FISHERMANS BEND PLANNING REVIEW PANEL: DRAFT AMENDMENT GC81

SUPPLEMENTARY INFORMATION NOTE

SIN NUMBER:	**3**
DATE:	28 March 2018
PRECINCT:	All
DRAFT FRAMEWORK REFERENCE:	
SUBJECT:	Response to request for supplementary and supporting data from DELWP Demographic Research Team, prepared by David Sykes (Principal Demographer)
NOTE:	
REQUEST:	Supplementary and supporting demographic and related data in the following areas: 1. Comparisons of residential and employment density between precincts and other inner city areas; 2. Source and supporting data for recent household additions totals quoted on p5 of the Population and Demographic Report; 3. Further information on car ownership rates for families in the inner city; 4. Further information on household types in three-bedroom apartments; 5. Background to, and explanation of "Scenario 2" tables quoted in Urban

Design Report, provision of Scenario 1.

6. Further information on annual average household and dwelling additions across the Inner Metro Region in the past five years

RESPONSE: Detailed data and advice has been provided by the DELWP Demographic Research Team in response to the numbered points above. See attachments with corresponding numbers listed below.

ATTACHMENTS:

Attachment 1 – Comparisons of residential and employment density between precincts and other inner city areas

Attachment 2 - Source and supporting data for recent household additions totals quoted on p5 of the Population and Demographic Report

Attachment 3 – Further information on car ownership rates for families in the inner city

Attachment 4 – Further information on household types in three-bedroom apartments

Attachment 5 – Background to, and explanation of "Scenario 2" tables quoted in Urban Design Report, provision of Scenario 1

Attachment 6 – Further information on annual average household and dwelling additions in the Inner Metro Region in the past five years

Attachment 1 – Comparisons of residential and employment densities between precincts and other inner city areas

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Prepared by David Sykes, Principal Demographer, DELWP, 22 March 2018

1. The table below compares projected population densities in the four mixed-use precincts, and Fishermans Bend as a whole, with current densities for inner city areas in Melbourne and Sydney.

Population Density - Persons per Hectare

		PERSONS PER HECTARE			
Precinct / SA2	***Area (ha)***	**2006**	**2016**	**2031**	**2051**
Montague	*45*			224	426
Lorimer	*27*			332	439
Sandridge	*86*			35	400
Wirraway	*94*			25	153
Fishermans Bend (Mixed Use)	*252*			97	317
Melbourne (CBD)	*244*	62	170		
Southbank	*237*	42	86		
Docklands	*307*	14	39		
Darlinghurst	*90*	112	136		
Potts Point - Woolloomooloo	*150*	125	153		
Pyrmont - Ultimo	*150*	117	156		
Redfern - Chippendale	*220*	75	110		
Surry Hills	*130*	123	137		
Sydney - Haymarket - The Rocks	*430*	52	70		

Sources:

2006 & 2016 populations - Regional Population Growth, Australia (ABS 3218.0)

2031 & 2051 populations - DELWP Fishermans Bend Population & Demographics Report

2. The table below compares projected employment densities in the five precincts, and Fishermans Bend as a whole, with current densities for inner city areas in Melbourne.

Employment Density - Jobs per Hectare

		JOBS PER HECTARE		
Precinct / SA2	***Area (ha)***	**2016**	**2031**	**2051**
Montague	*45*		45	89
Lorimer	*27*		59	146
Sandridge	*86*		48	326
Wirraway	*94*		6	43
Employment Precinct	*215*		79	186
Fishermans Bend (Total)	*467*		54	171
Melbourne (CBD)	*237*	1,079		
Docklands	*244*	273		
Southbank	*307*	146		
South Yarra - West	*150*	124		
South Melbourne	*249*	118		
Fitzroy	*138*	118		
Collingwood	*127*	103		
Carlton	*182*	99		

Sources:

2016 employment - ABS Census 2016 (adjusted with Labour Force Survey)

2031 & 2051 employment - DELWP Fishermans Bend Population & Demographics Report

Attachment 2 - Source and supporting data for recent household additions totals quoted on p5 of the Population and Demographic Report

