will need to meet Plan Melbourne's aspirational Scenario 2 target.

We conservatively estimate that Glen Eira will need to deliver approximately

- Approximately 9000 additional dwellings by 2031 based on confirmed projections identified within Plan Melbourne (Victoria in Future – VIF Projection).
- Approximately 25,000 to 28,000 additional dwellings by 2051 (however this could be as high as 33,000 depending on how the share is calculated) based on Plan Melbourne's aspirational targets.

TABLE 1 – Scenarios for accommodating housing for 'Inner South East Region'

	Bayside	Boroondara	Glen Eira	Stonnington	Total
VIF 2016 PROJECTIONS TO 2031 (CONFIRMED)					
Current No. Households in 2016	40056	68541	59754	51240	219591
Projected No. Households by 2031	47892	79561	68747	63149	259349
Distribution (%)	18.47%	30.68%	26.51%	24.35%	100.00%
Increase over the 15 year period	7836	11020	8993	11909	39758
Distribution (%)	19.71%	27.72%	22.62%	29.95%	100.00%
PLAN MELBOURNE 2051 HOUSING TARGETS (SCENARIOS)					
Based on distribution % of 'Projected No. Households by 2031'					
110,000 households target	20313	33745	29158	26784	110000
125,000 households target	23083	38346	33134	30436	125000
Based on distribution % of 'Increase over the 15 year period'					
110,000 households target	21680	30489	24881	32949	110000
125,000 households target	24637	34647	28274	37442	125000

2.3 HOUSING OPPORTUNITY ASSESSEMENT BY HOUSING ID

Housing ID have prepared an Analysis of Housing Consumption and Opportunities For Glen Eira report (henceforth referred to as the 'ID Report').

The ID report notes that Glen Eira has a foreseeable opportunity for 25,970 additional dwellings (see Figure 3), which provides 36 years of housing supply according to current development rates.

This is a conservative estimate that indicates Glen Eira is on track to meet expected housing targets in the foreseeable medium-term.

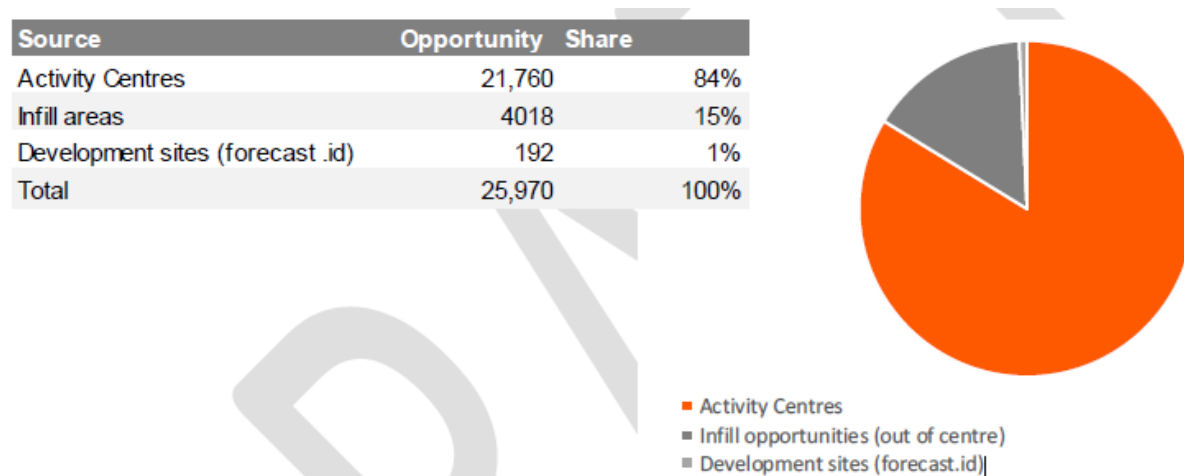


Figure 3: Summary of Housing Opportunity (table), extracted from Housing Opportunity Analysis for Glen Eira prepared by Housing ID

Council accepts the ID report assessment as presenting a conservative assumption for how additional housing can occur across the municipality. However, as the assessment is largely a demographic study (tempered by market attractiveness rather than an accurate spatial distribution of zoning), the assessment cannot be replicated to evaluate impacts of changes to zoning and policy as proposed with our draft Structure Plans and Quality Design Guidelines.

The assumed distribution of densities noted at Figure 53 (page 77 of the report) does not accurately represent zoning distribution across each centre. Therefore, a refined housing opportunity analysis has been prepared that is based on the ID report methodology but accurately reflects current zone distribution. This allows us to compare potential scenarios for changes to zones and policy, as proposed by current strategic work.

3. HOUSING OPPORTUNITY ANALYSIS

3.1 METHODOLOGY

SCENARIO COMPARISON

The analysis determines Housing Opportunity based on four key planning strategy scenarios as detailed in the following table.

Table 2 – Planning strategy scenarios investigated

Scenario	Description
THE BASE CASE <i>(No Change to Current Policy)</i>	This analysis identifies current housing opportunity based on existing planning scheme controls (no change). This analysis seeks to generally recreate and match the ID report forecast, and is used as a base case for comparing the following 3 scenarios for implementing policy changes.
SCENARIO 1 <i>(Restricting GRZ and CIZ Areas)</i>	Implementing key Quality Design Guideline recommendations to restrict development across all centres for General Residential Zoned ('Garden Townhouse' and 'Townhouse & Apartment Mix'), and all Commercial 1 Zoned land (new 'Shoptop' variations). No other changes.
SCENARIO 2 <i>(Structure Plan Implementation)</i>	Only implementing the revised Structure Plans for Bentleigh, Carnegie, Elsternwick and East Village (October 2016 revisions).
SCENARIO 3 <i>(Combination)</i>	An integrated approach implementing both Scenarios 1 and 2.

PROJECTION CALCULATION METHODOLOGY

The Housing Opportunity projections have been calculated for Each Activity Centre Study Area as follows:

- Evaluate all land within Activity Centre Study Areas to determine the **Developable land** (see Section 3.2 and Appendix A).
- Allocate a **Housing Density** for each current zone and preferred building type (see Section 3.3 and Appendix B).
- Calculate the **Theoretical capacity** (based on developable land multiplied by density of relevant zone or building type). *Note: Each scenario will have varying Developable Land and Density inputs depending on what is being compared. This is the key variable for each scenario.*
- Calculate **Housing Opportunity** by applying development assumption formulas (using Housing ID method) to the Theoretical Capacity. This includes:
 - Applying a **development assumption** percentage (i.e. attractiveness index).
 - Subtracting the estimated number of **demolished dwellings** as part of new developments (i.e. to construct new developments, existing buildings will be removed).
 - Adding the **forecast sites** (existing permits) with confirmed dwelling yield.

The assessment undertaken by Housing ID for land that is not within the Activity Centre Study Areas ('out of centre' land) notes an additional opportunity for 4210 new dwellings. This figure is accepted and is not changed in any scenario.

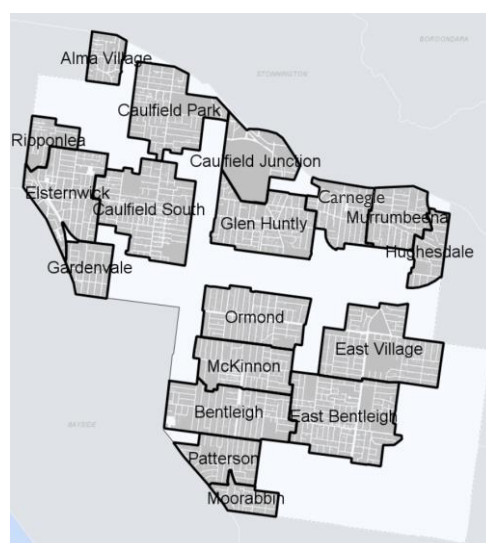
The results for each scenario are provided in Section 3 of this report and detailed calculations are provided in Appendix C.

3.2 DEVELOPABLE LAND ASSESSMENT

Developable land represents land that with expected potential to generate additional dwellings in Glen Eira's activity centre study areas. Developable land for this assessment includes a combination of: Land with expected development opportunity, and strategic uplift areas. Developable land is used as the base layer for spatial analysis and assessing Housing Opportunity. A detailed breakdown of developable land (including mapping) is provided in **Appendix A** and the broad methodology for ascertaining those figures is noted below.

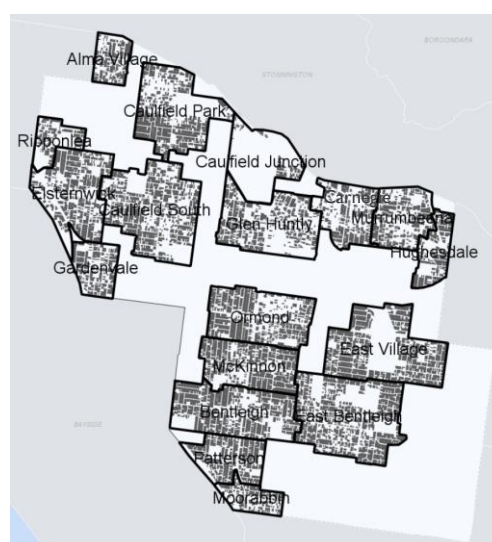
LAND ASSESSED

This map shows the land within each activity centre study area that has been assessed in this report. The land in the white areas is considered 'out of centre', and has not been analysed. Council relies upon the ID report projections for out of centre land, which is negligibly affected by current strategic work.



