



# Central Geelong Land Use and Market Assessment Update

DELWP

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OFFICIAL

*Note: Updates have been made in this report from the earlier version dated 8/12/2020 to provide greater clarity, make minor corrections and to update content related to Covid impacts and recovery, as identified by the Advisory Committee for the Draft Central Geelong Framework Plan.*



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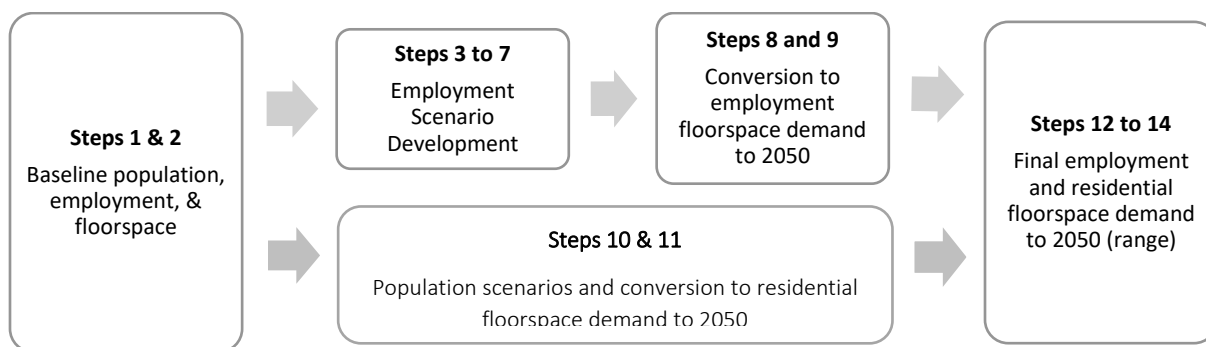
# Executive Summary

## Introduction

SGS Economics and Planning (SGS) and Savills has been engaged by the Department of Environment, Land, Water and Planning (DELWP) to undertake a land use demand and market assessment analysis for Central Geelong. The land use demand scenarios to 2050 contained within this report will support the development of the Central Geelong Framework Plan (the Framework Plan).

A detailed methodology for the scenario development can be found at section 1 of this report. The table below groups and summarises the steps.

### SUMMARY OF APPROACH



Source: SGS Economics and Planning, 2020

## Study Area

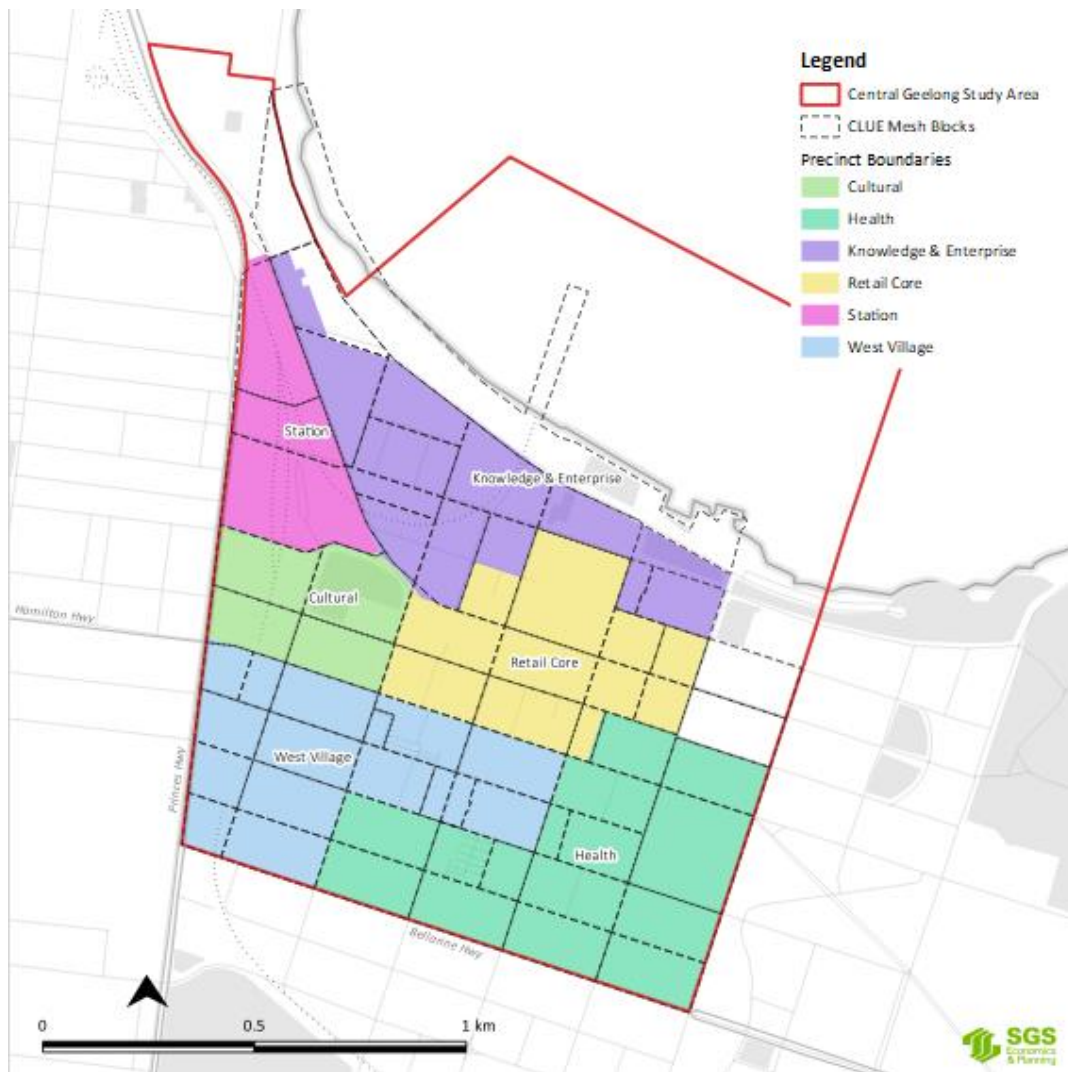
The Draft Framework Plan's study area (Figure 1) is bound by LaTrobe Terrace (Princes Highway) in the west, McKillop Street (Bellarine Highway) in the south, Swanston Street in the east and Corio Bay to the north. The Framework Plan has identified six potential precincts where targeted land use and built form planning controls will drive the future management of growth and development to 2050. The precincts are the Cultural Precinct, Health Precinct, Knowledge and Enterprise Precinct, Retail Core Precinct, Station Precinct, and West Village Precinct.<sup>1</sup> The remaining precincts in the Draft Framework Plan's study area, are the Waterfront Precinct and York Precinct which are not expected to accommodate significant growth and are therefore not included in the analysis in this report.

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<sup>1</sup> Precincts defined by MGS Architects



**FIGURE 1: STUDY AREA**



Source: SGS Economics and Planning

### Current Land Use and Floorspace Mix

At 2017, the Census of Land Use and Employment (CLUE) data for Central Geelong recorded a total of 1,773,889 sqm of total floorspace within the study area of Central Geelong. This total comprises 958,406 sqm 'employment and habitable' floorspace and 815,483 sqm of 'non-considered' floorspace identified in the CLUE data.

'Employment and habitable' floorspace made up 54% of the recorded 'floorspace' including:

- approximately 253,000sqm of office floorspace<sup>2</sup> (14% of total floorspace)
- approximately 160,000sqm of retail floorspace (9% of total floorspace)
- approximately 147,000sqm of education floorspace (8% of total floorspace)
- approximately 99,000sqm of retail floorspace (6% of total floorspace)

<sup>2</sup> includes the CLUE categories of 'Office' and 'Workshop/Studio'

- approximately 69,000sqm of residential and student accommodation floorspace (4% of total floorspace).

The remaining 46% is categorised as ‘non-considered’ floorspace in CLUE and includes areas set aside for car parking, transport, public domain and other unclassified uses.

### **Quantifying Land Use Demand**

Three scenarios have been prepared to help guide planning for the use and development of land within central Geelong to 2050. Each scenario presents estimates for future employment and residential floorspace requirements for central Geelong. The following provides an overview of each scenario, and its core component parts:

#### **Base case:**

- Adopts SALUP 2046 population forecast for Greater Geelong extrapolated to 2050.
- Share of LGA population in Central Geelong of 1.7% in 2050.
- Share of LGA jobs in Central Geelong of 19% in 2050.

#### **Upside:**

- Adopts population growth rate of 2.5% per annum<sup>^</sup> for the Greater Geelong LGA.
- Share of LGA population in Central Geelong of 2.0% to 2.5% in 2050.
- Share of LGA jobs in Central Geelong 20% in 2050.

#### **Optimistic:**

- Adopts population growth rate of 2.5% per annum<sup>^</sup> for the Greater Geelong LGA.
- Share of LGA population in Central Geelong of 2.5% to 3.0% in 2050.
- Share of LGA jobs in Central Geelong 22% in 2050.

<sup>^</sup> The assumption of a 2.5% per annum for the Greater Geelong LGA (adopted as foundation assumptions for the Upside and Optimistic scenarios) is aligned with Scenario D of the City of Greater Geelong Settlement Strategy. This scenario is almost double the long term historical growth rate (1.3% per annum) and notably higher than the current official forecast (2.1% per annum).

The Upside and Optimistic scenarios for Central Geelong have been developed by reference to the market analysis, consideration of proposed infrastructure and other investments, and policy and development aspirations for Central Geelong, with benchmarking against comparable centres elsewhere in Australia (Newcastle and Wollongong).

Employment scenarios are converted to floorspace using floorspace to job ratios, to identify an employment floorspace demand range for Central Geelong for 2020 to 2050. Residential scenarios convert population to floorspace by using the average household size in central Geelong combined with an assumed per dwelling floorspace to identify different levels of residential floorspace demand for 2020 to 2050.



The table below shows the final, compiled floorspace scenarios.

#### FINAL FLOORSPACE SCENARIOS (SQM)

Base case 2020-2050		Upside 2020-2050		Optimistic 2020-2050	
Employment	Residential	Employment	Residential	Employment	Residential
+414,323	+210,621	+862,217	+399,058 - 548,197	+967,029	+541,784 - 703,395
<b>+624,944</b>		<b>+1,261,275 - 1,410,414</b>		<b>+1,508,813 - 1,670,424</b>	

Source: SGS Economics and Planning

#### Considering COVID19

The impacts of COVID19 are still unfolding and it is therefore too soon to assess their effect on employment and residential floorspace trends. Moving forward there will likely be a mixture of both negative and positive factors which influence future trends.

Section 4.4 of this report discusses the potential scope of these negative and positive impacts on medium to long term floorspace demand. A COVID19 lag effect on the economy could reduce growth in floorspace demand by 246,659 sqm on the upper end of the Upside scenario. Conversely a COVID19 boost on projected employment and population growth could result in demand for an additional 430,317 sqm floorspace on the upper end of the Upside scenario.

#### Conclusion

For the purposes of developing planning controls as part of the Framework Plan, it is considered appropriate to use the Upside scenario (of an additional 1,261,275 - 1,410,414 sqm of floorspace from 2020 to 2050), which is based on sound working assumptions. A development envelope enabling this level of floorspace provision would provide for a more than doubling of the existing useable floorspace over an extended forecast period of 30 years.

While this additional floorspace is a reasonable and robust working assumption, it does represent a long range forecast (30 years) and it may not be necessary to identify the potential for 100% of this additional capacity in the planning work. Similarly, while it is desirable and important to make provision for supporting community infrastructure and services for the projected future population and workforce capacity proposed, a 20 year horizon (rather than 30 years) could be sufficient for this purpose<sup>3</sup>.

Real time monitoring of floorspace demand and supply, influenced by COVID19, and/or any other macro-economic trends or policy impacts, will be important to inform regular (say five yearly) reviews of the Framework Plan so that alternative planning directions can be adopted as necessary in future.

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<sup>3</sup> The 20 year horizon for jobs and population to inform community infrastructure planning can be derived from the Upside forecasts documented in this report (this is equivalent to two thirds of the additional jobs and population forecasts to 2050).

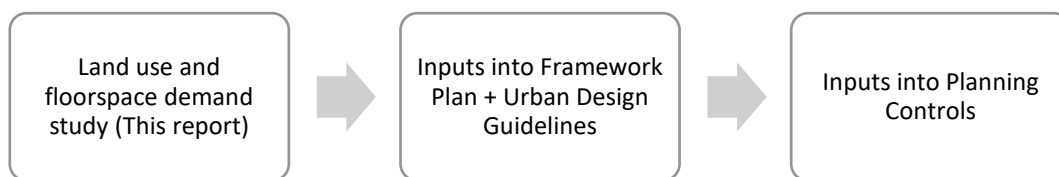
# 1. Introduction

## 1.1 Context

The current structure plan and urban design framework for Central Geelong was prepared in 2007/8. Based on government commitments through the State's Revitalising Central Geelong Action Plan 2016/17, a review of the Central Geelong Activity Centre Zone has been undertaken. To deliver this review an update to the current Central Geelong structure plan and urban design guidelines are required.

SGS Economics and Planning (SGS) and Savills has been engaged by the Department of Environment, Land, Water and Planning (DELWP) to undertake a land use demand and market assessment analysis of Central Geelong. The study is to support the development of the Central Geelong Framework Plan (the Framework Plan) which comprises a Structure Plan and Urban Design Guidelines. The key output required to support the Framework Plan is the provision of land use and floorspace demand projections to 2050.