Prepared by David Sykes, Principal Demographer, DELWP, 22 March 2018

1. The first paragraph on page 5 of the Population and Demographic Report reads:

> *The overall development rates shown in **Table 2** are strong but not unreasonable assumptions for a future inner city precinct. Once major projects are underway in Montague and Lorimer, it is expected that at least 1,000 additional households per year can be accommodated across Fishermans Bend. The peak overall rate is 1,400 extra households per annum in 2029 and 2030, when all precincts are under way. In comparison, over the last five years Melbourne CBD has averaged an estimated 1,350 additional households per annum while Southbank and Docklands have averaged over 700 each.*

2. Average annual household additions were calculated based on 90% of dwellings approved and expected to be constructed from the September quarter of 2012 to the June quarter of 2017. Allowing a 24-month lag for construction and occupancy, this is represented by dwellings approved from the September quarter of 2010 to the June quarter of 2015 (as per Building Approvals Australia, ABS 8731.0).

3. Due to a typographic error in the production of the Population and Demographic Report, the rounded dwelling figure for Melbourne SA2 (an area covering the Hoddle Grid plus the extension to Victoria/Peel/William Streets) was entered as 1,500 instead of 2,500 – leading to an erroneous calculation of 1,350 additional households (i.e. 90% of 1,500 dwellings).

4. The correct figures for Melbourne are provided in the tables below. Quoted figures for Southbank and Docklands remain valid. Further comment on the DELWP methodology follows overleaf.

CORRECTION OF HOUSEHOLD ADDITIONS TOTAL FOR MELBOURNE SA2: FISHERMANS BEND POPULATION AND DEMOGRAPHICS REPORT

	Corrected data - dwelling approvals		
	Total 20 Qtrs to Jun-2015	Annual Average	Rounded figure
Melbourne SA2 (CBD)	12,381	2,476	2,500
Southbank SA2	4,765	953	950
Docklands SA2	4,307	861	860
	Adjusted to household additions (90% of dwelling approvals)		
	Total 20 Qtrs to Jun-2015	Annual Average	Rounded figure
Melbourne SA2 (CBD)	11,143	2,229	2,230
Southbank SA2	4,289	858	860
Docklands SA2	3,876	775	780

Source: Building Approvals, Australia (ABS 8731.0)

5. There are a number of sources of dwelling data. It is, however, difficult to reconcile the different numbers on sales, construction, occupancy etc to build a coherent picture, or a match between sources, for places such as the CBD, Southbank and Docklands in particular. They are dynamic, and they are creating new challenges for estimation and enumeration, such as:

- adjustable floorplates within buildings, such that the original stated number of dwellings may be very different from the result;
- secure and inaccessible buildings have made it increasingly difficult for Census collectors to count numbers of dwellings, and to know how many are actually private dwellings vs serviced apartments, whether short-term airBNB should treated as hotels etc;
- gauging the actual occupancy and use - how many are vacant due to overseas investors, how many are short term rentals, how many are vacant due to normal market friction?

6. When numbers from complementary sources align, however, it lends strength to the chosen methodology (it is validated). DELWP's Housing Development Data (HDD) tracks dwelling change on the ground year-on-year. This data is now available up to the end of 2016 – but was only available up to end 2014 when the demographic report was compiled. When comparing the change in dwelling stock across the three SA2s of interest from 2011 to 2016 in HDD, results are similar to the assumption based on the construction timing after dwelling approvals (in this case for the five years up to end 2014, allowing for a 24-month lag for construction). See table below.

7.

Annual average dwelling additions 2011-16

Source: Housing Development Data (DELWP)

SA2 (Statistical Area Level 2)	Tracked via Housing Development Data (HDD)	Estimated via Dwelling Approvals
Docklands	920	707
Melbourne	2192	2163
Southbank	983	953

Attachment 3 – Further information on car ownership rates for families in the inner city

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Prepared by David Sykes, Principal Demographer, DELWP, 22 March 2018

1. Car ownership tables from the 2016 Census show a close relationship between current conditions and the aspirations in the demographic report. The three tables below show the increasing likelihood of households of all types to do without a car as focus narrows from all dwellings across Greater Melbourne, to high-rise apartments in inner Melbourne in general, and then specifically to the CBD. (Melbourne Inner SA4 covers an area roughly bounded by Essendon, Port Melbourne, St Kilda and Thornbury.)
2. Within the core of the city, even families with children do not have a car in over 60 per cent of cases. In the wider inner city area, this is still over 30 per cent. Given the proximity to the city, and the expected public and active transport links in Fishermans Bend, it is not unreasonable to assume the targets in the demographic report.