FIRST CUT: LAND WITH EXPECTED DEVELOPMENT OPPORTUNITY

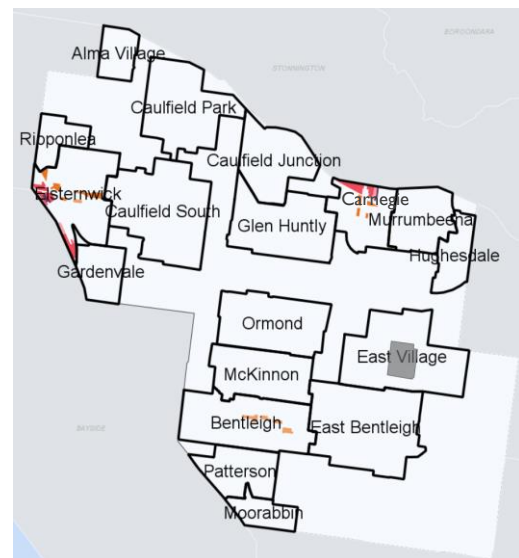
Starting with a review of all land in each catchment area, any parcels of land that are not considered available for development are removed from analysis. This includes open space, reserves and parkland, schools, churches, civic buildings, strata plan sites, roads, rail, recent permit activity, and smaller or narrow parcels generally less than 400 square metres (low yield or consolidation prospects). This process determines the total hectares available for development (the amount of expected developable land).



Some major redevelopment sites already have existing permits issued that will impact on housing delivery. These are removed from developable land and assessed separately in projection equations as 'forecast sites' with an identified development yield. One such example is the Caulfield Village development in Caulfield North. **Note:** *Housing ID prepared this spatial permit analysis with data current at December 2016 for the ID report.*

INTRODUCING STRATEGIC UPLIFT AREAS

Current structure planning work indicates that Strategic Sites, Urban Renewal and Urban Apartment areas will support development more than under existing policy. Therefore a concentrated level of development is anticipated to occur in these areas (including land previously assessed as unlikely to be developed above). For example, some existing 'public use zone' areas like car parks that were previously noted as unlikely to be developed, are now nominated in strategic sites with clear direction.



All **Strategic Sites**, **Urban Renewal** and **Urban Apartment** areas in Carnegie, Elsternwick and Bentleigh have been re-introduced as 'developable land' for assessment. The East Village Structure Plan area will also deliver a measurable gain in dwellings through urban renewal. This is included in the land analysis with a preliminary projection of 3000 dwellings.

3.3 HOUSING DENSITY ASSESSMENT

HOUSING DENSITIES APPLIED

In order to compare outcomes, housing densities have been applied for each current zone (that permits dwellings) and each proposed building type as detailed within Table 3. Housing densities are measured in dwellings per hectare (DPH). Commentary on the methodology used to apply these densities is provided on the following page.

Table 3- Development Density Rates by Zone and Building Type

	Height (Storeys)	Density (DPH)	Standard Site* (Square Metres)	Dwelling Output* (Indicative)
Current Zone				
Neighbourhood Residential Zone**	2	18	600 – 750	1-2**
General Residential Zone	3	150	1100	17
Residential Growth Zone	4	250	1500	38
Mixed Use Zone	4-8 (trend)	300	600	18
Commercial 1 Zone	6-8 (trend)	400	600 – 3000	24 – 120
Preferred Building Type				
Heritage and Character Housing**	1-2	18	600 – 750	1-2**
Minimal Change**	1-2	18	750	1-2**
Garden Townhouse	2-3	75	1100	8
Townhouse and Apartment Mix	2-3	150	1100	17
Garden Apartment	3-4	220	1500	33
Shoptop (standard)	3-5	350	600	21
- Shoptop (Heritage/Character)	3-4	220	600	13
Strategic Site A	6-8	400	600–3000	24–120
- Strategic Site B	4-5	300	600–3000	18–90
Urban Renewal A	8-12	500	3000	150
- Urban Renewal B	6-8	400	3000	120
Urban Apartment	3-4	250	1500	38

*Indicative numbers provided for comparison between zone and building type outcomes.

**Low density and dwelling output assumed due to restrictive policy framework.

APPROACH TO DETERMINING DENSITIES

The Victorian Planning system does not specifically reference or restrict housing densities. The system adopts a performance based approach with controls that encourage or restrict built forms. Some provisions are highly restrictive, while others are more open. Therefore, applying reasonable densities is not an exact science and requires a high level of broad assumptions on a municipality wide basis.

Testing the planning provisions and reviewing development trends provides a base for how planning policies affect housing densities. The densities applied in this analysis have been informed by a range of sources:

- Consideration of common density rates and development patterns.
- An analysis of existing approvals (see Appendix B).
- Preliminary spatial modelling of the Quality Design Guideline recommendations.
- *Peer Review of Glen Eira's Draft Quality Design Guidelines and Strategic and Urban Renewal Development Plans Analysis (draft)* report by AECOM in association with HillPDA. Note: some building types have been modified and renamed since that report was completed.
- *City of Glen Eira –Analysis of housing consumption and opportunities (draft)* report by Housing ID.

Densities have also been applied relative to each other to ensure a fair and balanced equation between existing zoning and proposed building types. The following high-level commentary is provided in relation to relativity of densities applied:

- The Heritage and Character Housing and Minimal Change building types are anticipated to have a similar output to that which is seen under current zoning and policy in the Neighbourhood Residential Zone, and therefore the same density has been applied.
- The Townhouse and Apartment Mix building type presents fairly similar development scenario to current General Residential Zone requirements in terms of likely dwelling output (150 dwellings per hectare), whilst the Garden Townhouse is more restrictive and yields a lower output of dwellings (nominated at 75 dwellings per hectare).
- The Garden Apartment building type (220 dwellings per hectare) presents a more dense form than town housing, whilst incorporating certain restrictions that temper development yield in comparison to Residential Growth Zone requirements (250 dwellings per hectare). The 'Urban Apartment' (250 dwellings per hectare) represents a more dense urban form.

- Strategic Site A and Urban Renewal A and B building types (400-500 dwellings per hectare) represent development at the higher end of current Commercial I Zoning trends, with the premise that these building types will be taller, but have an improved built form and will be applied in the most suitable locations for this form of development.
- Strategic Site B and Shoptop building types (220–350 dwellings per hectare) represent development closer to the lower density end of development currently seen in the Commercial I zone, with the premise that these will have an improved built form and be applied in preferred lower scale and transitional contexts.

Densities can vary from site-to-site and area-to-area. In this analysis, with exception of restrictive two-storey zones and building types, densities have generally been applied at the higher end of the density spectrum and will be tempered in the modelling through the ‘development assumption’ percentage (attractiveness index), which benchmarks different areas relative to each other. For example, commercial areas might receive more development and density in areas like Carnegie, which has better access to public transport, than areas like Alma Village.

3.4 HOUSING OPPORTUNITY PROJECTIONS

THE BASE CASE (NO CHANGE TO CURRENT POLICY)

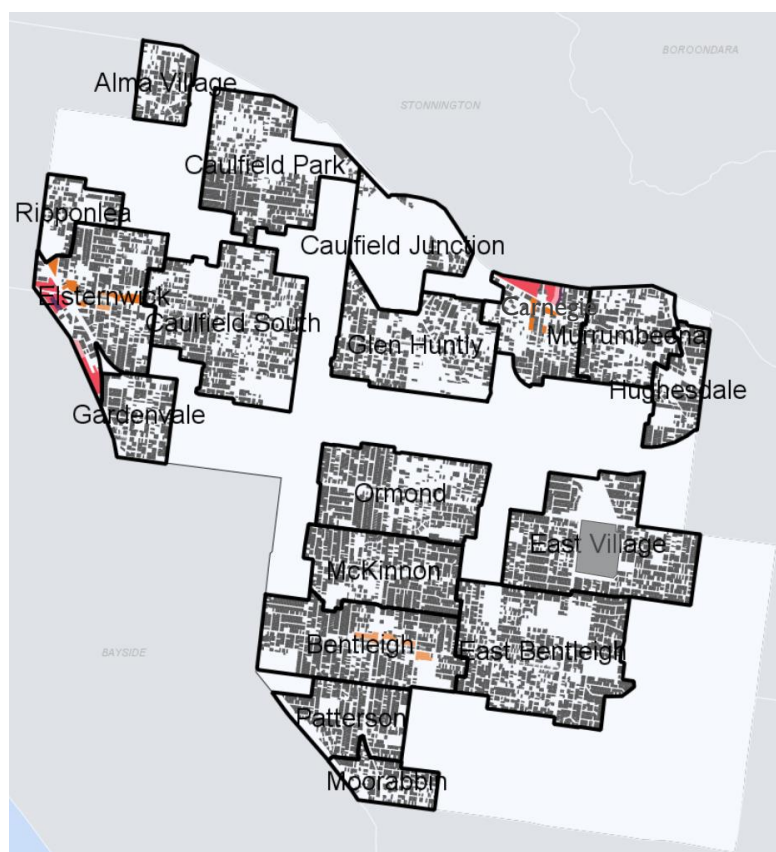
The base case identifies current housing opportunity based on existing planning scheme controls and zoning distribution. The analysis uses aspects of the ID report projection methodology, but seeks to apply a more accurate zone and density distribution to replace the broad density numbers listed in *Figure 53* of the ID report. This provides a fair base case for comparing the subsequent 3 scenarios.

The base case identifies a foreseeable opportunity for **26,198 additional dwellings** (see Table 4), which is within the low range of Council's expected housing targets. The base case is acceptably similar to Housing ID's forecast of 25,970 additional dwellings.

Table 4 – Base Case Results

ACTIVITY CENTRE	HOUSING OPPORTUNITY
Alma Village	294
Bentleigh	1976
Carnegie	3224
Caulfield Junction	2716
Caulfield Park	1161
Caulfield South	1704
East Bentleigh	1225
East Village	95
Elsternwick	3119
Gardenvale	100
Glen Huntly	1387
Hughesdale	330
McKinnon	916
Moorabbin	454
Murrumbeena	1373
Ormond	1673
Patterson	129
Ripponlea	111
OUT OF CENTRE	4210
TOTAL	26198

Figure 4: Developable Land Assessed For Base Case



SCENARIO I (RESTRICTING GRZ AND CIZ AREAS)

Scenario I investigates implementation of key Quality Design Guideline recommendations to restrict development across all centres for the General Residential Zone and Commercial I Zone.