**FIGURE 2: CENTRAL GEELONG FRAMEWORK PLAN PROCESS**



Source: SGS Economics and Planning, 2020

## 1.2 Study Area

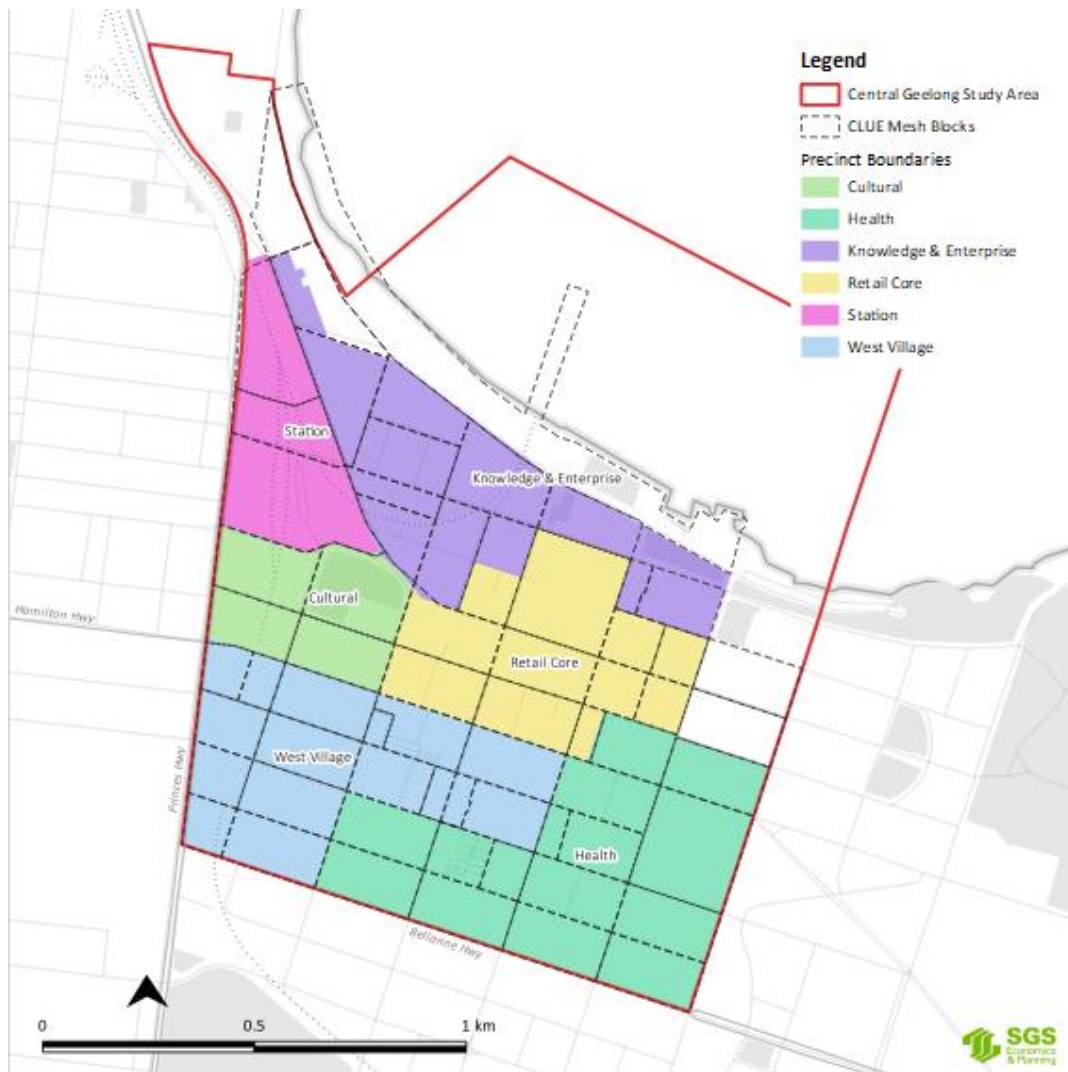
The Central Geelong study area is bound by LaTrobe Terrace (Princes Highway), McKillop Street (Bellarine Highway), Swanston Street and Corio Bay, as outlined in red below. Within the Draft Framework Plan six potential Precincts have been identified for growth; the Cultural Precinct, Health Precinct, Knowledge and Enterprise Precinct, Retail Core Precinct, Station Precinct, and West Village Precinct.<sup>4</sup>

Total floorspace data is calculated based on the Central Geelong Census of Land Use and Employment (CLUE) mesh block boundaries from City of Greater Geelong (outlined in the figure below with a dashed black line). The study area is a little greater than the mesh block boundaries for the CLUE data. The area covered by the minor mismatch principally contains residential floorspace or open space and does not impact on the modelling because the CLUE data is principally used for the employment floorspace scenarios.

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<sup>4</sup> Precincts defined by MGS Architects

**FIGURE 3: STUDY AREA**



Source: SGS Economics and Planning

### 1.3 Approach and Assumptions

The key output required to support the Framework Plan is the generation of land use and floorspace demand projections to 2050. The method used is summarised below, and in Figure 4 and Figure .

#### Employment floorspace

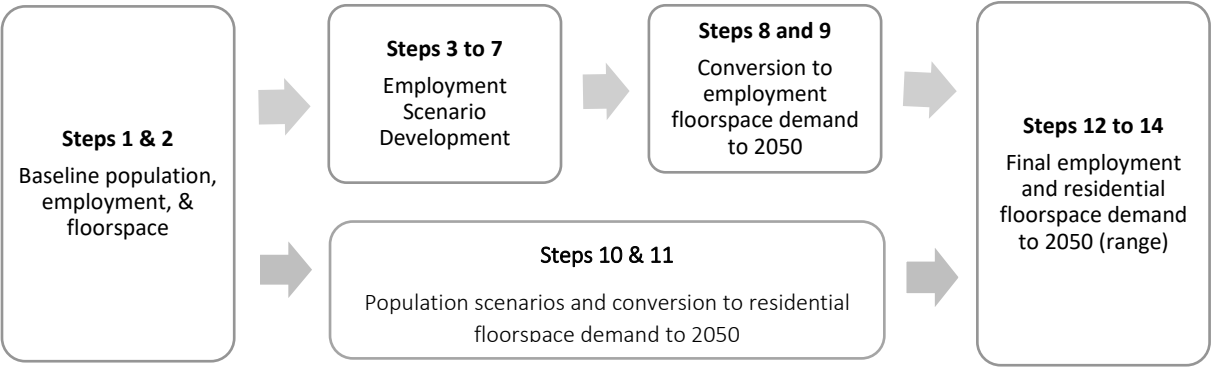
The current employment figures (as at 2016) for Central Geelong is based on the Small Area Land Use Projections (SALUP) prepared by SGS Economics and Planning and existing floorspace figures (as at 2017) is based on Central Geelong Census of Land Use and Employment (CLUE) from City of Greater Geelong. The ultimate forecast scenarios involve applying different growth rate assumptions to 2016 employment to grow employment to 2050. These are ‘upside’ growth rate assumptions based on market prospects by land use, and policy aspirations related to development and investment settings, with ‘sense checking’ by reference to comparative centre benchmarks. Employment scenarios are

converted to floorspace using floorspace to job ratios, to identify an employment floorspace demand range for Central Geelong for 2020 to 2050 (including accounting for recent developments).

**Residential floorspace**

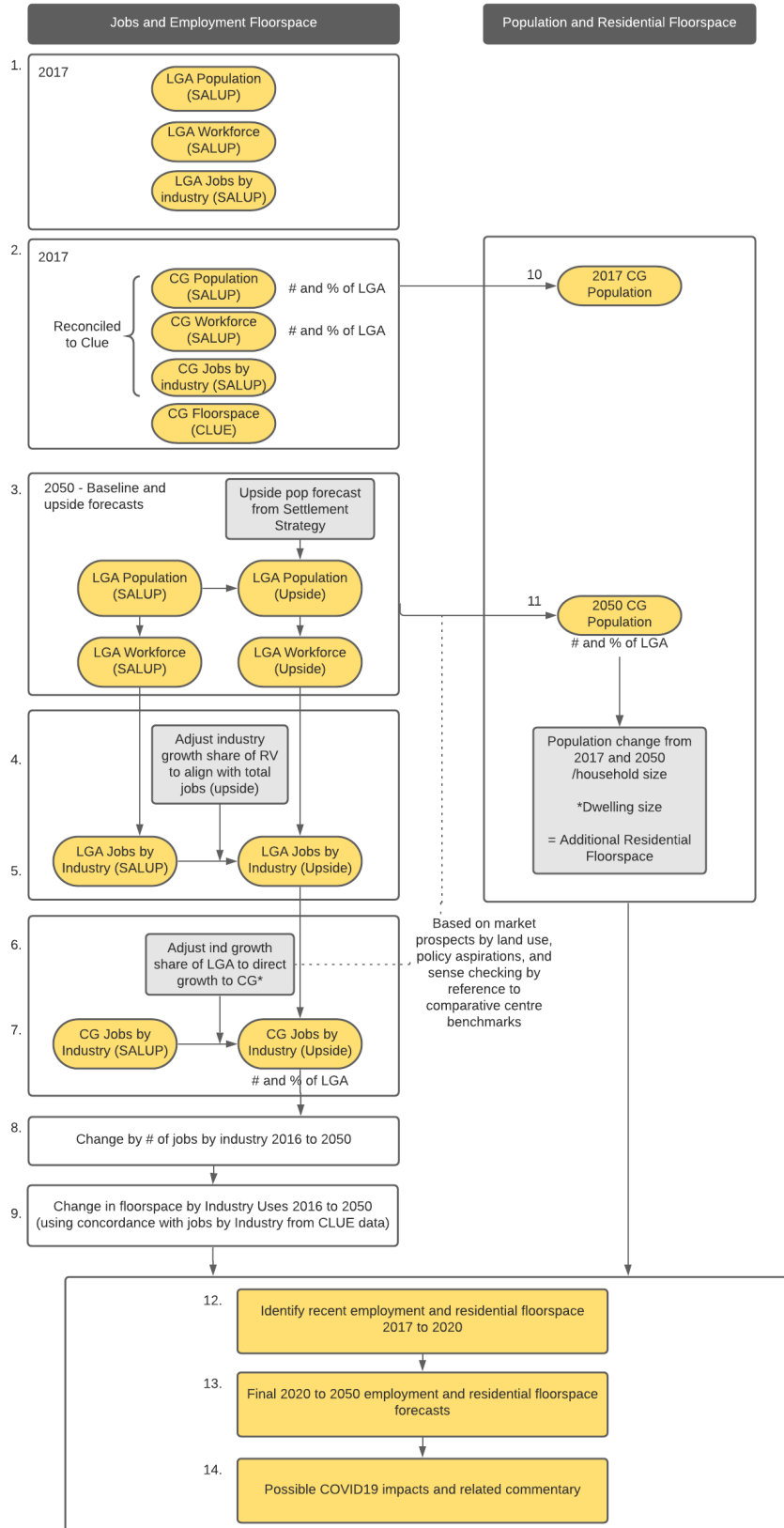
Current population figures (as at 2016) for Central Geelong are based on the SGS SALUP model and existing residential floorspace figures (as at 2017) are based on CLUE. Similarly to estimating employment floorspace demand, the preparation of residential development scenarios involves the application of different growth rate assumptions to 2016 population figures to grow population to 2050. These are ‘upside’ growth rate assumptions based on market prospects by land use and policy aspirations, with sense checking by reference to comparative centre benchmarks. Population was then converted to floorspace by using the average household size in Central Geelong to identify the level of residential floorspace demand for Central Geelong for 2020 to 2050 (including accounting for recent developments).

**FIGURE 4: SUMMARY OF APPROACH**



Source: SGS Economics and Planning, 2020

**FIGURE 5: DETAILED OVERVIEW OF APPROACH**



Source: SGS Economics and Planning, 2020



## **1.4 Report structure**

The report is structured as follows:

Chapter 2 presents a summary of recent market activity and future prospects for different land use types including office, retail, residential and visitor accommodation. This draws from a longer report prepared by Savills.

Chapter 3 presents the current land use and floorspace mix by precincts, as a baseline for the employment and residential floorspace demand scenarios to 2050.

Chapter 4 presents land use demand projections and scenarios for Central Geelong to 2050, and

Chapter 5 concludes the report.

## 2. Market Trends and Future Market Prospects by Land use Type

### 2.1 Introduction

This section of the report presents a summary of the future market prospects for Central Geelong as an input to the land use assessments and projections. This includes recent market activity and prospects for different land use types including office, retail, residential and visitor accommodation.

The property market assessment is informed by:

- Recent developments by type based on reviewing Councils development approvals (DAs) and DELWP DAs, Cordell's Construction Database, and ABS data where relevant
- Known proposals 'in the pipeline' based on reviewing existing research, Councils DAs and DELWP DA's and Cordell's Construction Database and marketing sounding
- Analysis and commentary on demand by space use / type for office, retail, residential and visitor accommodation
- Changes in rents, sale prices and capitalisation rates by use type as relevant to inform an understanding of property market prospects

Savills prepared this summary based on a longer report specially prepared for this study.