Car ownership by household type, all dwellings in Greater Melbourne

Source: ABS Census 2016

	Couple without children	All other families	Group household	Lone person household	Other household
No car	5%	3%	23%	23%	33%
One car	34%	23%	31%	66%	41%
Two cars	49%	47%	32%	8%	19%
Three or more cars	12%	28%	14%	3%	7%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Total Households (n)	*371,212*	*730,629*	*74,293*	*341,855*	*12,141*

Car ownership by household type, apartments in blocks of four storeys or more in Melbourne Inner SA4

Source: ABS Census 2016

	Couple without children	All other families	Group household	Lone person household	Other household
No car	28%	31%	62%	51%	66%
One car	51%	49%	27%	46%	28%
Two cars	19%	16%	10%	3%	5%
Three or more cars	2%	3%	1%	1%	1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Total Households (n)	*20,478*	*11,376*	*12,373*	*30,061*	*2,660*

Car ownership by household type, apartments in blocks of four storeys or more in Melbourne SA2

Source: ABS Census 2016

	Couple without children	All other families	Group household	Lone person household	Other household
No car	62%	62%	87%	81%	83%
One car	33%	32%	11%	18%	15%
Two cars	5%	5%	1%	1%	2%
Three or more cars	0%	1%	1%	0%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Total Households (n)	*3,345*	*1,983*	*4,237*	*5,412*	*950*

Attachment

4 – Further information on household types in three-bedroom apartments

Prepared by David Sykes, Principal Demographer, DELWP, 22 March 2018

1. The Census tables below show that the uptake of three-bedroom, high-rise dwellings varies by place. Across the whole of Greater Melbourne, the most common household type in these apartments is "All other families" (including couples with children and one-parent families). However, in Docklands the most common household type is the couple without children (potentially downsizers and/or young professionals), while in the Melbourne CBD it is the group household (potentially students). Southbank has a more even distribution, reflecting a mix of roles for the dwellings in the area.

Households by type in three bedroom apartments in blocks of four storeys or more

Source: ABS Census 2016

	Greater Melbourne	Docklands SA2	Melbourne SA2	Southbank SA2
Couple without children	24%	38%	18%	28%
All other families	37%	30%	22%	28%
Group household	18%	13%	39%	25%
Lone person household	18%	16%	16%	16%
Other household	3%	5%	5%	3%
Total	**100%**	**100%**	**100%**	**100%**
Total Households (n)	*9036*	*572*	*1181*	*1097*

2. To further support the future assumptions for household/family mix in the Population and Demographic Report it bears re-stating that the aim of the demographic work was to realise the vision of the Taskforce. The vision necessarily encompasses both the specific aims for the precincts and an understanding of how general trends in dwelling use and occupancy are likely to change over time.

3. At present, three-bedroom apartments are not a very common dwelling type across Melbourne, and there is a split in the market between those which are "family-friendly/affordable" and those which are a premium/penthouse product aimed at downsizers and the like. Over time, three-bedroom house/townhouse dwellings in inner Melbourne will most likely become relatively scarcer and much more expensive as the population grows and many opportunities remain concentrated in the inner region. This should see the creation of more three-bedroom apartments as typical housing for families, whose trade-off will be place-over-space, choosing a smaller dwelling in the well-connected inner city over a larger dwelling with private land in the middle or outer suburbs. Thus, while the aspirational share of families in three-bedroom dwellings is above that currently achieved across all of Melbourne, it is considered very likely the evolution of Melbourne's apartment market will make this achievable in places such as Fishermans Bend.

Attachment 5 – background to, and explanation of "Scenario 2" tables quoted in Urban Design Report, provision of Scenario 1

Prepared by David Sykes, Principal Demographer, DELWP, 22 March 2018

5. "Scenario 2" as quoted in the Urban Design Report is the result of an interim stage in the DELWP demographic modelling process: The Fishermans Bend Precinct Calculator - Household and Dwelling Scenarios. The purpose of the calculator is to generate a population total, average household size and average dwelling size for each precinct at 2051.

6. The starting point is the final (2051) total household number, the key user inputs used across the calculator's four steps are:

   - share of total households allocated to each household type (different distributions reflect the character of each precinct);
   - average number of persons in each household of each type;
   - proportion of the households of each type likely to occupy dwellings of each nominal capacity (dwelling size/bedroom number);
   - average size of each dwelling by nominal capacity.