The key variations are noted as follows:

- All General Residential Zoned Land (150 DPH) rezoned to achieve a 'Garden Townhouse' on local streets (75 DPH) and 'Townhouse and Apartment Mix' (75 DPH) on main roads.
- All Commercial I Zoned land (400 DPH) rezoned to achieve variations of the 'Shoptop (Heritage Character)' (220 DPH) or the 'Shoptop (Standard)' (350 DPH). As strategic work has not been undertaken to determine which building types would apply in each centre, a broad average of 300 DPH has been applied across all centres.

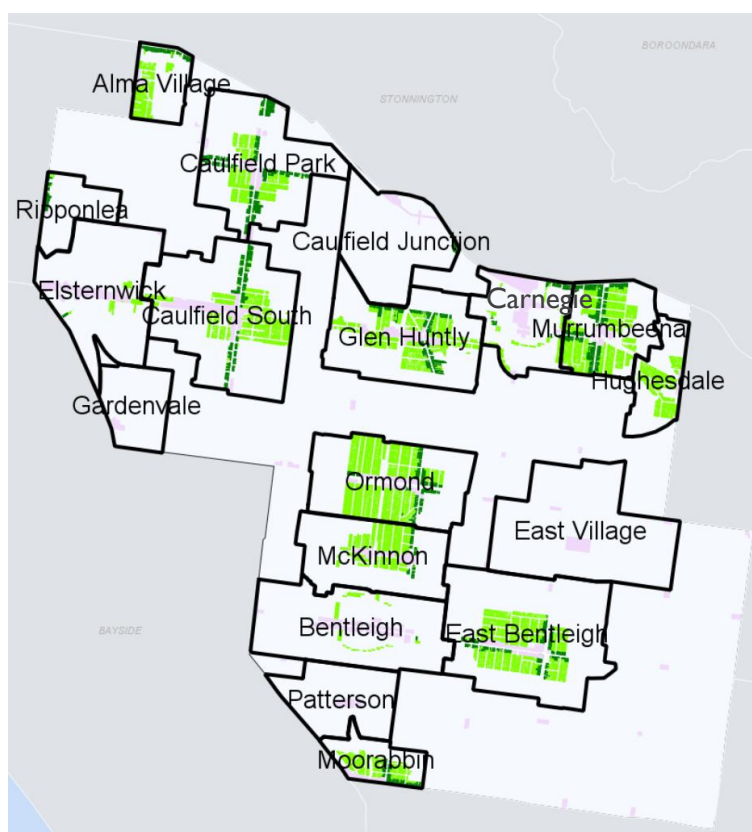
Scenario I identifies a foreseeable opportunity for **22,315 additional dwellings** (see Table 5).

This output is **3883 less than the base case** and does not meet Council's expected housing target range. Refer to Appendix C for the detailed calculations associated with this scenario.

Table 5 – Scenario I results

ACTIVITY CENTRE	HOUSING OPPORTUNITY
Alma Village	211
Bentleigh	1758
Carnegie	2849
Caulfield Junction	2687
Caulfield Park	841
Caulfield South	1247
East Bentleigh	904
East Village	90
Elsternwick	2884
Gardenvale	84
Glen Huntly	1085
Hughesdale	215
McKinnon	651
Moorabbin	327
Murrumbeena	976
Ormond	1078
Patterson	107
Ripponlea	110
OUT OF CENTRE	4210
TOTAL	22315

Figure 5 – Alternative zoning areas (GRZ & CIZ)



Legend:

- Garden Townhouse (Light green)
- Townhouse Apartment Mix (Dark green)
- Shoptop (variations) (Light purple)

SCENARIO 2 (STRUCTURE PLAN IMPLEMENTATION)

Scenario 2 investigates the alternative housing opportunity scenarios when implementing four key strategic projects:

- Bentleigh Structure Plan
- Carnegie Structure Plan
- Elsternwick Structure Plan
- East Village Structure Plan

Scenario 2 identifies a foreseeable opportunity for **29,359 additional dwellings** (see Table 6). This output is **3,161 more than the base case** and exceeds Council's expected housing target range. Refer to Appendix C for the detailed calculations associated with this scenario.

Table 6 – Scenario 2 Results

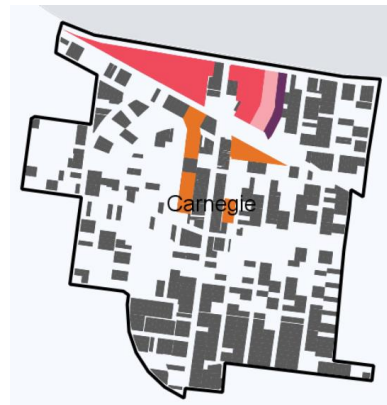
ACTIVITY CENTRE	HOUSING OPPORTUNITY
Alma Village	294
Bentleigh	1636
Carnegie	3280
Caulfield Junction	2716
Caulfield Park	1161
Caulfield South	1704
East Bentleigh	1225
East Village	3000
Elsternwick	3660
Gardenvale	100
Glen Huntly	1387
Hughesdale	330
McKinnon	916
Moorabbin	454
Murrumbeena	1373
Ormond	1673
Patterson	129
Ripponlea	111
OUT OF CENTRE	4210
TOTAL	29359

Figure 6 – Snapshot of ‘developable land’ assessed in the structure plan areas.

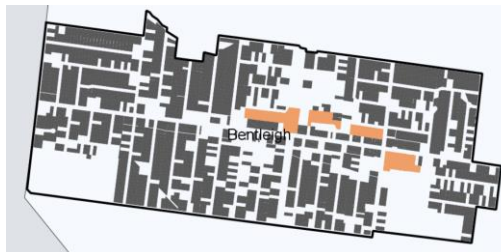
Elsternwick



Carnegie



Bentleigh



East Village



SCENARIO 3 (COMBINATION)

Scenario 3 implements both Scenarios 1 and 2, including:

- Alternative structure plan projections for Bentleigh, Carnegie, East Village and Elsternwick Activity Centre Study Areas (Scenario 2); and
- Alternative zone recommendations across the remaining centres for the General Residential Zone and Commercial 1 Zone (Scenario 1).

Scenario 3 identifies a foreseeable opportunity for **26,529 additional dwellings** (see Table 7).

This output is 111 dwellings more than the base case (generally aligned) and meets the expected housing target range. Refer to Appendix C for the detailed calculations associated with this scenario.

Table 7 – Scenario 3 Results

ACTIVITY CENTRE	HOUSING OPPORTUNITY
Alma Village	211
Bentleigh	1636
Carnegie	3280
Caulfield Junction	2687
Caulfield Park	841
Caulfield South	1247
East Bentleigh	904
East Village	3000
Elsternwick	3660
Gardenvale	84
Glen Huntly	1085
Hughesdale	215
McKinnon	651
Moorabbin	327
Murrumbeena	976
Ormond	1078
Patterson	107
Ripponlea	110
OUT OF CENTRE	4210
TOTAL	26308

3.5 COMPARISON OF PROJECTIONS

The following table provides a side-by-side comparison of each scenario, noting where increases or decreases have been found.

Table 8 – Housing Opportunity Results Comparison

ACTIVITY CENTRE	BASE CASE	SCENARIO 1		SCENARIO 2		SCENARIO 3	
	Opportunity	Opportunity	Difference	Opportunity	Difference	Opportunity	Difference
Alma Village	294	211	-84	294	0	211	-84
Bentleigh	1976	1758	-218	1636	-340	1636	-340
Carnegie	3224	2849	-375	3280	56	3280	56
Caulfield Junction	2716	2687	-29	2716	0	2687	-29
Caulfield Park	1161	841	-320	1161	0	841	-320
Caulfield South	1704	1247	-457	1704	0	1247	-457
East Bentleigh	1225	904	-321	1225	0	904	-321
East Village	95	90	-5	3000	2,905	3000	2,905
Elsternwick	3119	2884	-235	3660	541	3660	541
Gardenvale	100	84	-15	100	0	84	-15
Glen Huntly	1387	1085	-302	1387	0	1085	-302
Hughesdale	330	215	-115	330	0	215	-115
McKinnon	916	651	-266	916	0	651	-266
Moorabbin	454	327	-127	454	0	327	-127
Murrumbeena	1373	976	-398	1373	0	976	-398
Ormond	1673	1078	-594	1673	0	1078	-594
Patterson	129	107	-22	129	0	107	-22
Ripponlea	111	110	-1	111	0	110	-1
OUT OF CENTRE	4210	4210	0	4210	0	4210	0
TOTAL	26198	22315	-3,883	29359	3,161	26308	111

Opportunity = Housing Opportunity result

Difference = Difference between scenario and base case

Red text = less than base case

Green text = more than base case

4. SUMMARY OF KEY FINDINGS

Glen Eira's Housing target for 2031 is approximately 9000 additional dwellings.

The State Government has not yet confirmed a 2051 housing target for Glen Eira. Based on existing population trends, it is likely to be between 25,000 and 33,000 new dwellings by 2051. Council should ensure the city can deliver a minimum of **25,000 to 28,000 new dwellings** by that time based on conservative estimates.