### 2.2 Prospects by Land Use Type

#### Office Floorspace

Central Geelong has an emerging office market, with over 50,000 m<sup>2</sup> of A-Grade space (see box overleaf on office space grading) developed in the past few years or coming to market and 80,000 m<sup>2</sup> approved between 2015 and 2019. Savills notes that some sites were put forward to secure large Government agencies but are now pursuing other uses. Beyond the office buildings under construction, large A-Grade office space is unlikely to come on-line without a significant level of pre-commitment. A lease pre-commitment of circa 5,000 m<sup>2</sup> is likely to be needed to underpin a new A-Grade office building. The large tenants of A-Grade buildings are generally Government (with the notable exception of GMHBA). As such, Savills expects the short to medium term demand for new large A Grade office space to be strongly linked to demand from Government.

Savills expects in the medium term forecast continued employment growth and population growth will support demand for 'population driven' services such as professional and business services (lawyers, accountants), health services and personal and social assistance.

Two potential alternative scenarios after COVID are suggested for office demand in Central Geelong:

- If companies decide workers can continue to work more from home this is likely to translate to result in lower demand for office space than previously expected.

- If businesses and Government decide to decentralise and/or establish non-CBD work hubs, then demand could be higher (in centres like Geelong) than pre-COVID forecasts.

Savills expects continued demand for office space, particularly in the 350 m<sup>2</sup> – 500 m<sup>2</sup> and 500 m<sup>2</sup> – 1,000 m<sup>2</sup> square metre range in B Grade and refurbished space. However, demand for new A-Grade office space will be highly dependent on decisions by Government and Government tenants.

While the CLUE data suggests there is over 60,000 m<sup>2</sup> of B Grade office space, local agents indicate there is a big gap between A Grade and what is classified a B Grade in Geelong and there is a missing middle of good office stock with parking and around \$350 m<sup>2</sup> net rent in Central Geelong.

#### **Office space grading explained**

**Grade A** is the most sought-after and usually comprises of a new or recent development in a key business location. The systems and furnishings included are state of the art and the fit-outs are stylish and to a very high standard. The asking price for rent is usually high and reflects the quality and location of the offices.

**Grade B** space is cheaper to rent than Grade A and the fixtures and fittings will be to a lower standard. However, many Grade B offices can be well-maintained and facilities can still be excellent. Construction and design is not to the same high standards and they can often be former Grade A buildings which are past their sell by date.

**Grade C** office space, as can be expected, is usually located in an older building where standards aren't as rigorously maintained. This sort of space can present a bargain to companies who aren't reliant on a strong office image, although it is often located on the fringes of or out of town centres.

#### **Residential Floorspace**

Savills expects residential demand to grow in Central Geelong in future years and apartments *will* play a role in the city's future housing composition. These factors include decreasing household sizes, an ageing population, some latent demand for more diverse housing product in Geelong, population growth, housing affordability considerations (including Melbourne-based consumers increasingly looking at regional centres as a housing alternative) and lifestyle opportunities.

Savills expect that as prices rise the relationship between sales prices and development costs will become better aligned from a profitability perspective and when a relevant number of key criteria relating to risk and return are satisfied, new apartment projects will be developed in Central Geelong. Central to this is prices being high enough to deliver profit margins above a hurdle rate of return that adequately reflects the inherent risks assumed by the developer in undertaking the project.

Informed by market trends and major property owners Savills believes it is unlikely Central Geelong will grow to 10,000 permanent residents by 2028 as outlined in the Revitalising Central Geelong Action Plan 2013. There is an emerging demand for apartment living, however as it is possible to purchase a good house close to Central Geelong or in a new release area for a similar price to a unit, demand for new units / apartments will be contained to particular market segments, rather than widespread.

#### **Retail Floorspace**

Savills expects that if there is residential and commercial or health or education investment in Central Geelong as forecast, this will underpin demand for retail space. Retail property observers raise parking

or public transport and connectivity as an issue and believe good transport (bus system or trackless tram system) could reduce the reliance on cars. Some observers believe an additional multi-storey car park should be developed.

Savills notes that the number of retail establishments declined from 399 in 2011 to 319 in 2017, but the number of accommodation and food services establishments increased from 194 in 2011 to 231 in 2017.

In Savills opinion there will also need to be attention placed on the connectivity challenges imposed by Westfield and ways to encourage precincts similar to Little Malop Street. There are several Westfield and also QIC Shopping Centres in other areas that have become more open and better integrated with surrounding areas. Indeed, some observers contacted for this analysis suggest Market Square could be transformed if some tenancies faced outwards rather than inwards.

While many people Savills spoke with support flexibility in land use planning most also support mechanisms to support colocation of complementary retail business and retail precincts. The resulting increase in customer activity could also help address small scale and localised crime / misdemeanours in some locations.

### **Visitor accommodation Floorspace**

The Greater Geelong and Bellarine Tourism Development Plan identifies a range of initiatives to boost tourism and potentially underpin the demand for visitor accommodation including:

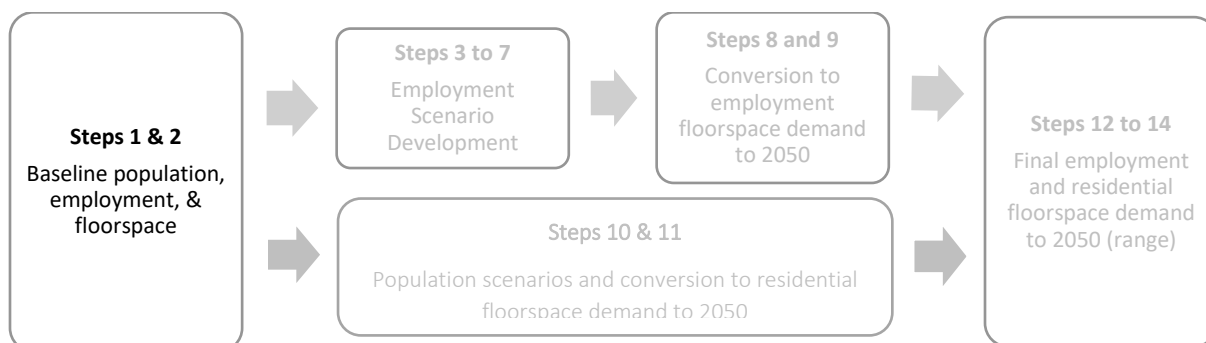
- Geelong Convention and Exhibition Centre
- Waterfront Geelong – Safe Harbour Precinct
- Fast Rail to Geelong
- Cruise Ship Infrastructure
- Osborne Park Precinct Redevelopment
- Geelong Cultural Precinct Redevelopment
- Development of the Eastern Beach Spa Complex
- Kardina Park Redevelopment
- Skyrig Adventure Park
- Development of 4 star and 5 star hotels
- Development of contemporary experiential accommodation.

The Greater Geelong and Bellarine Tourism Development Plan forecasts a shortage of over 300 serviced apartments and over 300 premium hotel rooms (i.e. 4.5 star) the Geelong Urban Region. An optimistic scenario would include more international flights to Avalon and capturing a higher share of overnight tourists.

### 3. Baseline population, jobs and floorspace

#### 3.1 Introduction

This chapter presents the current land use and floorspace mix for Central Geelong (Steps 1 and 2).



Source: SGS Economics and Planning, 2020

Steps 1 and 2 involved a review of the current land use mix and floorspace in Central Geelong, which formed the 2016 baseline for the analysis. The assumptions and sources for these baseline estimates are summarised below.

	Reference	Assumption and Source
Baseline estimates for employment	Steps 1 and 2	The baseline estimates for Central Geelong are based on the Small Area Land Use Projections (SALUP) prepared by SGS Economics and Planning. These are projections of population and dwellings and employment, beginning with ABS census data, prepared for a variety of geographic areas, including local government areas and sub-local government areas such as Central Geelong.  Appendix E in the SGS Report discusses the SALUP model in more detail.
Baseline estimates for population	Steps 1 and 2	
Baseline estimates for floorspace	Step 2	This is generated from the Central Geelong Census of Land Use and Employment (CLUE) from City of Greater Geelong. This is a survey of floorspace and employment in Central Geelong allocated to different use categories. The latest data available is for 2017.

#### 3.2 Baseline population and jobs in Central Geelong

Table 1 shows the 2011 and 2016 population in the Greater Geelong LGA and in Central Geelong, and associated growth rates. There were 239,529 people in the LGA in 2016 with 2087 or less than 1 per cent in Central Geelong.

**TABLE 1: POPULATION IN CENTRAL GEELONG, 2011 TO 2016**

	2011	2016	AAGR 2011 to 2016
Central Geelong	1,720	2,087	+4.0%
LGA Wide	215,813	238,514	+2.0%
<b>% in Central Geelong</b>	<b>0.8%</b>	<b>0.9%</b>	

Source: ABS Census, SGS SALUP model

Table shows the 2011 and 2016 jobs in the Greater Geelong LGA and in Central Geelong, and associated growth rates. There were 106,529 jobs in the LGA in 2016, with 22,906 or 21.5% in Central Geelong.

**TABLE 2: JOBS IN CENTRAL GEELONG, 2011 TO 2016**

	2011	2016	AAGR 2011 to 2016
Central Geelong	20,622	22,906	+2.1%
LGA Wide	96,733	106,529	+1.9%
<b>% in Central Geelong</b>	<b>21.3%</b>	<b>21.5%</b>	

Source: ABS Census, SGS SALUP model

### 3.3 Current land use and floorspace mix

#### Overall floorspace

As at 2017, based on the floorspace survey or 'CLUE' data, there was a total of approximately 958,406 sqm of what was categorized as 'Employment or Habitable Floorspace' in Central Geelong (see Table ). This included 253,000sqm of office floorspace<sup>5</sup> (14% of total floorspace), 160,000sqm of retail floorspace (9% of total floorspace) and 69,000sqm of residential and student accommodation floorspace (8% of total floorspace). Education floorspace, entertainment floorspace, and health floorspace contributed a further 381,707 sqm of floorspace in Central Geelong.

There was another category of 'Other' floorspace counted in the floorspace survey but this was not habitable (car parking and transport, and public domain) or was 'unclassified' without a use being recorded.

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<sup>5</sup> includes the CLUE categories of 'Office' and 'Workshop/Studio'



**TABLE 3: TOTAL FLOORSPACE IN CENTRAL GEELONG (CLUE BOUNDARIES), 2017**

Land use Categories	Total Floorspace (2017)	% of Total floorspace
Office	253,665	14.3%
Entertainment	73,791	4.2%
Accommodation	29,338	1.7%
Retail	161,231	9.1%
Health	98,714	5.6%
Education	146,685	8.3%
Residential and Student Accommodation	69,577	3.9%
Other - Notional	125,405	7.1%
<b>Total Employment or Habitable Floorspace</b>	<b>958,406</b>	<b>54.0%</b>
Other - Car Parking and Transport	125,425	7.1%
Other - Public Domain	506,810	28.6%
Other - Unclassified (Use not recorded)	183,249	10.3%
<b>Total Counted Floorspace</b>	<b>1,773,889</b>	<b>100%</b>

Source: CLUE, 2017

Note: The 'Other' land uses – making up 53% of the total 'floorspace' - have been allocated to four categories with only 'other – notional' somewhat informing the forecasts (via the calculation of job to floorspace ratios). Over a quarter (28.6%) of the floorspace recorded is private and public open space while 7% is car parking or transport related. Almost 10% of the total floorspace in the CLUE database is unclassified.

### Total Floorspace by Precincts

Figure 6 presents the distribution of total floorspace across the study area and Table and Table provides a breakdown of the total floorspace by precincts.

Office floorspace is relatively evenly spread across all precincts in Central Geelong, particularly in comparison to other land uses. West Village has the highest concentration of office floorspace (23% of total), followed by the Knowledge and Enterprise precinct (15% of total), and marginally by the Cultural Precinct (14% of total).

Most of the retail floorspace is located within the Retail Core precinct (29% of total), and most of the health related floorspace is located within the Health precinct (25% of total).

Education floorspace is mostly within the Cultural precinct (31% of total) and Knowledge and Enterprise precinct (18%), and entertainment floorspace is mostly located within the Retail Core precinct (7% of total) and West Village (5% of total).