7. Step one generates a number of households of each household type (proportion of total households in each type – couple, family with children, lone person, group) by multiplying the household total by the assumed proportion.

8. Step two generates the total population number by multiplying the number of each household type by its average persons per household (sum all four types for total population).

9. Step three generates a number of households in each nominal dwelling capacity by multiplying the total household number for each type by the assumed shares for each nominal dwelling capacity (results in bottom right table).

10. Step four (final) generates and sums the total floorspace in dwellings of each nominal capacity, dividing this by the total number of households to calculate the average dwelling size in square metres.

11. Scenario 1 is the initial scenario input by DELWP to demonstrate the working of the calculator. This scenario was for illustrative purposes only – no further modelling was based on its results. Note in particular the simplistic and unusable assumptions for allocation of household types to nominal dwelling capacities.

12. Scenario 2 is the space created for generation of inputs to further demographic models. Assumptions for allocation of household types to nominal dwelling capacities were input by DELWP based on Census analysis of apartment precincts in Melbourne and Sydney, plus aspirational assumptions for families with children. Persons per household in each household type and average dwelling size by nominal capacity were also used as input by DELWP. Household totals and shares by household type were refined by Leanne Hodyll

to create Scenario 2 results, which were used in further demographic modelling.

13. Outputs from Scenario 1 and 2 for each precinct follow.

Fishermans Bend Precinct Calculator - Household and Dwelling Scenarios

Instructions | **Prepared by DELWP** | **28-Feb-17**

Grey Cells = User Inputs
Orange Cells = Calcs/Outputs

Contact:
David Sykes
david.sykes@delwp.vic.gov.au 8683 0936

Montague

Scenario 1

Population	Persons / HH	No. Households
19,592	2.03	9,675

Average dwelling size: 64

Households type	Household %	No of HHs	Persons/hh	Population
Couple Household	40%	3,870	2.00	7,740
Families	20%	1,935	3.50	6,773
Lone Household	30%	2,903	1.00	2,903
Group Household	10%	968	2.25	2,177
Total	*100%*	*9,675*	*2.03*	*19,592*

	Square meters
1 bedroom	50
2 bedroom	70
3 bedroom	110
4+ bedroom	130

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	100%	0%	0%	0%	*100%*
Families	0%	0%	100%	0%	*100%*
Lone Household	100%	0%	0%	0%	*100%*
Group Household	0%	100%	0%	0%	*100%*

Households by Dwelling Type (bedroom number)

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	3,870	0	0	0	3,870
Families	0	0	1,935	0	1,935
Lone Household	2,903	0	0	0	2,903
Group Household	0	968	0	0	968
Total	*6,773*	*968*	*1,935*	*0*	*9,675*
Share of total	*70%*	*10%*	*20%*	*0%*	*100%*

Montague

Scenario 2

Population	Persons / HH	No. Households
19,197	2.25	8,532

Average dwelling size: 77

Households type	Household %	No of HHs	Persons/hh	Population
Couple Household	25%	2,133	2.00	4,266
Families	35%	2,986	3.50	10,452
Lone Household	30%	2,560	1.00	2,560
Group Household	10%	853	2.25	1,920
Total	*100%*	*8,532*	*2.25*	*19,197*

	Square meters
1 bedroom	50
2 bedroom	70
3 bedroom	110
4+ bedroom	130

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	20%	60%	19%	1%	*100%*
Families	5%	40%	54%	1%	*100%*
Lone Household	50%	45%	5%	0%	*100%*
Group Household	5%	74%	20%	1%	*100%*

Households by Dwelling Type (bedroom number)

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	427	1,280	405	21	2,133
Families	149	1,194	1,613	30	2,986
Lone Household	1,280	1,152	128	0	2,560
Group Household	43	631	171	9	853
Total	*1,898*	*4,257*	*2,316*	*60*	*8,532*
Share of total	*22%*	*50%*	*27%*	*1%*	*100%*

Fishermans Bend Precinct Calculator - Household and Dwelling Scenarios

Instructions | **Prepared by DELWP** | **28-Feb-17**

Grey Cells = User Inputs
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Contact:
David Sykes
david.sykes@delwp.vic.gov.au 8683 0936