This report analysed four projection scenarios to test alternative planning policy scenarios and their impact on housing opportunity. The following key conclusions are noted:

- The city should meet expected housing targets with no changes to current policy and zone distributions (**Base Case**). However, community concern around inappropriate built form outcomes is likely to continue. The base case identifies a foreseeable opportunity for 26,198 additional dwellings, which is within the low range of Council's expected housing targets.
- If Council seeks to introduce further restrictions in key zones of contention (**Scenario 1**), it is unlikely that Glen Eira will meet expected housing targets. Scenario 1 identifies a foreseeable opportunity for 22,315 additional dwellings. This output is 3883 less than the base case and does not meet Council's expected housing target range.
- Implementing structure plans with identified urban renewal and growth areas should ensure that Council meets and exceeds expected housing targets (**Scenario 2**). Scenario 2 identifies a foreseeable opportunity for 29,359 additional dwellings. This output is 3,161 more than the base case and exceeds Council's expected housing target range.
- Implementing a municipal-wide amendment that introduces further restrictions to key zones of contention as well as introduces structure planned areas accommodating growth will ensure that Council provides a 'balancing act' that continues to meet expected housing targets (**Scenario 3**). Scenario 3 identifies a foreseeable opportunity for 26,308 additional dwellings. This output is 111 dwellings more than the base case (generally aligned) and meets the expected housing target range.

- Noting that Glen Eira's high proportion of restrictive Neighbourhood Residential Zoning has received heavy industry criticism, and that this will become a large matter of contention in any future planning scheme amendment proposing restrictions to development in activity centres, it is vital to ensure that any proposed policy changes do not reduce housing opportunity as a whole across the city. The Scenario 3 approach demonstrates a way to achieve '**no reduction**' – a strategy that encourages growth in suitable locations that will compensate for other areas of further restriction in a way that continues to meet the expected housing target under Plan Melbourne.

Table 9 – Summary of Housing Opportunity Analysis

Scenario	Description	Housing Opportunity
Base Case	Housing opportunity based on current zone distribution, policy and controls.	26198
Scenario 1	Introducing restrictive modifications to General Residential Zone and Commercial Zone areas city-wide (based on Quality Design Guideline Recommendations).	22315
Scenario 2	Implementing Structure Plan recommendations for Bentleigh, Carnegie, Elsternwick and East Village.	29359
Scenario 3	The full package, implementing Scenario 1 and 2.	26308

All projections have been conservatively calculated. Calculations may yield higher or lower housing opportunities with changes to assumptions. For example, stronger growth in the Neighbourhood Residential Zone than anticipated, or development uptake as a whole in areas not anticipated for high growth. It is also unclear how recent changes to planning controls, including the Better Apartments Design Standards and Minimum Garden Area requirements will shape development trends and housing opportunity.

APPENDICES

APPENDIX A – DEVELOPABLE LAND MAPPING AND DATA

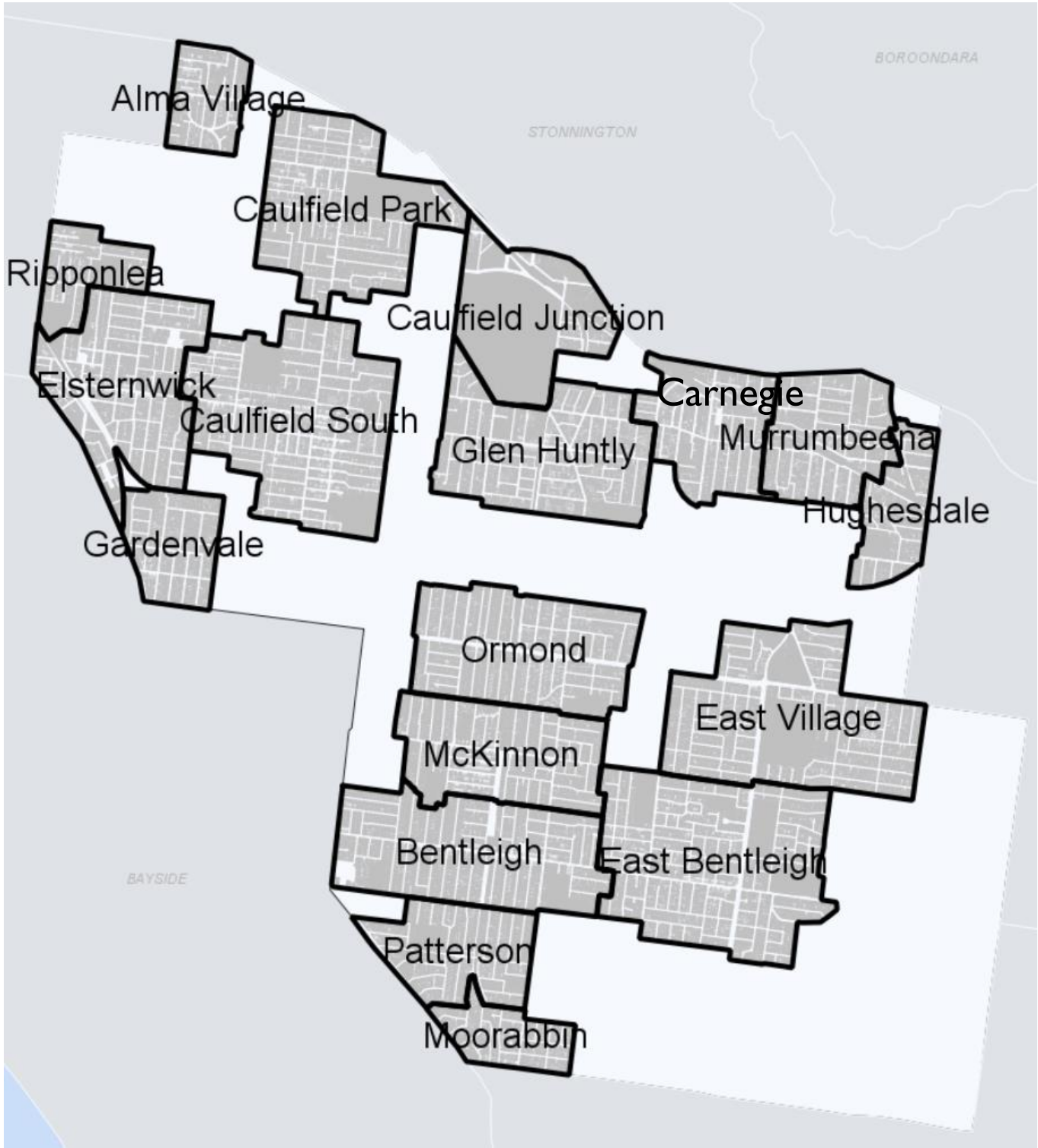
APPENDIX B – PERMIT ACTIVITY EXAMPLES

APPENDIX C – PROJECTION CALCULATIONS

APPENDIX A – DEVELOPABLE LAND MAPPING AND DATA

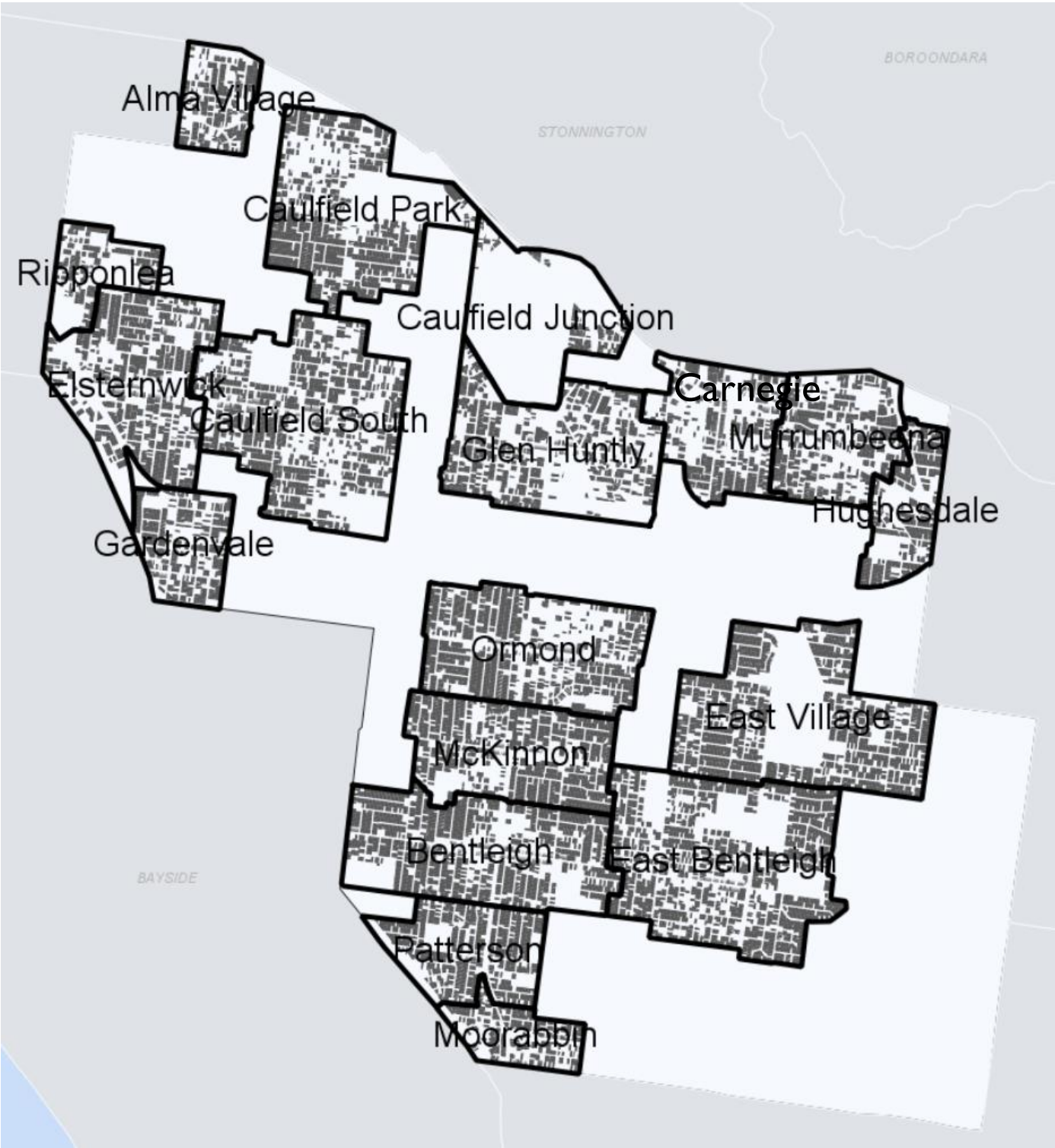
ALL LAND ASSESSED

This map shows all land within each activity centre study area that has been assessed in this report. The land in the white areas is considered ‘out of centre’, and has not been analysed. Council relies upon Housing ID’s projections for out of centre land, which will be minimally affected by the key strategic projects.