**FIGURE 6: DISTRIBUTION OF FLOORSPACE BY PRECINCTS**



Source: SGS Economics and Planning; CLUE, 2017

**TABLE 4: TOTAL FLOORSPACE BY PRECINCTS (% OF TOTAL FLOORSPACE)**

Land Use Categories	Total Floorspace	Retail Core	Cultural	Station	Knowledge & Enterprise	Health	West Village	Outside of Precincts
Office	253,665	11%	14%	8%	15%	13%	23%	16%
Entertainment	73,791	7%	4%	1%	4%	1%	5%	5%
Accommodation	29,338	0%	0%	0%	5%	3%	0%	2%
Retail	161,231	29%	0%	3%	3%	3%	9%	2%
Health	98,714	0%	0%	0%	0%	25%	3%	1%
Education	146,685	1%	31%	0%	18%	3%	8%	0%
Residential	69,577	1%	0%	3%	11%	2%	5%	3%
Other - Notional	125,405	12%	7%	4%	7%	5%	7%	2%
<b>Subtotal</b>	<b>958,406</b>	<b>62%</b>	<b>56%</b>	<b>19%</b>	<b>63%</b>	<b>56%</b>	<b>61%</b>	<b>31%</b>
Other - Car Parking and Transport	125,425	10%	4%	33%	3%	3%	4%	0%
Other - Public Domain	506,810	8%	29%	45%	23%	34%	30%	65%
Other - Unclassified	183,249	21%	11%	4%	11%	7%	6%	3%
<b>Total</b>	<b>1,773,889</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: SGS Economics and Planning; CLUE, 2017

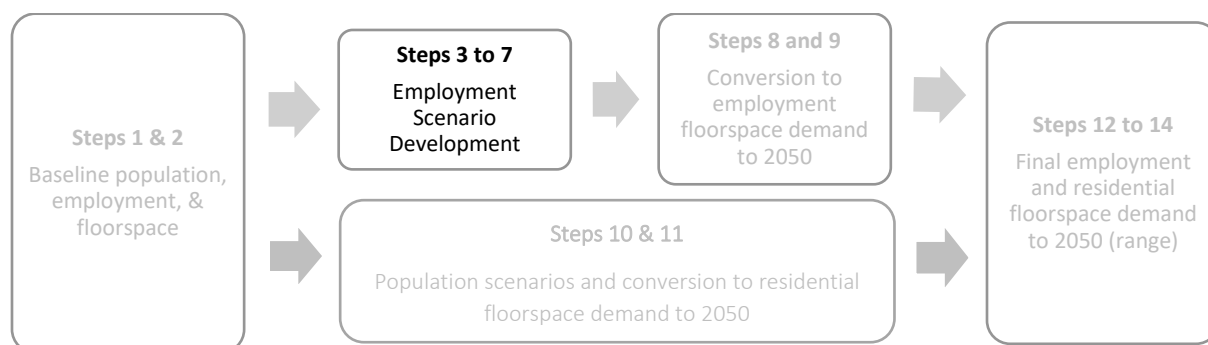
**TABLE 5: TOTAL FLOORSPACE BY PRECINCTS (SQM)**

Land Use Categories	Retail Core	Cultural	Station	Knowledge & Enterprise	Health	West Village	Total (within Precincts)	Outside of Precincts	Total floorspace
Office	43,095	23,091	12,544	47,769	43,875	61,794	232,169	21,495	253,665
Entertainment	26,828	7,206	972	14,519	4,925	12,599	67,049	6,742	73,791
Accommodation	571	498	-	16,784	8,530	-	26,383	2,955	29,338
Retail	112,299	245	4,486	9,206	9,197	23,227	158,660	2,571	161,231
Health	1,013	-	417	838	86,338	8,739	97,346	1,368	98,714
Education	2,913	52,646	-	57,646	11,814	21,667	146,685	-	146,685
Residential	5,337	-	4,367	35,133	8,337	12,676	65,850	3,727	69,577
Other - Notional	44,720	12,056	5,688	23,493	17,377	18,940	122,274	3,131	125,405
<b>Subtotal</b>	<b>236,776</b>	<b>95,742</b>	<b>28,473</b>	<b>205,389</b>	<b>190,393</b>	<b>159,643</b>	<b>916,416</b>	<b>41,990</b>	<b>958,406</b>
Other - Car Parking and Transport	38,452	7,161	49,790	9,801	10,352	9,868	125,425	-	125,425
Other - Public Domain	30,351	49,418	68,593	75,940	116,373	78,057	418,733	88,076	506,810
Other - Unclassified	78,910	18,615	6,297	36,779	22,491	15,640	178,731	4,518	183,249
<b>Total</b>	<b>384,489</b>	<b>170,936</b>	<b>153,153</b>	<b>327,908</b>	<b>339,610</b>	<b>263,209</b>	<b>1,639,305</b>	<b>134,584</b>	<b>1,773,889</b>

Source: SGS Economics and Planning; CLUE, 2017

## 4. Future land use demand

### 4.1 Employment Scenario Development



Source: SGS Economics and Planning, 2020

Steps 3 to 7 involved the preparation of base, 'upside' and 'optimistic' forecasts for employment in Central Geelong. The assumptions and sources for these baseline estimates are summarised below.

	Reference	Assumption and Source
Market prospects	Input to Steps 3-7	<b>Savills</b> research summarised in Section 2.
Policy Aspirations	Input to Steps 3-7	Policy and strategy documents such as Revitalising Central Geelong Action Plan 2016 identify positive possible futures for Central Geelong. Engagement with key institutions (Deakin University and Barwon Health) was also conducted.
Comparative centre benchmarks	Input to Steps 3-7	<b>Central Wollongong</b> and <b>Central Newcastle</b> are considered comparable large peri-urban regional centres. Employment and population shares and related indicators for these locations, and Melbourne CBD, were considered to indicate potential shares of LGA population and jobs that could locate in central city areas.
Upside and optimistic estimates for employment	Step 3	<ul style="list-style-type: none"> <li>– The <b>base case</b> projection assumes the SALUP 2046 population forecast for the Greater Geelong LGA extrapolated to 2050.</li> <li>– The SALUP forecasts assume a participation rate amongst the working age population to generate an associated job forecast for the LGA. This is equivalent to a participation rate that rises from 44.7% of the total population in 2016 to 46.2% in 2050.</li> <li>– The SALUP projections assume 19% of LGA jobs are in Central Geelong in 2050 (down from 21.5% in 2016), which reflects a continuation of the trend of suburbanising employment.</li> <li>– The <b>upside</b> and <b>optimistic</b> scenarios are generated from Scenario D of the Settlement Strategy, an aspirational growth scenario of 2.5% population growth per annum.</li> </ul>

		<ul style="list-style-type: none"> <li>– In these scenarios the effective participation rate increases again, equivalent to 49.7% of the total population to establish the 2050 LGA jobs totals.</li> <li>– The <b>upside</b> scenario assumes 20% of the LGA's jobs are in Central Geelong in 2050, while the <b>optimistic</b> scenario assumes 22%, arresting the sliding share of the base case</li> </ul>
Industry mix	Steps 4 to 7	<ul style="list-style-type: none"> <li>– Generating a floorspace projection from a job projection requires three calculations: first is the identification of an industry split of the jobs, second is the allocation of jobs by industry to a recognisable floorspace or land use category and third is the application of a use specific 'floorspace to job' ratio to each job by land use type.</li> <li>– These steps provide the references for the first of these calculations.</li> <li>– The SALUP forecast jobs by industry for the LGA and Central Geelong.</li> <li>– The assumed SALUP industry mix of jobs for Central Geelong was extrapolated to the total jobs for 2050 identified in the base case.</li> <li>– Alternative future industry mixes were applied to the upside and optimistic scenarios to reflect a more rapid evolution and maturing of Central Geelong as an employment precinct. This involves professional estimation informed by reference to the market research, policy aspirations and comparable benchmarks.</li> </ul>

Three employment scenarios have been modelled for Central Geelong:

- **Base case:** Assumes SALUP 2046 population forecast for Greater Geelong extrapolated to 2050 and 19% share of LGA jobs in Central Geelong in 2046 and it assumes this holds to 2050)
- **Upside:** Adopts population growth rates for Greater Geelong LGA aligned with Scenario D in the Settlement Strategy, with an increase to 20% of LGA jobs in Central Geelong in 2050.
- **Optimistic:** Adopts population growth rates for Greater Geelong LGA aligned with Scenario D in the Settlement Strategy, with an increase to 22% of LGA jobs in Central Geelong in 2050.

The upside and optimistic scenarios assume a higher rate of population and therefore employment growth in the LGA as a whole compared to the base case, and higher shares of jobs growth in Central Geelong relative to the rest of the LGA. Results are presented at a Central Geelong level. A preferred distribution of growth within Central Geelong should be directed based on policy directions and desired outcomes by precinct, and capacity (assuming this is available).

Further detail on each of the scenarios, assumptions and results are provided below.

### Base case

The base case is based on the small area land use projections (SALUP) prepared by SGS Economics and Planning which in turn are aligned with the Victoria in Future forecasts prepared by DELWP.

Under the base case, the share of total jobs within City of Greater Geelong being in Central Geelong decreases from 22% in 2016 to 19% by 2050. Under the base case, the total number of jobs in Central Geelong would not reach the Revitalising Central Geelong Action Plan 2016 target of 30,000 jobs by 2028 but this total will be achieved by 2031.

This scenario assumes that the industry mix for jobs in Central Geelong under SALUP is retained.



## Upside and Optimistic scenarios

The upside and optimistic scenarios have been informed by the market analysis described in the previous chapter, as well as consideration of the following policies and development aspirations:

- **Revitalising Central Geelong Action Plan 2016**; including construction of a new centralised Council office, delivery of the city heart project and sites adjoining the proposed city heart for strategic redevelopment, and the conversion of existing office or vacant building stock for residential use. The Action Plan 2016 contains **targets for 2028**; including reduction in ground floor property vacancies by 5%, a 30% increase in the number of people working in Central Geelong (that is from 21,000 to 30,000 workers), an increase in Central Geelong visitation by 40%, a total student population studying in Central Geelong increase from 4,500 to 10,000 students.
- **Barwon Health aspirations** to acquire new sites for a new Womens and Children Hospital, a new Mental Health Facility (accommodating 60 staff), as well as further investment in private consulting rooms and improved quality short-term accommodation.
- **Deakin University Expansion** as detailed in the Western Beach Master plan.
- Scenario D of the **City of Greater Geelong Settlement Strategy** which is in line with the G21 Regional Growth Plan aspirational growth scenario of 2.5% population growth per annum.

The upside and optimistic scenarios are also informed by **benchmarking with Central Wollongong, Central Newcastle and Melbourne CBD**<sup>6</sup>. Wollongong and Newcastle are major regional centres separated from but linked to metropolitan Sydney. By train Wollongong is 1hr 35m to central Sydney and Newcastle is 2hr 30m to central Sydney so both are further than Geelong to Melbourne. Both Central Newcastle and Central Wollongong are somewhat more 'mature' as settlements and economies than Central Geelong. They represent good comparators when thinking about the future of central Geelong as it matures.

SGS has assumed that 20% of jobs in Greater Geelong will be in Central Geelong in the upside scenario while in the optimistic scenario this is expected to be 22%. This is an increase of 1 and 3 percentage points from the baseline scenario respectively.

The upside and optimistic estimates are ultimately based on the workforce that would be present if Scenario D of the Settlement Strategy were achieved for Greater Geelong. This is in line with the G21 Regional Growth Plan aspirational growth scenario of 2.5% population growth per annum. This scenario is almost double the long term historical growth rate (1.3% per annum) and notably higher than the current official forecast (2.1% per annum). For this reason, we believe it is a suitable population level to use to inform upside and optimistic forecasts.<sup>7</sup>

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<sup>6</sup> Refer to Appendix B for detailed analysis on the population and jobs growth rates in Central Geelong relative to Wollongong and Newcastle.

<sup>7</sup> Refer to Appendix B for comparison with various other population forecasts

## WOLLONGONG AND NEWCASTLE BENCHMARKS

As of 2016, only a small proportion of Greater Geelong's population resided in Central Geelong compared to Central Wollongong and Central Newcastle, though population growth in these two LGAs is now mostly restricted to infill, favouring the central areas. Wollongong, Newcastle, and Geelong have a similar share of employment in their central areas though in all cases the share increased a little between 2011 and 2016. With significant anticipated suburban population growth in Geelong LGA there will be a tendency toward an increased future share of population-related and other jobs in suburban areas (Rest of Geelong).

Regions	Population			Jobs		
	2011	2016	Change 2011 to 2016	2011	2016	Change 2011 to 2016
Rest of Wollongong	92.1%	91.6%	-0.6%	72.4%	71.2%	-1.2%
Central Wollongong	7.9%	8.4%	+0.6%	27.6%	28.8%	+1.2%
Rest of Newcastle	93.3%	93.1%	-0.2%	78.4%	77.5%	-0.9%
Central Newcastle	6.7%	6.9%	+0.2%	21.6%	22.5%	+0.9%
Rest of Geelong	99.2%	99.1%	-0.1%	78.7%	78.5%	-0.2%
Central Geelong	0.8%	0.9%	+0.1%	21.3%	21.5%	+0.2%

## The employment scenarios

Table summarises the key population and job figures which underpin the ultimate employment floorspace scenarios. Under the base case, the City of Greater Geelong is expected to accommodate approximately 430,000 people and 199,000 jobs by 2050. Under the upside and optimistic scenarios, the City of Greater Geelong is expected to accommodate approximately 545,000 people (or an additional 115,000 people from the base case) and 240,000 jobs (or an additional 41,000 jobs from the baseline) by 2050.

In 2016 Central Geelong accommodated approximately 22,900 jobs. By 2050 it is assumed that this grows in the base case to 38,525, in the upside scenario to 55,465 (more than double the 2016 figure) and in the optimistic scenario to 59,079. This reflects average annual jobs growth in Central Geelong from 2016 of 1.5%, 2.6% and 2.8% respectively (compared to 2.1% between 2011 and 2016).