Lorimer

Scenario 1

Population	Persons / HH	No. Households
11,905	1.79	6,660

Average dwelling size: 60

Households type	Household %	No of HHs	Persons/hh	Population
Couple Household	35%	2,331	2.00	4,662
Families	15%	999	3.50	3,497
Lone Household	45%	2,997	1.00	2,997
Group Household	5%	333	2.25	749
Total	*100%*	*6,660*	*1.79*	*11,905*

	Square meters
1 bedroom	50
2 bedroom	70
3 bedroom	110
4+ bedroom	130

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	100%	0%	0%	0%	*100%*
Families	0%	0%	100%	0%	*100%*
Lone Household	100%	0%	0%	0%	*100%*
Group Household	0%	100%	0%	0%	*100%*

Households by Dwelling Type (bedroom number)

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	2,331	0	0	0	2,331
Families	0	0	999	0	999
Lone Household	2,997	0	0	0	2,997
Group Household	0	333	0	0	333
Total	*5,328*	*333*	*999*	*0*	*6,660*
Share of total	*80%*	*5%*	*15%*	*0%*	*100%*

Lorimer

Scenario 2

Population	Persons / HH	No. Households
12,002	2.04	5,891

Average dwelling size: 74

Households type	Household %	No of HHs	Persons/hh	Population
Couple Household	35%	2,062	2.00	4,123
Families	25%	1,473	3.50	5,154
Lone Household	35%	2,062	1.00	2,062
Group Household	5%	295	2.25	663
Total	*100%*	*5,891*	*2.04*	*12,002*

	Square meters
1 bedroom	50
2 bedroom	70
3 bedroom	110
4+ bedroom	130

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	20%	60%	19%	1%	*100%*
Families	5%	40%	54%	1%	*100%*
Lone Household	50%	45%	5%	0%	*100%*
Group Household	5%	74%	20%	1%	*100%*

Households by Dwelling Type (bedroom number)

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	412	1,237	392	21	2,062
Families	74	589	795	15	1,473
Lone Household	1,031	928	103	0	2,062
Group Household	15	218	59	3	295
Total	*1,532*	*2,972*	*1,349*	*38*	*5,891*
Share of total	*26%*	*50%*	*23%*	*1%*	*100%*

Fishermans Bend Precinct Calculator - Household and Dwelling Scenarios

Instructions | **Prepared by DELWP** | **28-Feb-17**

Grey Cells = User Inputs
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Contact:
David Sykes
david.sykes@delwp.vic.gov.au 8683 0936

Sandridge

Scenario 1

Population	Persons / HH	No. Households
32,775	1.90	17,250

Average dwelling size: 61

Households type	Household %	No of HHs	Persons/hh	Population
Couple Household	40%	6,900	2.00	13,800
Families	15%	2,588	3.50	9,056
Lone Household	35%	6,038	1.00	6,038
Group Household	10%	1,725	2.25	3,881
Total	*100%*	*17,250*	*1.90*	*32,775*

	Square meters
1 bedroom	50
2 bedroom	70
3 bedroom	110
4+ bedroom	130

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	100%	0%	0%	0%	*100%*
Families	0%	0%	100%	0%	*100%*
Lone Household	100%	0%	0%	0%	*100%*
Group Household	0%	100%	0%	0%	*100%*

Households by Dwelling Type (bedroom number)

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	6,900	0	0	0	6,900
Families	0	0	2,588	0	2,588
Lone Household	6,038	0	0	0	6,038
Group Household	0	1,725	0	0	1,725
Total	*12,938*	*1,725*	*2,588*	*0*	*17,250*
Share of total	*75%*	*10%*	*15%*	*0%*	*100%*

Sandridge

Scenario 2

Population	Persons / HH	No. Households
34,405	1.98	17,420

Average dwelling size: 74

Households type	Household %	No of HHs	Persons/hh	Population
Couple Household	35%	6,097	2.00	12,194
Families	20%	3,484	3.50	12,194
Lone Household	35%	6,097	1.00	6,097
Group Household	10%	1,742	2.25	3,920
Total	*100%*	*17,420*	*1.98*	*34,405*

	Square meters
1 bedroom	50
2 bedroom	70
3 bedroom	110
4+ bedroom	130

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	20%	60%	19%	1%	*100%*
Families	5%	40%	54%	1%	*100%*
Lone Household	50%	45%	5%	0%	*100%*
Group Household	5%	74%	20%	1%	*100%*

Households by Dwelling Type (bedroom number)