FIRST CUT: DEVELOPABLE LAND BY CURRENT ZONE

Map showing developable land identified within each activity centre. Developable land was assessed with data up to date at December 2016 (by Housing ID) and should be subject to on-going review. Note: Forecast ID development sites (permits issued) are removed and dealt with separately in equations.

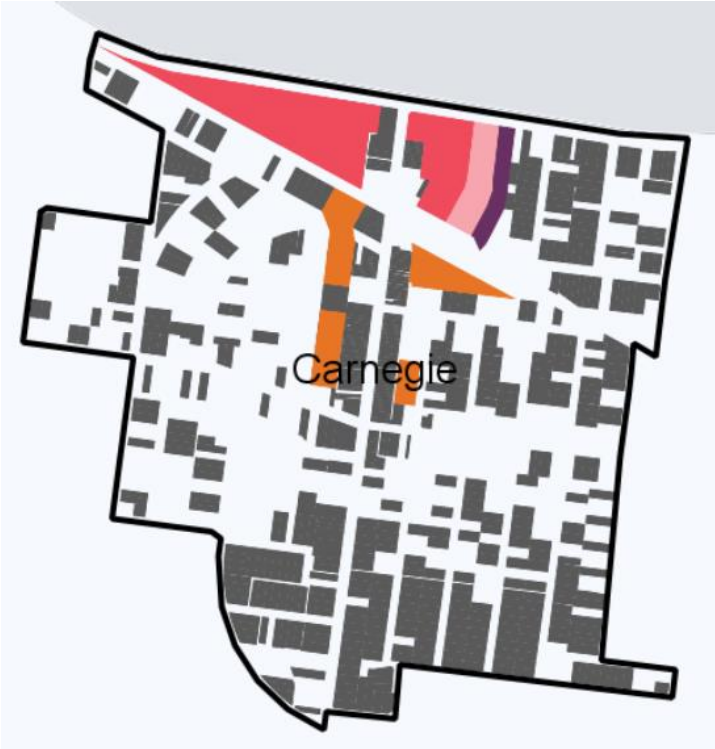


STRATEGIC UPLIFT AREAS IDENTIFIED

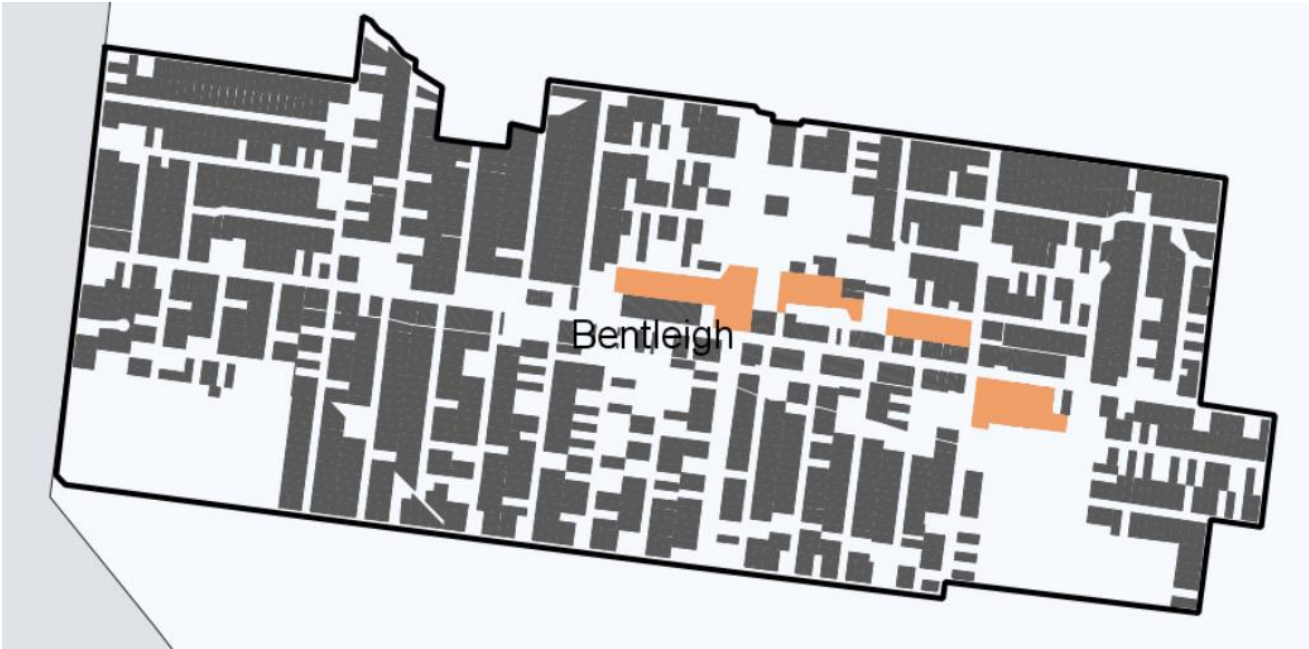
Elsternwick



Carnegie



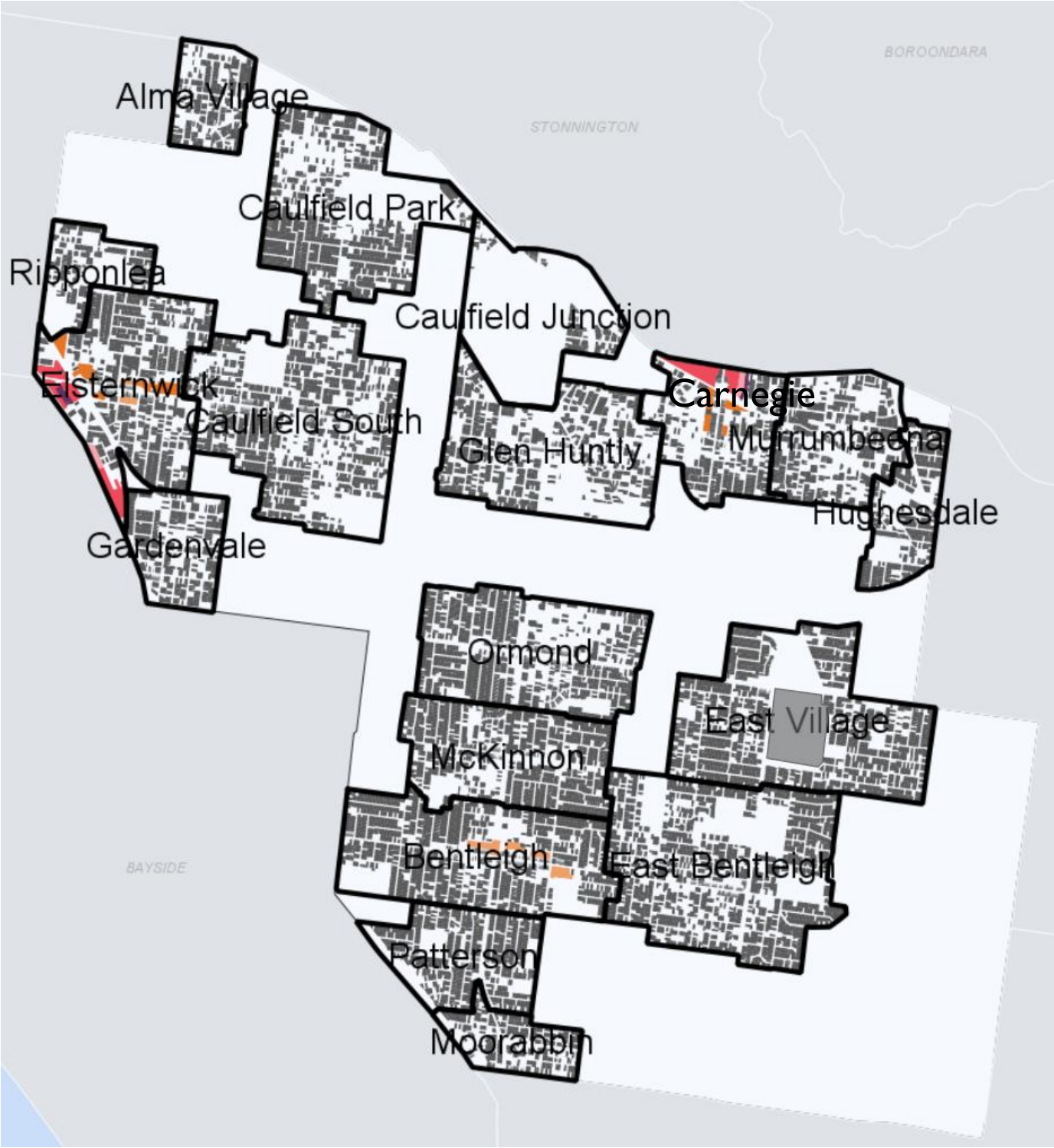
Bentleigh



Note: The entire **East Village** Structure Plan site is considered developable (not mapped here).