**TABLE 6: INPUTS TO AND SUMMARY OF CENTRAL GEELONG EMPLOYMENT SCENARIOS, 2016 TO 2050**

		Base Case		Upside		Optimistic	
	2016	2050	2016-50	2050	2016-50	2050	2016-50
LGA Population	238,514	429,737	191,223 (1.7% AAGR)	545,210	306,696 (2.5% AAGR)	545,210	306,696 (2.5% AAGR)
LGA Jobs	106,529 (44.7% of Pop)	198,734 (46.2% of Pop)	92,205 (1.9% AAGR)	271,203 (49.7% of Pop)	164,674 (2.8% AAGR)	271,203 (49.7% of Pop)	164,674 (2.8% AAGR)
Central Geelong Jobs	22,906	38,525 (19% of LGA)	15,619 (1.5% AAGR)	55,465 (20% of LGA)	32,559 (2.6% AAGR)	59,079 (22% of LGA)	36,173 (2.8% AAGR)

Source: ABS Census, SGS SALUP model, SGS Calculations and assumptions

### Industry mix

An alternative future industry mix was applied to the upside and optimistic scenarios to reflect a more rapid evolution of Central Geelong as an employment precinct. Again, this is informed by market analysis on prospects for various land uses, policies and development aspirations for Central Geelong, and benchmarking with comparable centres. It is important to note that the share of jobs in key city centre and service sector activities has been adjusted upward compared to the baseline. For instance, health care and social assistance declines in relative importance compared to the baseline though the absolute number of jobs in this sector increases substantially. Absolute job numbers increase in most industry categories even if the share of jobs is stable or declines somewhat.

The current industry mix for Central Geelong from SALUP data and the alternative future mixes are detailed in Table 2 below. The key shifts from the baseline to the upside and optimistic scenarios are highlighted in green:

- Increase in Financial and Insurance Services and Professional, Scientific and Technical Services employment reflecting an increase in service sector activities in Central Geelong
- Increase in public administration employment reflecting the movement of VIC Government offices to Central Geelong
- Health care and social assistance declines in relative importance compared to the baseline though the absolute number of jobs in this sector increases substantially. Absolute job numbers increase in most industry categories even if the share of jobs is stable or declines somewhat.

The proposed future mix is applied to upside and optimistic scenarios (and not the base case).

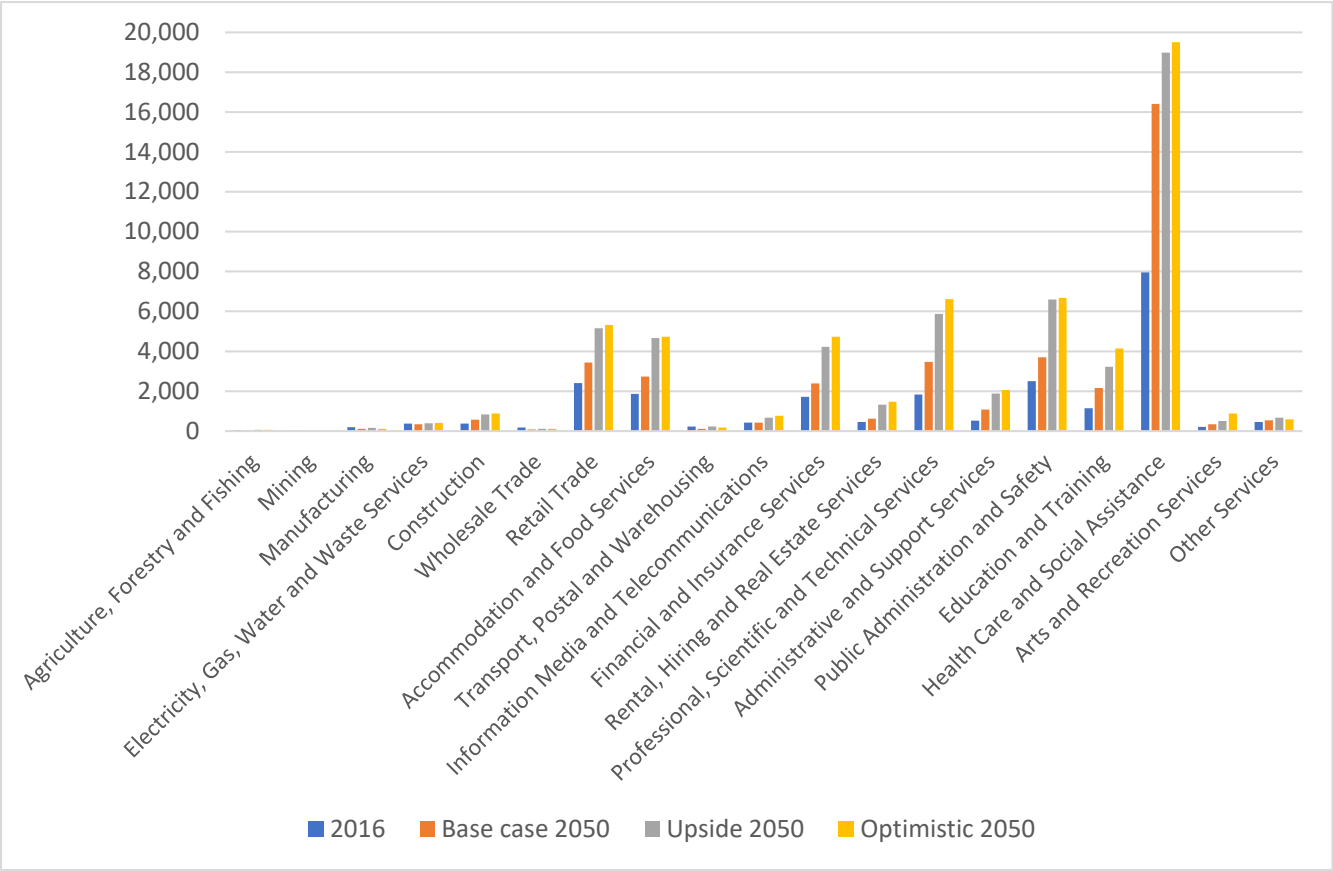
**TABLE 2: JOBS BY INDUSTRY MIX FOR SCENARIOS IN 2050**

Jobs by Industry	Share of Jobs (base)	Share of jobs (upside)	Share of jobs (optimistic)
Agriculture, Forestry and Fishing	0.1%	0.1%	0.1%
Mining	0.0%	0.0%	0.0%
Manufacturing	0.3%	0.3%	0.2%
Electricity, Gas, Water and Waste Services	0.9%	0.7%	0.7%
Construction	1.5%	1.5%	1.5%
Wholesale Trade	0.2%	0.2%	0.2%
Retail Trade	8.9%	9.3%	9.0%
Accommodation and Food Services	7.1%	8.4%	8.0%
Transport, Postal and Warehousing	0.3%	0.4%	0.3%
Information Media and Telecommunications	1.1%	1.2%	1.3%
Financial and Insurance Services	6.2%	7.6%	8.0%
Rental, Hiring and Real Estate Services	1.6%	2.4%	2.5%
Professional, Scientific and Technical Services	9.0%	10.6%	11.2%
Administrative and Support Services	2.8%	3.4%	3.5%
Public Administration and Safety	9.6%	11.9%	11.3%
Education and Training	5.6%	5.8%	7.0%
Health Care and Social Assistance	42.6%	34.2%	33.0%
Arts and Recreation Services	0.9%	0.9%	1.5%
Other Services	1.4%	1.2%	1.0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: SGS Economics and Planning

This assumption in relation to share of employment by industry translates into the change by jobs by industry in total from 2016 for each of the three scenarios to 2050 is shown in Figure (and Table ). This shows the rapid growth of jobs assumed in key central city type sectors (e.g. Accommodation and Food Services, Financial and Insurance Services, Professional, Scientific and Technical Services and Public Administration and Safety) in the upside and optimistic scenarios in particular, and in health care and social assistance across all three scenarios.

FIGURE 7: NUMBER OF JOBS BY INDUSTRY 2016 TO 2050 SCENARIOS



**TABLE 8: NUMBER OF JOBS BY INDUSTRY 2016 TO 2050 SCENARIOS AND CHANGE IN JOBS**

		Total Jobs			Change in Jobs 2016 to 2050		
	2016	Base case 2050	Upside 2050	Optimistic 2050	Base	Upside	Optimistic
Agriculture, Forestry and Fishing	49	38	55	59	-11	6	10
Mining	6	6	0	0	0	-6	-6
Manufacturing	187	109	166	118	-78	-21	-69
Electricity, Gas, Water and Waste Services	369	359	388	414	-10	19	45
Construction	373	573	832	886	200	459	513
Wholesale Trade	177	62	111	118	-115	-66	-59
Retail Trade	2409	3,441	5,158	5,317	1,032	2,749	2,908
Accommodation and Food Services	1867	2,729	4,659	4,726	862	2,792	2,859
Transport, Postal and Warehousing	224	131	222	177	-93	-2	-47
Information Media and Telecommunications	424	424	666	768	0	242	344
Financial and Insurance Services	1720	2,381	4,215	4,726	661	2,495	3,006
Rental, Hiring and Real Estate Services	457	610	1,331	1,477	153	874	1,020
Professional, Scientific and Technical Services	1839	3,480	5,879	6,617	1,641	4,040	4,778
Administrative and Support Services	528	1,082	1,886	2,068	554	1,358	1,540
Public Administration and Safety	2511	3,684	6,600	6,676	1,173	4,089	4,165
Education and Training	1144	2,161	3,217	4,136	1,017	2,073	2,992
Health Care and Social Assistance	7961	16,396	18,969	19,496	8,435	11,008	11,535
Arts and Recreation Services	204	334	499	886	130	295	682
Other Services	456	523	666	591	67	210	135
<b>Total</b>	<b>22,906</b>	<b>38,525</b>	<b>55,521</b>	<b>59,256</b>	<b>15,619</b>	<b>32,616</b>	<b>36,351</b>

Source: SGS Economics and Planning



## Conversion to employment floorspace and scenarios

Steps 8 and 9 involve the conversion of job projections in each scenario to floorspace 'demand' to 2050. Step 12 adjusts for more recent developments. The assumptions and sources for this process are summarised below.

	Reference	Assumption and Source
Concordance between jobs by industry and land use	Step 9	As shown and discussed above employment projections allocate jobs to different industry types. These industry types don't neatly align with land use or floorspace categories utilised in strategic planning. From the 2017 Central Geelong Census of Land Use and Employment (CLUE) data base from the City of Greater Geelong SGS has prepared an 'Industry to land use concordance' table (see <b>Appendix C</b> ). This is based on the observed share of jobs by industry occupying any particular land use type in Central Geelong. Using this concordance table jobs by industry in 2050 are converted to jobs by use category.
Floorspace to job ratios	Step 9	The floorspace to job ratios adopted generally reflect those currently observed within Central Geelong, based on CLUE data. Where the CLUE floorspace to job ratio was substantially different to the ratio utilised by SGS elsewhere for other regions, this was reviewed and a ratio determined based on this previous experience, an understanding of the local context and expected trends in each industry (see <b>Appendix D</b> ).
Adjustment to account for post-2017 developments	Step 12	Because the baseline floorspace data is from the 2017 CLUE survey floorspace additions since that time need to be added to the existing supply (or subtracted from the future forecast which is based from 2016).

## Recent employment floorspace developments

This section summarises the recent developments (from 2016 to 2020) that have been accounted for in the demand analysis, based on data provided by DELWP and City of Greater Geelong.

- Recently constructed Barwon Water building at 55-67 Ryrie St, Geelong can accommodate 300 employees, which is the equivalent to approximately 4,500sqm of office floorspace.
- Recently constructed WorkSafe building at 1 Malop St in Geelong can accommodate up to 680 employees, which is the equivalent to approximately 10,200sqm of office floorspace.
- Recent two-level expansion of St John of God Hospital at 80 Myers St in Geelong, which added an additional 721sqm of health floorspace to Central Geelong.

Due to lack of available floorspace data, the recently constructed Tech School at the Gordon Institute of TAFE's city campus and Stage 2 of the Geelong Performing Arts Centre redevelopment were not excluded from the demand analysis. This means there is likely to be an overestimate of demand for education floorspace in particular.

## Employment floorspace and scenarios

Table shows the adjusted 2020 floorspace figures by employment land use type (residential and student accommodation is not included) and the final employment floorspace scenarios (including the jobs after concordance for the upside and optimistic scenarios).

- The **base case** adds over 400,000 sqm of additional employment floorspace by 2050, more than half the current estimated habitable floorspace.
- The **upside scenario** adds over 860,000 sqm of additional employment floorspace, almost double the existing estimated habitable floorspace.
- The **optimistic scenario** adds almost a million sqm of additional employment floorspace, well over double the existing estimated habitable floorspace.