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	1,219	3,658	1,158	61	6,097
Families	174	1,394	1,881	35	3,484
Lone Household	3,049	2,744	305	0	6,097
Group Household	87	1,289	348	17	1,742
Total	*4,529*	*9,085*	*3,693*	*113*	*17,420*
Share of total	*26%*	*52%*	*21%*	*1%*	*100%*

Fishermans Bend Precinct Calculator - Household and Dwelling Scenarios

Instructions | **Prepared by DELWP** | **28-Feb-17**

Grey Cells = User Inputs
Orange Cells = Calcs/Outputs

Contact:
David Sykes
david.sykes@delwp.vic.gov.au 8683 0936

Wirraway

Scenario 1

Population	Persons / HH	No. Households
14,523	2.58	5,640

Average dwelling size: 82

Households type	Household %	No of HHs	Persons/hh	Population
Couple Household	20%	1,128	2.00	2,256
Families	50%	2,820	3.50	9,870
Lone Household	20%	1,128	1.00	1,128
Group Household	10%	564	2.25	1,269
Total	*100%*	*5,640*	*2.58*	*14,523*

	Square meters
1 bedroom	50
2 bedroom	70
3 bedroom	110
4+ bedroom	130

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	100%	0%	0%	0%	*100%*
Families	0%	0%	100%	0%	*100%*
Lone Household	100%	0%	0%	0%	*100%*
Group Household	0%	100%	0%	0%	*100%*

Households by Dwelling Type (bedroom number)

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	1,128	0	0	0	1,128
Families	0	0	2,820	0	2,820
Lone Household	1,128	0	0	0	1,128
Group Household	0	564	0	0	564
Total	*2,256*	*564*	*2,820*	*0*	*5,640*
Share of total	*40%*	*10%*	*50%*	*0%*	*100%*

Wirraway

Scenario 2

Population	Persons / HH	No. Households
14,402	2.58	5,593

Average dwelling size: 81

Households type	Household %	No of HHs	Persons/hh	Population
Couple Household	20%	1,119	2.00	2,237
Families	50%	2,797	3.50	9,788
Lone Household	20%	1,119	1.00	1,119
Group Household	10%	559	2.25	1,258
Total	*100%*	*5,593*	*2.58*	*14,402*

	Square meters
1 bedroom	50
2 bedroom	70
3 bedroom	110
4+ bedroom	130

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	20%	60%	19%	1%	*100%*
Families	5%	40%	54%	1%	*100%*
Lone Household	50%	45%	5%	0%	*100%*
Group Household	5%	74%	20%	1%	*100%*

Households by Dwelling Type (bedroom number)

	1 bedroom	2 bedroom	3 bedroom	4+ bedroom	Total
Couple Household	224	671	213	11	1,119
Families	140	1,119	1,510	28	2,797
Lone Household	559	503	56	0	1,119
Group Household	28	414	112	6	559
Total	*951*	*2,707*	*1,890*	*45*	*5,593*
Share of total	*17%*	*48%*	*34%*	*1%*	*100%*

Attachment 6 – Further information on annual average household and dwelling additions in the Inner Metro Region in the past five years

Prepared by David Sykes, Principal Demographer, DELWP, 22 March 2018

14. The tables below present information on household and dwelling additions in the Statistical Areas Level 2 (SA2) across the municipalities of the City of Melbourne, City of Port Phillip and City of Yarra.

15. See the map below for definition of areas. Note where an SA2 crosses LGA boundaries it has only been included once in a table, and all development across the SA2 is captured within a single figure.

16. Dwelling additions are presented from two sources:

    - ABS Building Approvals – this dataset covers dwellings approved and expected to be constructed in the five calendar years from January 2013 to December 2017. Construction is lagged from date of approval by six months in the case of separate houses, 12 months in the case of townhouses and apartments up to two stories, and by 24 months for apartments in blocks of three storeys or more. These lags are consistent with research conducted by the ABS, and with comparisons to DELWP Housing Development Data for corresponding periods.
    - DELWP Housing Development Data – this dataset covers dwellings tracked as completed over the five calendar years from January 2012 to December 2016 (the latest data available). The data are derived from detailed analysis of aerial photography.

17. Though the data cover slightly different periods, there is considerable correspondence, and the relative scale of dwelling completions between areas is consistent (e.g. Melbourne SA2 – the CBD – has the highest numbers, while Carlton North – Princess Hill SA2 has very low numbers).