FINAL ASSESSMENT LAYER: DEVELOPABLE LAND INCLUDING STRATEGIC UPLIFT AREAS

Maps showing developable land in each structure plan area (data on following page).



ZONE DATA BREAKDOWN

Developable land (**Area in Hectares**) within each **Zone**, by Activity Centre Study Area

	Alma Village	Bentleigh	Carnegie	Caulfield Junction	Caulfield Park	Caulfield South	East Bentleigh	East Village	Elsternwick	Gardenvale	Glen Huntly	Hughesdale	McKinnon	Moorabbin	Murrumbeena	Ormond	Patterson	Ripponlea	TOTAL
NRZ*	14.72	71.24	18.23	6.14	47.44	64.13	73.86	91.68	48.55	25.99	41.36	18.58	48.68	11.71	14.01	37.08	41.53	14.67	689.61
GRZ*	5.26	2.70	4.19	0.29	17.68	15.81	27.22	0.00	1.28	0.00	12.72	5.60	13.69	6.23	22.79	32.11	0.00	0.40	167.98
RGZI	0.00	8.67	7.28	0.88	0.00	0.00	0.00	0.00	15.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.25
MUZ*	0.08	0.00	1.36	0.00	0.00	0.11	0.17	0.00	1.50	0.00	0.91	0.30	0.00	0.00	0.33	0.44	0.00	0.09	5.28
C1Z	0.62	5.84	8.10	0.81	1.78	7.76	2.81	0.60	5.57	0.77	3.20	0.58	1.71	0.80	1.37	2.93	1.10	0.07	46.42
C2Z	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.81	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.92
PUZ*	0.00	3.39	1.00	0.00	0.00	0.00	0.21	0.00	2.54	0.42	0.00	0.00	1.11	0.00	0.00	0.00	0.00	0.00	8.68
IN*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.37
PPRZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PDZ*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUZ*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL EACH CENTRE	20.68	91.84	40.17	8.11	66.90	87.80	104.27	92.28	79.68	27.30	58.20	25.06	65.57	18.74	38.50	72.56	42.63	15.23	955.50

Alternative GRZ breakdown for Scenario 1

GRZ (TOWNHOUSE APARTMENT MIX)	0.51	0.10	1.11	0.29	4.79	4.40	4.24	0.00	0.00	0.00	2.63	0.00	1.21	1.25	5.68	3.00	0.00	0.40	29.61
GRZ (GARDEN TOWNHOUSE)	4.76	2.61	3.08	0.00	12.89	11.41	22.98	0.00	1.28	0.00	10.10	5.60	12.48	4.98	17.11	29.11	0.00	0.00	138.37

Developable land (**Number of Properties**) within each **Zone**, by Activity Centre Study Area *(note: this represents 'ground floor' properties more than 100sqm to remove anomalies like common driveways or multi-level buildings)*

	Alma Village	Bentleigh	Carnegie	Caulfield Junction	Caulfield Park	Caulfield South	East Bentleigh	East Village	Elsternwick	Gardenvale	Glen Huntly	Hughesdale	McKinnon	Moorabbin	Murrumbeena	Ormond	Patterson	Ripponlea	TOTAL
NRZ*	211	1074	306	99	666	994	1128	1418	767	387	630	272	773	181	190	554	646	236	10532
GRZ*	81	38	64	4	267	250	404	0	9	0	204	84	205	91	305	476	0	6	2488
RGZI	0	130	137	15	0	0	0	0	190	0	0	0	0	0	0	0	0	0	472
MUZ*	1	0	25	0	0	7	2	0	18	0	2	7	0	0	4	11	0	1	78
C1Z	18	209	155	20	40	200	119	22	169	32	91	13	54	22	47	99	35	1	1346
C2Z	0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	0	0	0	11
PUZ*	0	5	2	0	0	0	2	0	8	1	0	0	1	0	0	0	0	0	19
IN*	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
PPRZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PDZ*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUZ*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EACH CENTRE	311	1456	689	138	973	1451	1655	1440	1171	421	927	376	1037	294	546	1140	681	244	14950

Alternative GRZ breakdown for Scenario 1

GRZ (TOWNHOUSE APARTMENT MIX)	5	1	17	4	68	58	57	0	0	0	41	0	22	18	62	48	0	6	407
GRZ (GARDEN TOWNHOUSE)	76	37	47	0	199	192	347	0	9	0	163	84	183	73	243	428	0	0	2081

BUILDING TYPE DATA BREAKDOWN

Developable land (**Area in Hectares**) within each **Building Type**, by Activity Centre Study Area

	Alma Village	Bentleigh	Carnegie	Caulfield Junction	Caulfield Park	Caulfield South	East Bentleigh	East Village	Elsternwick	Gardenvale	Glen Huntly	Hughesdale	McKinnon	Moorabbin	Murrumbeena	Ormond	Patterson	Ripponlea	TOTAL
Heritage and character housing	0.00	20.20	1.16	0.00	0.00	0.00	0.00	0.00	32.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	54.33
Minimal change	0.00	48.30	14.30	0.00	0.00	0.00	0.00	0.00	20.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	82.83
Garden townhouse	0.00	6.64	3.83	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.87
Townhouse and apartment mix	0.00	4.19	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.19
Garden Apartment	0.00	1.99	3.51	0.00	0.00	0.00	0.00	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.96
Shop top heritage character	0.00	0.28	2.23	0.00	0.00	0.00	0.00	0.00	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.27
Shop top standard	0.00	4.41	1.46	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.30
Strategic site A	0.00	0.00	2.02	0.00	0.00	0.00	0.00	0.00	4.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.55
Strategic site B	0.00	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.67
Urban renewal A	0.00	0.00	4.31	0.00	0.00	0.00	0.00	0.00	6.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.15
Urban Renewal B	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69
Urban Apartment	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21
TOTAL	0.00	89.71	39.09	0.00	0.00	0.00	0.00	0.00	75.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	204.01

Developable land (**Number of Properties**) within each **Building Type**, by Activity Centre Study Area (note: this represents ‘ground floor’ properties more than 100sqm to remove anomalies like common driveways or multi-level buildings)

	Alma Village	Bentleigh	Carnegie	Caulfield Junction	Caulfield Park	Caulfield South	East Bentleigh	East Village	Elsternwick	Gardenvale	Glen Huntly	Hughesdale	McKinnon	Moorabbin	Murrumbeena	Ormond	Patterson	Ripponlea	TOTAL
Heritage and character housing	0	308	21	0	0	0	0	0	478	0	0	0	0	0	0	0	0	0	807
Minimal change	0	730	247	0	0	0	0	0	325	0	0	0	0	0	0	0	0	0	1302
Garden townhouse	0	96	62	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	165
Townhouse and apartment mix	0	63	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143
Garden Apartment	0	29	59	0	0	0	0	0	75	0	0	0	0	0	0	0	0	0	163
Shop top heritage character	0	13	92	0	0	0	0	0	123	0	0	0	0	0	0	0	0	0	228
Shop top standard	0	188	37	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	234
Strategic site A	0	0	23	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	54
Strategic site B	0	28	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	36
Urban renewal A	0	0	38	0	0	0	0	0	79	0	0	0	0	0	0	0	0	0	0
Urban Renewal B	0	0	14	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0
Urban Apartment	0	0	14	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	41
NO BUILDING TYPE APPLIED	311	1	2	138	973	1451	1655	1440	3	421	927	376	1037	294	546	1140	681	244	11640
TOTAL PROPERTIES WITH A BUILDING TYPE	0	1455	687	0	0	0	0	0	1168	0	0	0	0	0	0	0	0	0	3310
TOTAL OF ALL PROPERTIES	311	1456	689	138	973	1451	1655	1440	1171	421	927	376	1037	294	546	1140	681	244	14950

APPENDIX B – PERMIT ACTIVITY EXAMPLES

PERMIT EXAMPLES IN THE GENERAL RESIDENTIAL ZONE

GRZ	3 STOREY APPROVALS				
Permit	Property Address	Height	Area	Dwellings	Density
GE/PP-28065/2015	29-31 Prince Edward Avenue MCKINNON	3	1450	19	131
GE/PP-26721/2014/A	289 Grange Road ORMOND	3	1040	17	163
GE/PP-27994/2015	24-26 Cadby Avenue ORMOND	3	1394	12	86
GE/PP-28065/2015	29-31 Prince Edward Avenue MCKINNON	3	1450	21	145
GE/PP-30199/2016	30-32 Prince Edward Avenue MCKINNON	3	1394	17	122
GE/PP-27839/2015	10-12 Station Avenue MCKINNON	3	1449	21	145
GE/PP-27463/2014	64-66 Bent Street MCKINNON	3 to 4	1524	31	203
GE/PP-23132/2010	61 Lees Street MCKINNON	3	1461	26	178
GE/PP-28020/2015	6-10 Claire Street MCKINNON	3	1744	36	206
GE/PP-24181/2011/A	127 - 129 Murray Street CAULFIELD	3	1350	28	207
GE/PP-25837/2013/C	93-97 Truganini Road CARNEGIE	3	1890	28	148
GE/PP-24624/2012	1044-1044A Glen Huntly Road CAULFIELD SOUTH	3	779	14	180
GE/PP-29903/2016	35 Kokaribb Road CARNEGIE	3	850	5	59
GE/PP-28183/2015	14 Vickery Street BENTLEIGH	3	834	10	120
GE/PP-27173/2014	85 Robert Street BENTLEIGH	3	595	10	168
GE/PP-29325/2016	9-13 St Georges Avenue BENTLEIGH EAST VIC	2	2016	15	74
GE/PP-23160/2010	276 Hawthorn Road CAULFIELD	3	686	10	146
GE/PP-25104/2012	286 Hawthorn Road CAULFIELD	3	696	13	187
GE/PP-26664/2014	288 Hawthorn Road CAULFIELD	3	697	10	143
GE/PP-23962/2011	290 Hawthorn Road CAULFIELD	3	696	10	144
AVERAGE			1199.75	17.65	148

Note: The General Residential Zone figures are based on existing trends that may not be reflective of future developments. The State Government has recently introduced Minimum Garden Area requirements that may reduce developable yield in the General Residential Zone. As these requirements are new, Council Officers have limited permit activity demonstrating their on-going impact on Dwelling Yield for the zone. This will be subject to further review.