**TABLE 9: EMPLOYMENT AND FLOORSACE SCENARIOS**

		Base case (2050)		Upside (2050)		Optimistic (2050)	
Land use / Floorspace	Total empl. floorspace (sqm) (2020)	Additional Floorspace (sqm)	FS/Job Ratio	Jobs after conc- ordance	Additional Floorspace (sqm)	Jobs after conc- ordance	Additional Floorspace (sqm)
Office	268,365	+47,312	15	+12,671	+175,369	+14,418	+201,577
Entertainment	73,791	+17,204	36	+1,523	+54,836	+1,656	+59,630
Accommodation	29,338	+16,077	50	+1,033	+51,653	+1,058	+52,897
Retail	161,231	+34,170	33	+3,042	+100,399	+3,208	+105,861
Health	99,435	+246,184	30	+10,802	+323,339	+11,339	+339,454
Education	146,685	+53,289	45	+2,487	+111,925	+3,481	+156,653
Other - Notional	125,405	+88	46	+971	+44,696	+1,108	+50,958
<b>Total</b>	<b>904,250</b>	<b>+414,323</b>	<b>-</b>	<b>+32,530</b>	<b>+862,217</b>	<b>36,269</b>	<b>+967,029</b>

Source: SGS Economics and Planning

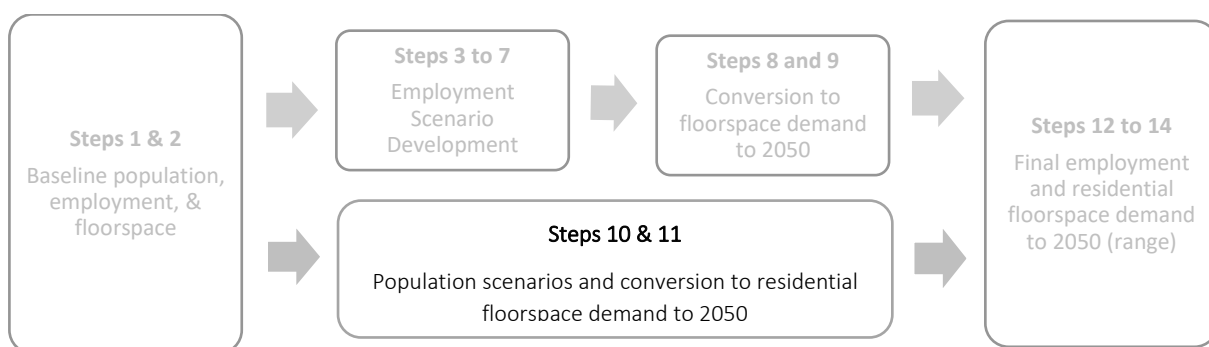
The significant share of new floorspace in the health category particularly stands out in all scenarios. Though the Floorspace to Job ratio has been adjusted down from that observed in the CLUE data, when combined with the projected significant health employment it looms large in future demand potential. The choice of Floorspace to Job ratio impacts significantly on the floorspace estimate in this health category.

If the new floorspace is mainly in ancillary health activities and consulting rooms it is unlikely to generate this projected demand because this type of health floorspace looks and functions like standard

office space (where a lower Floorspace to Job ratio would apply). If however new floorspace includes significant clinical and ward space (as well as ancillary and consulting rooms) then the projections may be realistic.

Where reflected in the capacity analysis and the ultimate controls the component related to health floorspace indicated in the table will likely include a supply-side buffer (i.e. the demand projection could be lower). The base case has health floorspace contributing more than half of the total growth; the upside scenario has it contributing over a third; it currently contributes almost a tenth to the Central Geelong total. In all jurisdictions jobs in health are anticipated to grow significantly so the outsized contribution to future floorspace demand in these scenarios is to be expected. It could be however, that as Greater Geelong grows, more health employment and related floorspace occurs in suburban locations, though the Central Geelong cluster will stay dominant in hospital services. These are unknowns but including a buffer for now is appropriate.

## 4.2 Residential floorspace demand



Steps 10 and 11 involve the generation of residential floorspace demand scenarios for Central Geelong based on assuming a share of the LGA population will reside in Central Geelong and then the conversion of ‘population’ to dwellings and floorspace. Step 12 adjusts for more recent residential developments. The assumptions and sources for this process are summarised below.

	Reference	Assumption and Source
Population scenarios and share of LGA population in Central Geelong	Steps 10 and 11	<ul style="list-style-type: none"> <li>– The <b>base case</b> projection assumes the SALUP 2046 population forecast for the Greater Geelong LGA extrapolated to 2050 (1.7% AAGR). The SALUP projections assume 1.7% of LGA population is in Central Geelong in 2050 (up from 0.9% in 2016).</li> <li>– The <b>upside</b> and <b>optimistic</b> scenarios are generated from Scenario D of the Settlement Strategy, an aspirational growth scenario of 2.5% population AAGR for Greater Geelong.</li> <li>– The share of LGA population in Central Geelong increases to 2-2.5% (<b>upside</b>) and 2.5-3% (<b>optimistic</b>) to establish the 2050 Central Geelong population ranges.</li> </ul>
Average household size	Step 11	The average household size for new dwellings in Central Geelong is assumed to be 1.8 persons per household.

Average dwelling size	Step 11	The average dwelling size for new apartments in Central Geelong is assumed to range between 90sqm and 94sqm GFA.
Adjustment to account for post-2017 developments	Step 12	Because the baseline floorspace data is from the 2017 CLUE survey floorspace additions since that time need to be added to the existing supply (or subtracted from the future forecast which is based from 2016).

### Recent Residential floorspace

- A total of 191 new dwellings were constructed between 2017 and 2019. Most of these new dwellings were constructed at 53 Mercer Street (138 new dwellings in 2019) and 158-192 Myers Street (59 new dwellings in 2018). This is equivalent to approximately 17,190 sqm of residential floorspace (assuming 90sqm per dwelling).
- A total of 410 student accommodation units at 19-23 Brougham Street in Geelong. This is equivalent to approximately 24,600sqm of residential floorspace (assuming 60sqm per dwelling).

### Residential floorspace and scenarios

Central Geelong could expect to accommodate between 7,100 and 16,350 residents between 2016 to 2050 (see Table ). A range of population outcomes is provided in both the upside and optimistic scenarios. After factoring in recent development, and using the assumptions for household size and average dwelling size mentioned above, the residential scenarios are:

- The **base case** adds over 210,000 sqm of additional residential floorspace by 2050 to Central Geelong, accommodating a more than doubling of the current population.
- The **upside scenario** adds between 400,000 and 550,000 sqm of additional residential floorspace, implying at the upper end of the range a more than six-fold increase on the current population.
- The **optimistic scenario** adds about 700,000 sqm of additional residential floorspace at the upper end of the range, implying a more than eight-fold increase on the current population.

**TABLE 10: POPULATION FORECASTS FOR CENTRAL GEELONG / RESIDENTIAL FLOORSPACE SCENARIOS 2020 TO 2050**

		Base Case		Upside				Optimistic			
	2016	2050	Change 2016-50	2050 Low	2050 High	Change 2016-50 Low	Change 2016- 50 High	2050 Low	2050 High	Change 2016-50 Low	Change 2016-50 High
<b>LGA Population</b>	238,514	429,737	191,223	545,210		306,696		545,210		306,696	
<b>Share of LGA population</b>	0.9%	1.7%	-	2.0%	2.5%	-		2.5%	3.0%	-	
<b>Central Geelong Population</b>	2,087	7,135	5,048	10,904	13,630	8,817	11,543	13,630	16,356	11,543	14,269
<b>Average Annual Growth Rate for Central Geelong</b>	-	-	3.7%	-	-	5.0%	5.7%	-	-	5.7%	6.2%
<b>Average Household Size</b>			1.8			1.8	1.8			1.8	1.8
<b>Dwellings</b>			2804			4898	6413			6413	7927
<b>Average Dwelling size</b>			90			90	92			91	94
<b>Residential Floorspace 2016-2020</b>			41,790			41,790	41,790			41,790	41,790
<b>Additional Residential Floorspace demand 2020 to 2050</b>			210,621			399,058	548,197			541,784	703,395

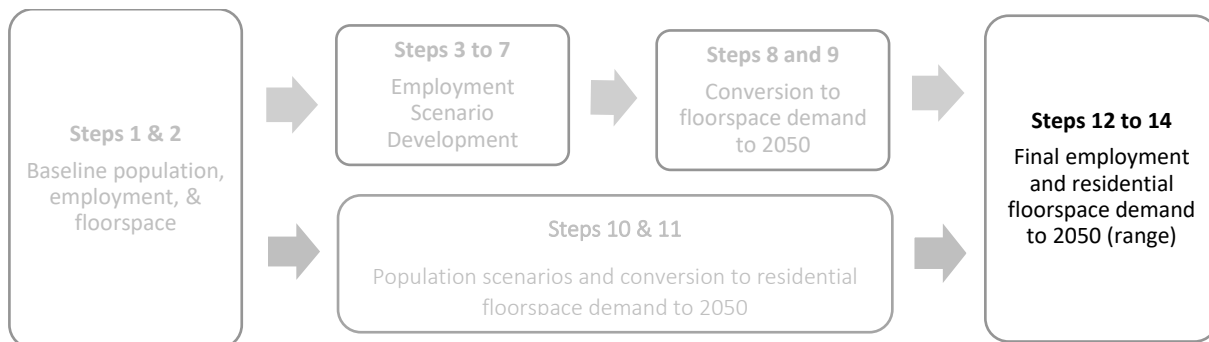
Source: SGS Economics and Planning

The comparator centres show (see earlier Text Box and Appendix B) that Central Wollongong has about 8% of the total Wollongong LGA population and Central Newcastle has about 7% of the total Newcastle LGA population. Central Geelong has about 1% of its LGA population. While it will be more difficult for Central Geelong to increase its share of the LGA population because of the continued and significant greenfield development occurring and proposed within the Greater Geelong LGA boundaries, the scenarios assume a climbing share of the LGA population total for Central Geelong, and an ever increasing growth rate – in each respective scenario well ahead of the growth rates assumed for the LGA as a whole.

To provide a comparison the upside scenario would see Central Geelong with a population in 2050 broadly in line with that in Central Newcastle in 2016 (11,000) while the optimistic scenario would have it in line with the population in Central Wollongong in 2016 (17,700). In 2016 Central Wollongong had about 27,000 jobs while Central Newcastle had about 26,000 jobs. The upside and optimistic scenarios for Central Geelong have more than double this level of employment in 2050, though with a much greater share in health than in either of these other cities, reflecting the complex of facilities and institutions in Central Geelong (Newcastle's main hospital is in the suburbs, Wollongong's is on the fringe of the central area).

There is significant hinterland employment elsewhere in the Lower Hunter and beyond (including the main hospital and university campus but also large shopping centres and other nodes) which 'dilutes' Central Newcastle's employment role. A similar situation exists in the Illawarra and it is also a little closer to southern Sydney. Central Geelong may have less nearby 'competitors' for major employment (particularly if supported by policy constraining excessive 'out of centre' activity) though the relative proximity of Melbourne is likely to constrain prospects for higher order and professional services (major legal, insurance, finance, business management firms). It should be remembered that the upside and optimistic scenarios are so-named for a reason; they present positive and step-change scenarios for Central Geelong – particularly perhaps for employment outcomes.

### 4.3 Employment and Residential floorspace demand range



Source: SGS Economics and Planning, 2020

Steps 12 to 14 involve the generation of the final scenarios for Central Geelong as summarised below.

	Reference	Assumption and Source
Recent developments	Step 12	Employment and residential floorspace scenarios were adjusted to account for recent development as discussed in the previous discussion of assumptions
Add floorspace figures	Step 13	Add employment and residential floorspace in each scenario to show potential total additional floorspace from 2020 to 2050
COVID19 Impacts / Sensitivity tests	Step 14	Commentary on the possible impacts of Covid is included, though it is too early to assess medium to long term impacts. Sensitivity tests or outcomes are shown to illustrate both a dampening or enhancing impact of Covid (2.1% and 3.0% AAGR respectively for the population in the Greater Geelong LGA, compared to 2.5% AAGR as the basis for the upside and optimistic scenarios here, with all other assumptions held constant).

#### Final floorspace scenarios

In 2017 when the CLUE survey was conducted it is estimated that there was a total of 958,406sqm 'employment or habitable' floorspace, consisting of 888,829sqm of employment (or non-residential) and 69,577sqm residential and student accommodation. From 2017 to 2020 it is estimated 57,211sqm was added, consisting of 15,421sqm and 41,700sqm of residential floorspace. The 2020 'employment and habitable' floorspace then is just over 1 million sqm (1,015,527sqm).

Table shows the final, compiled floorspace scenarios. The 2020 comparable and 'employment and habitable' floorspace is just over 1 million sqm:

- The **base case** adds approximately 625,000 sqm
- The **upside scenario** adds between 1.26m and 1.41m sqm

- The **optimistic scenario** adds between 1.51 and 1.67m sqm

**TABLE 11: FINAL FLOORSPACE SCENARIOS (SQM)**

2020	Base 2020-2050		Upside 2020-2050		Optimistic 2020-2050	
1,015,527 (comparable empl't or habitable floorspace)	Employment	Residential	Employment	Residential	Employment	Residential
	+414,323	+210,621	+862,217	+399,058 - 548,197	+967,029	+541,784 - 703,395
	<b>+624,944</b>		<b>+1,261,275 - 1,410,414</b>		<b>+1,508,813 - 1,670,424</b>	

Source: SGS Economics and Planning

## 4.4 Impact of COVID19

The impacts of COVID19 on population growth and the economy are difficult to assess over the long term and therefore to what extent they might influence assumptions being used for this report. Table provides a summary of potential positive and negative impacts for different floorspace users that could occur in the medium term.