18. Where numbers are notably larger for the more recent five-year period (e.g. Southbank, Port Melbourne Industrial) this is due to larger numbers of completions in 2017. For example, Southbank averaged approximately 1,000 completions across the calendar years 2013 to 2016, but slightly over 2,000 completions are estimated for 2017.

19. Household additions are derived directly from dwelling additions. A blanket assumption is made in this analysis that household additions are equivalent to 90 per cent of dwelling completions, allowing for vacant dwellings. Total vacancy rates do vary from area to area, but the vast majority of dwellings added over this period are high-rise apartments, and the similarity of vacancy rates between areas for similar dwelling types makes a simple assumption valid.

Five Years of Estimated and Tracked Dwelling Completions, Inner Metro Statistical Areas

Statistical Areas (Level 2) and Local Govt Areas	Estimated via ABS Building Approvals		Tracked via DELWP Housing Development Data	
	Total 5 yrs to 2017	Annual Average	Total 5 yrs to 2016	Annual Average
Carlton	2,504	501	2,323	465
Docklands	4,368	874	4,602	920
East Melbourne	531	106	37	7
Flemington Racecourse	0	0	0	0
Kensington (Vic.)	145	29	308	62
Melbourne	11,034	2,207	10,971	2,194
North Melbourne	2,958	592	2,894	579
Parkville	577	115	599	120
South Yarra - West	410	82	409	82
Southbank	6,509	1,302	4,932	986
West Melbourne	0	0	0	0
Total in City of Melbourne	**29,036**	**5,807**	**27,075**	**5,415**
Albert Park	620	124	327	65
Elwood	323	65	340	68
Port Melbourne	729	146	708	142
Port Melbourne Industrial	285	57	19	4
South Melbourne	1,811	362	1,206	241
St Kilda	2,561	512	2,336	467
St Kilda East	246	49	247	49
Total in City of Port Phillip	**6,575**	**1,315**	**5,183**	**1,037**
Abbotsford	1,952	390	2,308	462
Carlton North - Princes Hill	44	9	34	7
Collingwood	1,168	234	1,217	243
Fitzroy	570	114	524	105
Fitzroy North	601	120	504	101
Richmond (Vic.)	2,165	433	2,559	512
Yarra - North	294	59	285	57
Total in City of Yarra	**6,794**	**1,359**	**7,431**	**1,486**

Sources:

Building Approvals Australia (ABS 8731.0)

Housing Development Data (DELWP)

Five Years of Estimated Household Additions, Inner Metro Statistical Areas

Statistical Areas (Level 2) and Local Govt Areas	Estimated via ABS Building Approvals		Estimated via DELWP Housing Development Data	
	Total 5 yrs to 2017	Annual Average	Total 5 yrs to 2016	Annual Average
Carlton	2,254	451	2,091	418
Docklands	3,931	786	4,142	828
East Melbourne	478	96	33	7
Flemington Racecourse	0	0	0	0
Kensington (Vic.)	131	26	277	55
Melbourne	9,931	1,986	9,874	1,975
North Melbourne	2,662	532	2,605	521
Parkville	519	104	539	108
South Yarra - West	369	74	368	74
Southbank	5,858	1,172	4,439	888
West Melbourne	0	0	0	0
Total in City of Melbourne	**26,132**	**5,226**	**24,368**	**4,874**
Albert Park	558	112	294	59
Elwood	291	58	306	61
Port Melbourne	656	131	637	127
Port Melbourne Industrial	257	51	17	3
South Melbourne	1,630	326	1,085	217
St Kilda	2,305	461	2,102	420
St Kilda East	221	44	222	44
Total in City of Port Phillip	**5,918**	**1,184**	**4,665**	**933**
Abbotsford	1,757	351	2,077	415
Carlton North - Princes Hill	40	8	31	6
Collingwood	1,051	210	1,095	219
Fitzroy	513	103	472	94
Fitzroy North	541	108	454	91
Richmond (Vic.)	1,949	390	2,303	461
Yarra - North	265	53	257	51
Total in City of Yarra	**6,115**	**1,223**	**6,688**	**1,338**

Sources:

Building Approvals Australia (ABS 8731.0)

Housing Development Data (DELWP)

Map of Statistical Areas Level 2 (SA2) and Local Government Areas, Inner Metro Region

(LGA names and boundaries are bold dark grey. SA2 names and boundaries are in fine black)