PERMIT EXAMPLES IN THE RESIDENTIAL GROWTH ZONE

RGZ	4 STOREY APPROVALS				
Permit	Property Address	Height	Area	Dwellings	Density
GE/PP-27023/2014	22-26 Bent Street BENTLEIGH	4	1876	41	219
GE/PP-27334/2014/A	14-18 Bent Street BENTLEIGH	4	1996	55	276
GE/PP-27935/2015	10-12 Bent Street BENTLEIGH	4	1345	35	260
GE/PP-26034/2013/B	15 Bent Street BENTLEIGH	4	846	19	225
GE/PP-27635/2015/A	23 Bent Street BENTLEIGH	4	1057	29	274
GE/PP-28566/2015/B	15-19 Vickery Street BENTLEIGH	4	2100	47	224
GE/PP-29007/2016	24-26 Vickery Street BENTLEIGH	4	1357	36	265
GE/PP-28916/2015	79-83 Mitchell Street BENTLEIGH	4	1785	41	230
GE/PP-27003/2014	29-33 Loranne Street BENTLEIGH	4	2088	42	201
GE/PP-27020/2014/D	24-26 Mavho Street BENTLEIGH	4	1376	28	203
GE/PP-27683/2015	40 Mavho Street BENTLEIGH	4	701	24	342
GE/PP-28182/2015	21-25 Nicholson Street BENTLEIGH	4	1871	44	235
GE/PP-29497/2016	37-39 Nicholson Street BENTLEIGH	4	1248	26	208
GE/PP-28180/2015	6-8 Blair Street BENTLEIGH	4	1492	35	235
GE/PP-27737/2015/A	110-114 Mimosa Road CARNEGIE	4	2462	50	203
GE/PP-29061/2016	90-94 Mimosa Road CARNEGIE	4	1753	41	234
GE/PP-28072/2015	9 & 9A Truganini Road CARNEGIE	4	920	20	217
GE/PP-26254/2013/A	21-25 Truganini Road CARNEGIE	4	1905	41	215
GE/PP-27552/2014	247-251 Neerim Road CARNEGIE	4	2072	48	232
GE/PP-26350/2013	259-261 Neerim Road CARNEGIE	4	1143	28	245
GE/PP-29702/2016	323 Neerim Road CARNEGIE	4	976	24	246
GE/PP-27300/2014	339-341 Neerim Road & 19-21 Belsize Avenue CARNEGIE	4	1605	35	218
GE/PP-29294/2016	322-326 Neerim Road & 17 Elliot Avenue CARNEGIE	4	1880	38	202
GE/PP-28186/2015	3-9 Elliott Avenue CARNEGIE	4	2208	41	186
AVERAGE			1586	36	233

PERMIT EXAMPLES IN COMMERCIAL & MIXED USE AREAS

CIZ & MUZ	3-6 STOREY APPROVALS				
Permit	Property Address	Height	Area	Dwellings	Density
GE/PP-22614/2010/A	261 Centre Road BENTLEIGH	5	752	31	412
GE/PP-23386/2011/C	2 Morton Avenue CARNEGIE	6	757	40	528
GE/PP-26015/2013	178-180 Koornang Road CARNEGIE	6	697	26	373
GE/PP-28591/2015	315 Neerim Road CARNEGIE	6	315	9	286
GE/PP-30307/2017	Unit 1-4 1A Kokaribb Road CARNEGIE	6	397	12	302
GE/PP-25209/2012/D	Flat 101-604 483 Glen Huntly Road ELSTERNWICK	7	969	49	506
GE/PP-26136/2013/C	15 Gordon Street ELSTERNWICK	7	1166	47	403
GE/PP-27086/2014	495-501 Glen Huntly Road ELSTERNWICK	7	838	32	382
GE/PP-28786/2015	342-346 Centre Road BENTLEIGH	7	633	19	300
		AVERAGE	725	29	388

CIZ & MUZ	7-8 STOREY APPROVALS				
Permit	Property Address	Height	Area	Dwellings	Density
GE/PP-27086/2014	495-501 Glen Huntly Road ELSTERNWICK	7	838	44	525
GE/PP-25209/2012/D	483-493 Glen Huntly Road ELSTERNWICK	7	969	57	588
GE/PP-26136/2013/C	15-17 Gordon Street ELSTERNWICK	7	1166	47	403
GE/PP-28189/2015	324-326, 328, 328A Centre Road BENTLEIGH	8	1235	39	316
GE/PP-28913/2015	60-64 Rosstown Road CARNEGIE	8	1183	40	338
GE/PP-29399/2016	411-415 Glen Huntly Road ELSTERNWICK	8	1016	37	364
GE/PP-25733/2013/B	28 Riddell Parade ELSTERNWICK	8	1283	54	421
GE/PP-27622/2015	(COLES) Shop 1 441, 459, 461 Glen Huntly Road & 9 Beavis Street ELSTERNWICK	8	7175	183	255
		AVERAGE (Including Coles site)	1858	63	401
		AVERAGE (Not including Coles site)	1099	45	422

CIZ & MUZ	11-13 STOREY APPROVALS				
Permit	Property Address	Height	Area	Dwellings	Density
GE/PP-28952/2016	22-26 Riddell Parade ELSTERNWICK	11	548	40	730
GE/PP-23483/2011	221-229 Glen Huntly Road ELSTERNWICK	11	1147	89	776
GE/PP-24930/2012/A	1056, 1058-1060 Dandenong Road CARNEGIE	12	4151	173	417
GE/PP-27197/2014/A	14-22 Woorayl Street CARNEGIE	13	2738	138	504
		AVERAGE	2088	101	542

APPENDIX C – PROJECTION CALCULATIONS

BASE CASE RESULTS

METHOD

The Housing Opportunity projections have been calculated for Each Activity Centre Study Area as follows:

- Evaluate all land within Activity Centre Study Areas to determine the **Developable land** (see Section 3.2 and Appendix A).
- Allocate a **Housing Density** for each current zone and preferred building type (see Section 3.3 and Appendix B).
- Calculate the **Theoretical capacity** (based on developable land multiplied by density of relevant zone or building type to show an absolute maximum). *Note: Each scenario will have varying Developable Land and Density inputs depending on what is being compared. This is the key variable for each scenario.*
- Calculate **Housing Opportunity** by applying development assumption formulas (using Housing ID method) to the Theoretical Housing Capacity. This includes:
 - Applying a **development assumption** percentage (i.e. attractiveness index).
 - Subtracting the estimated number of **demolished dwellings** as part of new developments (i.e. to construct new developments, existing buildings will be removed).
 - Adding the **forecast sites** (existing permits) with confirmed dwelling yield.

The assessment undertaken by Housing ID for land that is not within the Activity Centre Study Areas ('out of centre' land) notes an additional opportunity for 4210 new dwellings. This figure is accepted and is not changed in any scenario.

FORMULAS USED IN BELOW TABLE

- Dwelling yield for each zone = Total Area of developable land for each zone x Density
- Development Assumption = Extracted from Housing ID report for each centre.
- Demolished Dwellings calculation = (total number of properties x development assumption x 0.8)
- Forecast sites = Extracted from Housing ID report for each centre.
- Housing Opportunity = Development assumption result – Demolished Dwellings + Forecast ID sites

RESULTS

ZONES	DENSITY	ACTIVITY CENTRE STUDY AREA (DWELLING YIELD FOR EACH ZONE)																		OUT OF CENTRE (ID)	TOTAL
		Alma Village	Bentleigh	Carnegie	Caulfield Junction	Caulfield Park	Caulfield South	East Bentleigh	East Village	Elsternwick	Gardenvale	Glen Huntly	Hughesdale	McKinnon	Moorabbin	Murrumbena	Ormond	Patterson	Ripponlea		
NRZ*	18	265	1282	328	111	854	1154	1329	1650	874	468	744	334	876	211	252	668	747	264		
GRZ*	150	789	406	629	44	2652	2371	4084	0	192	0	1909	840	2053	934	3419	4817	0	60		
RGZI	250	0	2169	1820	219	0	0	0	0	3855	0	0	0	0	0	0	0	0	0		
MUZ*	300	24	0	408	0	0	32	50	0	451	0	273	90	0	0	99	131	0	26		
C1Z	400	248	2334	3242	323	712	3103	1126	240	2227	307	1282	232	685	321	547	1170	441	28		
C2Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PUZ*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
IN*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PPRZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PDZ*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
SUZ*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
THEORETICAL CAPACITY (DWELLINGS)		1325	6191	6427	696	4218	6660	6588	1890	7599	775	4208	1497	3615	1466	4316	6786	1189	378		
DEVELOPMENT ASSUMPTION (%)		20%	28%	36%	36%	28%	28%	16%	8%	36%	20%	28%	24%	24%	28%	28%	24%	20%	20%		
DEVELOPMENT ASSUMPTION RESULT (DWELLINGS)		265	1733	2314	251	1181	1865	1054	151	2736	155	1178	359	868	410	1209	1629	238	76	4018	
DEMOLISHED DWELLINGS		50	326	198	40	218	325	212	92	337	67	208	72	199	66	122	219	109	39		
FORECAST ID SITES (PERMITS) (DWELLINGS)		79	569	1109	2505	198	164	383	36	721	12	416	43	248	109	287	263	0	75	192	
HOUSING OPPORTUNITY (DWELLINGS)		294	1976	3224	2716	1161	1704	1225	95	3119	100	1387	330	916	454	1373	1673	129	111	4210	26198

SCENARIO I RESULTS

KEY VARIATIONS FROM BASE CASE

Scenario I investigates implementation of key Quality Design Guideline recommendations to restrict development across all centres for the General Residential Zone and Commercial I Zone. The key variations are noted as follows:

- All General Residential Zoned Land (150 DPH) rezoned to achieve a ‘Garden Townhouse’ on local streets (75 DPH) and ‘Townhouse and Apartment Mix’ (75 DPH) on main roads.
- All Commercial I Zoned land (400 DPH) rezoned to achieve variations of the ‘Shoptop (Heritage Character)’ (220 DPH) or the ‘Shoptop (Standard)’ (350 DPH). As strategic work has not been undertaken to determine which building types would apply in each centre, a broad average of 300 DPH has been applied across all centres.