**TABLE 12: POTENTIAL IMPACTS OF COVID19 FOR CENTRAL GEELONG**

	NEGATIVE IMPACTS	POSITIVE IMPACTS
<b>Population growth</b>	<p>Reduced migration will dampen overall growth in the short to medium term and may be a drag on future population growth in Greater Geelong.</p> <p>Central Geelong may not provide the same comparative offer of lifestyle 'retreat' that suburban or hinterland areas are benefitting from.</p>	<p>Housing and location preferences appear to be shifting. Remote work will become more accepted in some sectors and increased private space for both work and leisure will be sought after. This will shift demand away from dense inner city locations toward well connected lifestyle locations such as Geelong. A spike in growth is already being observed in greenfield development. House price growth might make apartments in Central Geelong more attractive.</p>
<b>Retail</b>	<p>Online retailing has accelerated. While physical retailing will partly bounce back post-pandemic Covid has accelerated an existing trend away from conventional 'bricks and mortar'.</p>	<p>Virtual shop fronts are perhaps now as important for shops as their physical space. This has shifted online retailing from a treat to an opportunity and increased market reach for unique local retailers, thereby opening up demand for new retail/wholesale hybrid spaces in unique city centre environments (like Central Geelong), which will be more distinct than suburban centres.</p>
<b>Warehousing</b>		<p>A shift away from 'just in time' supply chains could mean that business hold much more stock than is currently the case. This would increase the demand for additional warehouse floorspace – including in</p>

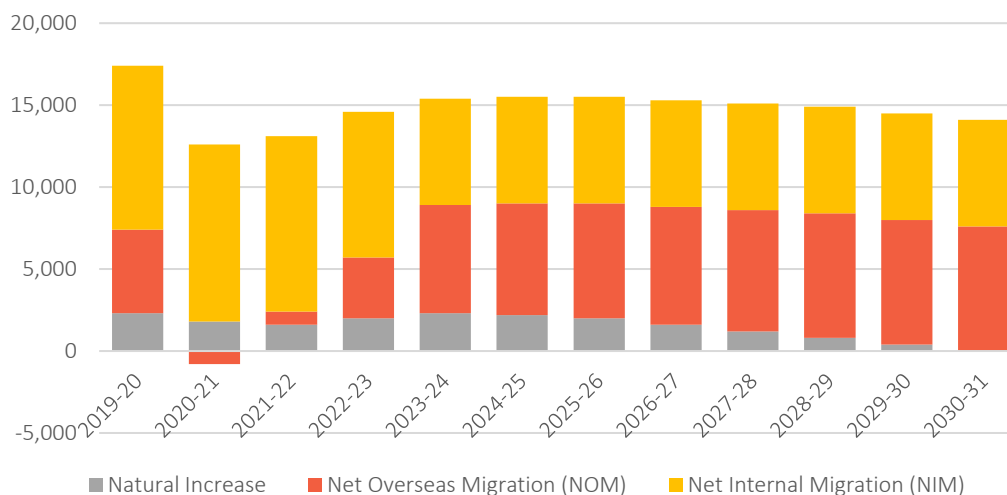


		near or edge CBD locations, particularly if rents are lower.
<b>Local manufacturing</b>	Slow economic recovery locally and disruptions to foreign export markets may slow demand and impact local manufacturing in some sectors.	Local manufacturing could increase as business want greater certainty for their supply chains. This means that there would be less imports and more domestic production for key products, particularly as consumers increasingly look to support locally made products. Business support functions in Central Geelong could stand to benefit and grow.
<b>Health services</b>	Tele-health services have accelerated reducing the need for face to face consultations. Mostly this is at the GP end of the health services continuum and less likely to impact on demand for health related floorspace for specialists, operations etc in Central Geelong.	Investment in health services, from research, pharmaceutical and supply production to hospitals and other related service has been a focus during COVID-19. Continued strong investment in these sectors is likely to provide health related ancillary growth opportunities, benefitting the health cluster in Central Geelong.
<b>Commercial office workers</b>	Slow economic recovery is likely to impact the high jobs growth projected in the broader commercial and office sector. Hybrid working habits may reduce office occupancy and affect prospects for a deeper office market in Central Geelong.	<p>The pandemic has forced many office-based workers to work from home, dramatically changing the nature of how and where people work. This period is likely to shift some perceptions and priorities in the commercial sector resulting in a more dispersed and mobile workforce.</p> <p>High amenity, lower cost areas which are still accessible to major capital cities (such as Central Geelong) may benefit from this trend.</p>
<b>Tourism</b>	International tourism to be subdued until later in 2022-3. Reduced visitors impacts tourism businesses including retail, accommodation, food services, arts and recreation, particularly those geared towards international tourism (particularly related to Great Ocean Road).	State border closures lifting so domestic tourism should recover strongly. Tourism businesses may need to provide alternative offerings to appeal to the domestic market given differences to the international tourism market. This presents opportunities for new and improved tourism products and services in Central Geelong.

Source: SGS Economics and Planning

In December 2020, the Commonwealth Government Centre for Population Research forecast that the collapse in net overseas migration as a result of COVID impacts would lead to 20,600 less people by 2030-31. This lag impact for regional Victoria in the short term is shown in Figure .

**FIGURE 8: COMPONENTS OF POPULATION GROWTH IN REGIONAL VICTORIA POST COVID**



Source: Centre for Population Research, Population Statement: Capital city and Rest-of-State Population Projections, 2019-20 to 2030-31, Commonwealth of Australia 2020, SGS calculations

It is unclear at this stage if Greater Geelong (or Central Geelong) will follow the suggested regional trends outlined in Figure 7. However, recently released 'Estimated Resident Population' (ERP) figures by the ABS shows a sharp fall in the rate of growth in Greater Geelong between 2019 and 2020, down to 2.29% per annum as shown in Figure .

**FIGURE 9: ESTIMATED RESIDENT POPULATION AND % GROWTH PA GREATER GEELONG 2013-2020**

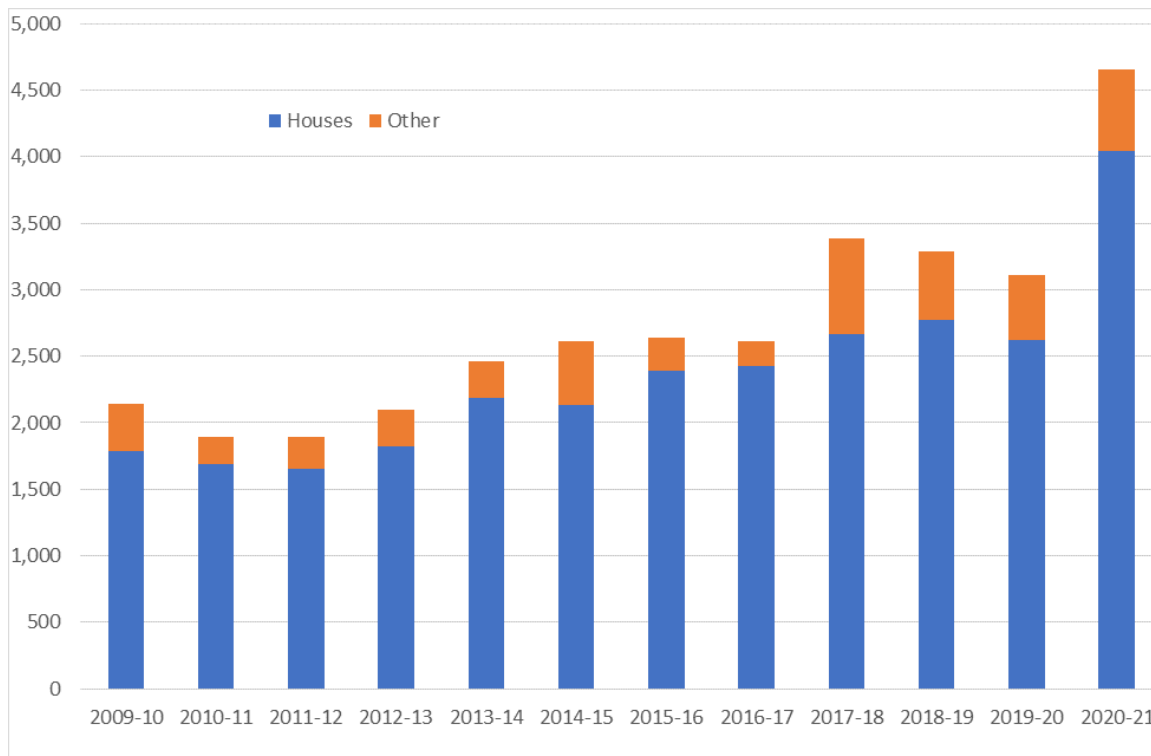


Source: [https://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS\\_ERP\\_LGA2020](https://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_ERP_LGA2020)

The above ERP figures appear to be a 'lag' indicator, when compared against residential building approvals for Greater Geelong which spiked significantly in 2020-21 as shown in Figure . Building approvals averaged between 2,500 to 3,400 per year between 2014 and 2020 but increased to over

4,500 in 2020-21. If this increase is translated into completions leading to occupation, it could be expected that population increase may see an increase in coming years. Whether higher growth rates can be sustained through the medium term remains to be seen.

**FIGURE 10: GREATER GEELONG RESIDENTIAL BUILDING APPROVALS**

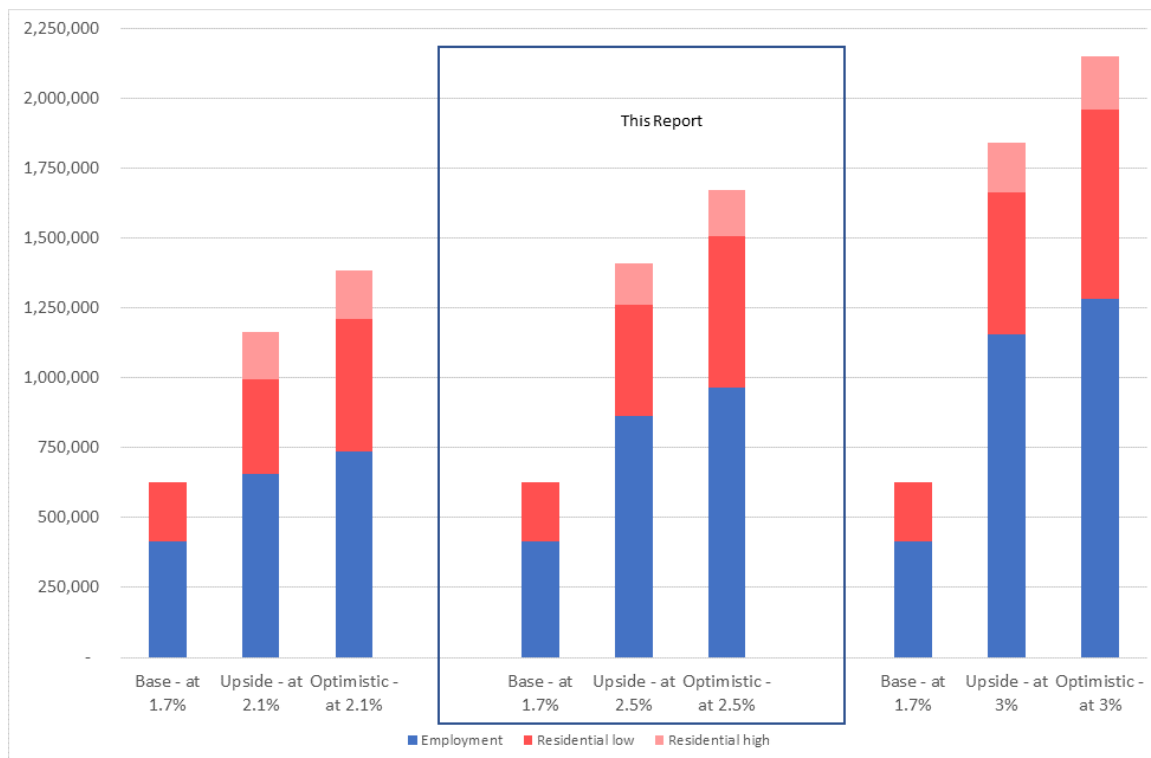


Source: <https://profile.id.com.au/geelong/building-approvals>

The scenarios prepared for this report need to be put in context of uncertain post Covid impacts by comparison with more conservative and more aggressive scenarios. More conservative scenarios (though higher than the base case) can be represented by say a 2.1% Annual Average Growth Rate for Greater Geelong to 2050 as a basis for the upside and optimistic scenarios instead of the 2.5% rate used in this report. More aggressive (and unlikely) upside and optimistic scenarios can be prepared as a further sensitivity test by assuming a 3% Annual Average Growth Rate for Greater Geelong to 2050. These are shown in Figure 11.

A lasting Covid impact on the economy and population growth in Victoria might curtail growth in Central Geelong to the base case or worse. With a solid recovery and a continued focus on Geelong for investment by state government and given its significant intrinsic merits, Central Geelong can push to and beyond the upside and optimistic scenarios generated by the 2.1% pa growth assumption. The upside and optimistic scenarios prepared for this report (2.5% pa population growth assumption for Greater Geelong with all other assumptions for Central Geelong holding) are stretch targets, but worthwhile for an ambitious planning strategy.

**FIGURE 11: COMPARISON OF SCENARIOS WITH DIFFERENT GREATER GEELONG GROWTH RATES**



A lasting Covid impact on the economy and population growth in Victoria might curtail growth in Central Geelong to the base case or worse. With a solid recovery and a continued focus on Geelong for investment by state government and given its significant intrinsic merits, Central Geelong can push to and beyond the upside and optimistic scenarios generated by the 2.1% pa growth assumption. The upside and optimistic scenarios prepared for this report (2.5% pa growth assumption for Greater Geelong with all other assumptions for Central Geelong holding) are stretch targets, but worthwhile for an ambitious planning strategy.