RESULTS
(KEY INPUT VARIATIONS HIGHLIGHTED IN RED)

ZONES	DENSITY	ACTIVITY CENTRE STUDY AREA (DWELLING YIELD FOR EACH ZONE)																		OUT OF CENTRE (ID)	TOTAL
		Alma Village	Bentleigh	Carnegie	Caulfield Junction	Caulfield Park	Caulfield South	East Bentleigh	East Village	Elsternwick	Gardenvale	Glen Huntly	Hughesdale	McKinnon	Moorabbin	Murrumbeena	Ormond	Patterson	Ripponlea		
NRZ*	18	265	1282	328	111	854	1154	1329	1650	874	468	744	334	876	211	252	668	747	264		
GRZ (TOWNHOUSE APARTMENT MIX)	150	76	15	167	44	719	660	636	0	0	0	394	0	182	188	853	450	0	60		
GRZ (GARDEN TOWNHOUSE)	75	357	195	231	0	967	855	1724	0	96	0	757	420	936	373	1283	2184	0	0		
RGZI	250	0	2169	1820	219	0	0	0	0	3855	0	0	0	0	0	0	0	0	0		
MUZ*	300	24	0	408	0	0	32	50	0	451	0	273	90	0	0	99	131	0	26		
CIZ (SHOPTOP - VARIATIONS)	300	186	1751	2431	242	534	2328	844	180	1670	231	961	174	514	240	410	878	331	21		
THEORETICAL CAPACITY (DWELLINGS)		907	5412	5386	615	3073	5029	4583	1830	6946	698	3130	1019	2508	1012	2897	4310	1079	371		
DEVELOPMENT ASSUMPTION (%)		20%	28%	36%	36%	28%	28%	16%	8%	36%	20%	28%	24%	24%	28%	28%	24%	20%	20%		
DEVELOPMENT ASSUMPTION RESULT (DWELLINGS)		181	1515	1939	222	861	1408	733	146	2501	140	876	245	602	283	811	1034	216	74	4018	
DEMOLISHED DWELLINGS		50	326	198	40	218	325	212	92	337	67	208	72	199	66	122	219	109	39		
FORECAST ID SITES (PERMITS) (DWELLINGS)		79	569	1109	2505	198	164	383	36	721	12	416	43	248	109	287	263	0	75	192	
HOUSING OPPORTUNITY (DWELLINGS)		211	1758	2849	2687	841	1247	904	90	2884	84	1085	215	651	327	976	1078	107	110	4210	22315

SCENARIO 2 RESULTS

KEY VARIATIONS FROM BASE CASE

This scenario involves substitution of alternative projections for Bentleigh Carnegie, East Village and Elsternwick based on Structure Planning. Council have received preliminary advice that the East Village structure plan will contribute approximately 3,000 additional dwellings. The figures for Bentleigh, Carnegie and Elsternwick are noted on the following table.

STRUCTURE PLAN PROJECTIONS

BUILDING TYPE	HEIGHT	DENSITY (DPH)	BENTLEIGH		CARNEGIE		ELSTERNWICK	
			AREA (HA)	DWELLING YIELD	AREA (HA)	DWELLING YIELD	AREA (HA)	DWELLING YIELD
Heritage and character housing	1-2	18	2	18	20.20	364	1.16	21
Minimal change	1-2	18	2	18	48.30	869	14.30	257
Garden townhouse	2-3	75	3	75	6.64	498	3.83	288
Townhouse and apartment mix	2-3	150	3	150	4.19	628	5.00	750
Garden Apartment	3-4	220	4	220	1.99	438	3.51	773
Shop top heritage character	3-5	350	4	350	0.28	97	2.23	781
Shop top standard	3-4	220	5	220	4.41	971	1.46	321
Strategic site A	6-8	400	8	400	0.00	0	2.02	809
Strategic site B	4-5	300	5	300	3.70	1110	0.00	0
Urban renewal A	8-12	500	12	500	0.00	0	4.31	2155
Urban Renewal B	6-8	400	8	400	0.00	0	0.75	298
Urban Apartment	3-4	250	4	250	0.00	0	0.51	129
THEORETICAL CAPACITY					4975		6582	

RESULTS

(KEY INPUT VARIATIONS FROM BASE CASE HIGHLIGHTED IN RED)

ZONES	DENSITY (DPH)	ACTIVITY CENTRE STUDY AREA (DWELLING YIELD FOR EACH ZONE)																	OUT OF CENTRE (ID)	TOTAL	
		Alma Village	Bentleigh	Carnegie	Caulfield Junction	Caulfield Park	Caulfield South	East Bentleigh	East Village	Elsternwick	Gardenvale	Glen Huntly	Hughesdale	McKinnon	Moorabbin	Murrumbeena	Ormond	Patterson			Ripponlea
NRZ*	18	265			111	854	1154	1329			468	744	334	876	211	252	668	747	264		
GRZ*	150	789			44	2652	2371	4084			0	1909	840	2053	934	3419	4817	0	60		
RGZI	250	0			219	0	0	0			0	0	0	0	0	0	0	0	0		
MUZ*	300	24			0	0	32	50			0	273	90	0	0	99	131	0	26		
CIZ	400	248			323	712	3103	1126			307	1282	232	685	321	547	1170	441	28		
THEORETICAL CAPACITY (DWELLINGS)		1325	4975	6582	696	4218	6660	6588		9101	775	4208	1497	3615	1466	4316	6786	1189	378		
DEVELOPMENT ASSUMPTION (%)		20%	28%	36%	36%	28%	28%	16%		36%	20%	28%	24%	24%	28%	28%	24%	20%	20%		
DEVELOPMENT ASSUMPTION RESULT (DWELLINGS)		265	1393	2370	251	1181	1865	1054		3276	155	1178	359	868	410	1209	1629	238	76	4018	
DEMOLISHED DWELLINGS		50	326	198	40	218	325	212		337	67	208	72	199	66	122	219	109	39		
FORECAST ID SITES (PERMITS) (DWELLINGS)		79	569	1109	2505	198	164	383		721	12	416	43	248	109	287	263	0	75	192	
HOUSING OPPORTUNITY (DWELLINGS)		294	1636	3280	2716	1161	1704	1225	3000	3660	100	1387	330	916	454	1373	1373	129	111	4210	29359

SCENARIO 3 RESULTS

KEY VARIATIONS FROM BASE CASE

Scenario 3 implements both Scenarios 1 and 2, including:

- Alternative structure plan projections for Bentleigh, Carnegie, East Village and Elsternwick Activity Centre Study Areas (Scenario 2); and
- Alternative zone recommendations across the remaining centres for the General Residential Zone and Commercial 1 Zone (Scenario 1).

RESULTS

(KEY INPUT VARIATIONS FROM BASE CASE HIGHLIGHTED IN RED)

ZONES	DENSITY	ACTIVITY CENTRE STUDY AREA (DWELLING YIELD FOR EACH ZONE)																	OUT OF CENTRE (ID)	TOTAL	
		Alma Village	Bentleigh	Carnegie	Caulfield Junction	Caulfield Park	Caulfield South	East Bentleigh	East Village	Elsternwick	Gardenvale	Glen Huntly	Hughesdale	McKinnon	Moorabbin	Murrumbeena	Ormond	Patterson			Ripponlea
NRZ*	18	265			111	854	1154	1329		468	744	334	876	211	252	668	747	264			
GRZ (TOWNHOUSE APARTMENT MIX)	150	76			44	719	660	636		0	394	0	182	188	853	450	0	60			
GRZ (GARDEN TOWNHOUSE)	75	357			0	967	855	1724		0	757	420	936	373	1283	2184	0	0			
RGZI	250	0			219	0	0	0		0	0	0	0	0	0	0	0	0			
MUZ*	300	24			0	0	32	50		0	273	90	0	0	99	131	0	26			
CIZ (SHOPTOP - VARIATIONS)	300	186			242	534	2328	844		231	961	174	514	240	410	878	331	21			
THEORETICAL CAPACITY (DWELLINGS)		907	4975	6582	615	3073	5029	4583	9101	698	3130	1019	2508	1012	2897	4310	1079	371			
DEVELOPMENT ASSUMPTION (%)		20%	28%	36%	36%	28%	28%	16%	36%	20%	28%	24%	24%	28%	28%	24%	20%	20%			
DEVELOPMENT ASSUMPTION RESULT (DWELLINGS)		181	1339	2370	222	861	1408	733	3276	140	876	245	602	283	811	1034	216	74	4018		
DEMOLISHED DWELLINGS		50	326	198	40	218	325	212	337	67	208	72	199	66	122	219	109	39			
FORECAST ID SITES (PERMITS) (DWELLINGS)		79	569	1109	2505	198	164	383	721	12	416	43	248	109	287	263	0	75	192		
HOUSING OPPORTUNITY (DWELLINGS)		211	1636	3280	2687	841	1247	904	3000	3660	84	1085	215	651	327	976	1078	107	110	4210	26308