The upside and optimistic scenarios based on a 3% pa growth assumption for Greater Geelong and the flow on impacts for Central Geelong are unlikely and would rely on an enduring post-Covid positive step change in prospects. A sustained 3% rate for over 30 years is highly unlikely not least because of the increasing base population that makes achieving this rate harder every year, implying an ever growing annual increase in population.

#### 4.5 Demand forecasts and future planning

For the purposes of structure planning and identifying an envelope for future development in Central Geelong, it is appropriate to adopt the Upside land use forecast (based on a 2.5% pa population growth assumption for Greater Geelong) of an additional 862,217 sqm of employment floorspace and the range of 399,058 to 548,197 sqm of residential floorspace to 2050 (and also having regard to the assumed split of floorspace between different land uses and the objectives and preferred uses in each precinct).

While this additional floorspace is a reasonable and robust working assumption, it does represent a long range forecast (30 years) and it may not be necessary to identify the potential for 100% of this

additional capacity in the planning work. Similarly, while it is desirable and important to make provision for supporting community infrastructure and services for the future population and workforce, a 20 year horizon (rather than 30 years) would be sufficient for this purpose<sup>8</sup>.

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<sup>8</sup> The 20 year horizon for jobs and population to inform community infrastructure planning can be derived from the Upside forecasts documented in this report (this is equivalent to two thirds of the additional jobs and population forecasts to 2050).

# 5. Conclusion

## 5.1 The Evolution of Central Geelong

Through the 20<sup>th</sup> century Geelong developed with the characteristics of a strong regional centre, though constrained by its civic and service function for a relatively modest suburban, hinterland and rural population. Since the turn of the century the Greater Geelong area has grown rapidly with its assets of being close to lifestyle and recreational areas and within close reach of a rapidly expanding metropolis in Melbourne.

Within Central Geelong the economy has begun to evolve, with investment by government in health and insurance functions, medium and high density residential development, tangible proposals for investment in tertiary education and expanded health functions. As a result Central Geelong is 'stepping up' as a commercial and regional centre with a more diverse employment base.

This continued evolution and positive growth story is more or less assumed by the SALUP population and employment forecasts utilised in the baseline scenario in this study. The upside and optimistic scenarios assume an accelerated evolution to a higher order centre based on rapid suburban and regional population growth, further investment in transport infrastructure to enhance connectivity and new public domain, cultural, education, accommodation, commercial and health developments.

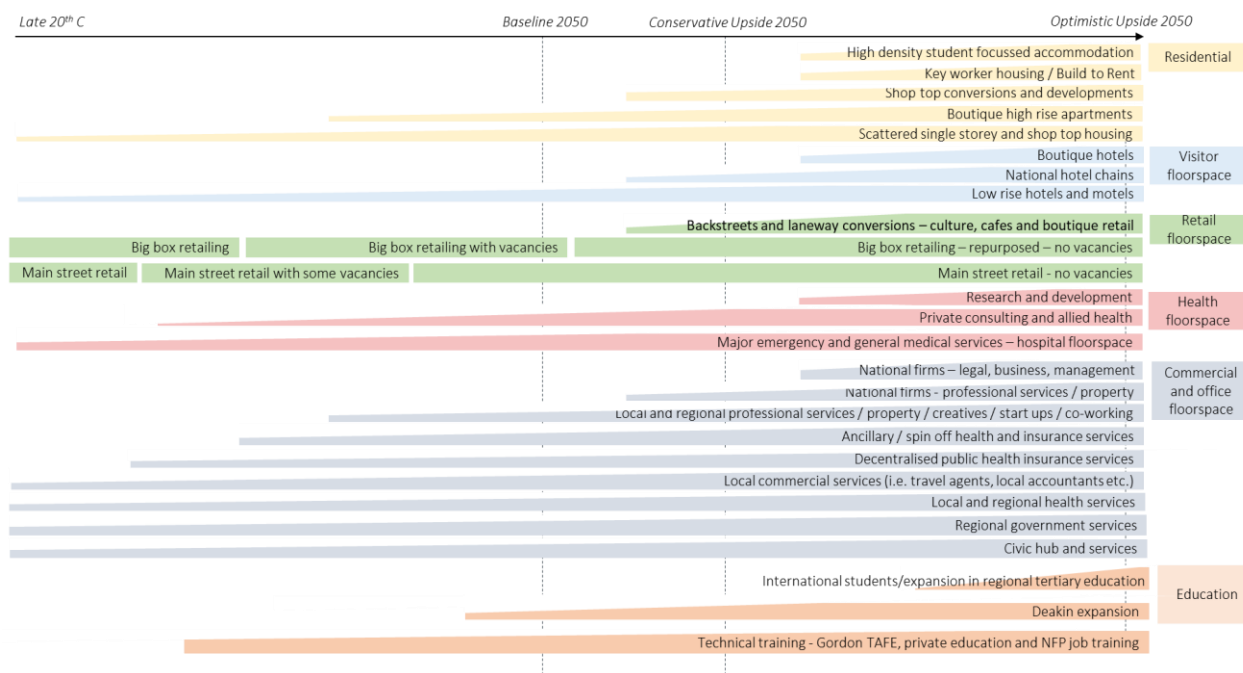
Figure 121 aims to characterise this evolution across the key land use categories in Central Geelong. It shows the relatively limited presence of employment and other floorspace in the late 20<sup>th</sup> century: that is, main street and regional and big box shopping; civic services, regional government, local commercial services and health services occupying commercial floorspace; hospital and some ancillary health services; some low rise visitor accommodation; and low rise and limited shop top housing. By 2020 there is a greater mix of uses, including a greater array of private consulting and allied services in the health sector and the presence of the decentralised health and insurance services in the commercial sector.

Further advances and evolutions across the land use categories are shown for the Baseline 2050 and Upside and Optimistic scenarios. The pathways of other regional centres such as Wollongong and Newcastle, the latter in particular, provide something of a guide for the mix of uses and floorspace types assumed when the Upside and Optimistic 2050 scenario is achieved. This is probably the most plausible or likely of the upside and optimistic scenarios with: more shop top and boutique residential; a revived (post-Covid) big box offer, and recognisably diverse retail and hospitality in laneway and side street spaces; national hotel chains, an increased array of public and private activities in a booming health precinct; greater depth across the range of commercial and office uses, though not yet extending to the national and international firms in accounting, business and management consulting; and an established and expanded tertiary education sector.

The Optimistic scenario characterised in the figure represents a stretch outcome, in particular regarding the depth of the commercial and office sector. Parramatta in suburban Sydney, a planning focus for 50 years as a 'second' CBD now hosts about 50,000 jobs and has the Greater Western Sydney population of almost 3 million in its catchment. Only recently has it attracted two of the major, national accounting and advisory firms (Deloitte and KPMG). With its proximity to Melbourne it is unlikely Geelong would evolve to the point where it attracts major large floorplate and multi-storey office developments,

though in due course – and by 2050 - it could certainly attract national engineering, design and boutique business consulting firms seeking smaller floorspace tranches and servicing a large, non-metropolitan population and business base. It would be expected that under the Optimistic scenario, with the assumption that education and the student population drives much of the retail, hospitality and night time economy activities, higher density student accommodation would be an attractive option. Alternative housing tenures such as key worker and build to rent housing might also be entrenched.

**FIGURE 121: SCENARIO LIFECYCLE DEVELOPMENT ASSUMPTION**



Source: SGS Economics and Planning

It should be noted that there is no direct relationship between this characterisation of floorspace in Figure 121 and the quantified floorspace scenarios, except as a background reference to the ‘thinking’ that informed the scenarios.

## 5.2 Development preconditions and possible planning drivers

Table 3 includes some reflections on the development preconditions for the different potential land use types that would contribute to the acceleration of Central Geelong’s economy and floorspace mix. Many of the drivers for change are outside the control or influence of planning but the table also includes a selection of planning drivers that might support change. A detailed consideration of the drivers for each of the different land use types is merited given the aspiration for growth and the importance of a special and authentic outcome.

Funding infrastructure, amenities and services is also important to facilitate desirable change. An appropriate combination of development and value sharing contributions should be developed to accompany physical planning and infrastructure planning undertaken for or after the Central Geelong Framework Plan (Framework Plan).

**TABLE 3: DEVELOPMENT PRECONDITIONS AND PLANNING DRIVERS FOR CONSIDERATION**

Land use	Upside and optimistic potential types	Preconditions for development in Central Geelong	Planning drivers
Residential	Shop top conversions and developments	Deepening market for higher density living, central city becomes an attractive alternative	Parking concessions, regulation reviews, assisted development pathways to minimise costs
	Key worker housing / Build to Rent	Expansion of programs, incentives and support for affordable housing and alternative tenure forms (likely driven by other levels of government)	Broad value capture based contributions, land dedications for subsidies to support; appropriate parking/ development concessions to reduce costs
	High density student focussed accommodation	Post-Covid recovery for education, strong international student market attracted to Geelong	Land dedications, parking concessions
Visitor floorspace	National hotel chains	Increasing recognition as a tourist and visitor destination, more events and entertainment options	Available sites, option for high amenity outcomes, views etc
	Boutique hotels	Night time economy expands; increasing recognition as a cultural and event destination with lifestyle and entertainment attractions	Protection of 'fine grain' for urban grit and amenity; parking concessions, regulation reviews, assisted development pathways to minimise costs
Retail floorspace	Big box retailing – repurposed – no vacancies	Regional population growth; night time economy expands for more diverse development opportunities	Management / restrictions of 'out of centre' retailing; site specific mixed use development innovation; partnerships with community to support and underpin diverse development
	Backstreets and laneway conversions – culture, cafes and boutique retail	Night time economy expands; increasing recognition as a cultural and event destination with lifestyle and entertainment attractions	Protection of 'fine grain' for urban grit and amenity; parking concessions, regulation reviews, assisted development pathways to minimise costs; economic development programs for innovation



Commercial and office floorspace	Local and regional professional services / property	Regional population growth deepens local market for services; fast train connections to Melbourne and efficient connections to south west Victoria	Management / restrictions to 'out of centre' office development; liveable urban amenity to attract professionals
	National firms - professional services / property	Regional population growth deepens local market for services; fast train connections to Melbourne and efficient connections to south west Victoria	Available A-grade and boutique office space; liveable urban amenity to attract professionals
	National firms – legal, business, management	Regional population growth; Geelong becomes more desirable than western Melbourne as a business hub	Available A-grade and boutique office space; liveable urban amenity to attract professionals

Source: SGS Economics and Planning

# Appendix A: Other Land Uses

The table below provides a detailed breakdown of other land uses from CLUE that has been excluded from the floorspace calculations.

**TABLE 14: OTHER LAND USES FROM CLUE DATA, 2017**

Other Land Uses	Total floorspace (2017)	% of Total floorspace
<b><i>Other - Notional</i></b>		
Unoccupied - Unused	61,195	3.4%
Unoccupied - Under Demolition/Condemned	2,293	0.1%
Manufacturing	560	0.0%
Storage	10,504	0.6%
Public Display Area	9,338	0.5%
Performances, Conferences, Ceremonies	9,903	0.6%
Retail - Showroom	4,470	0.3%
Common Area	20,774	1.2%
Unoccupied - Under Renovation	2,019	0.1%
Institutional Accommodation	1,764	0.1%
Retail - Cars	2,584	0.1%
<b><i>Other - Car Parking and Transport</i></b>		
Parking - Commercial Uncovered	9,308	0.5%
Parking - Private Covered	44,698	2.5%
Transport	55,318	3.1%
Parking - Commercial Covered	16,101	0.9%
<b><i>Other - Public Domain</i></b>		
Private Outdoor Space	401,761	22.6%
Unoccupied - Undeveloped Site	3,876	0.2%
Community Use	4,078	0.2%
Unoccupied - Under Construction	3,332	0.2%
Equipment Installation	4,265	0.2%
Park/Reserve	27,159	1.5%
Square/Promenade	5,178	0.3%
Public Open Space n.e.c.	55,743	3.1%
Sports & Recreation - Outdoor	1,217	0.1%

Retail - Stall	201	0.0%
<b>Other - Unclassified (Use not recorded)</b>	183,249	10.3%
<b>Total</b>	<b>757,639</b>	<b>53.0%</b>

Source: SGS Economics and Planning

### Share of 'Other' Space

A significant proportion of floorspace classified as 'Other' has not been included in the existing floorspace calculations, including 7% of total floorspace in car parking and transport related land uses, 28% of total floorspace in private and public open space, and 10% of total floorspace where the land use is not recorded. This is summarised in the table below.

**TABLE 15: SHARE OF 'OTHER' SPACE, 2017**

Land use Categories	% of Total floorspace
Office, entertainment, accommodation, retail, health, education, residential and notional other floorspace	54.0%
Other - Car Parking and Transport	7.1%
Other - Public Domain	28.6%
Other - Unclassified (Use not recorded)	10.3%
<b>Total</b>	<b>100%</b>

Source: SGS Economics and Planning

### Share of 'other' space in 2050 – if 2017 rates held

If the floorspace shares of other - car parking and transport, and other - unclassified uses (though not including public domain assuming this is independent of future employment floorspace demand) in 2017 holds the same in 2050, it would add an additional 132,000sqm to 172,000sqm of floorspace. This would bring the total additional floorspace estimate to between 544,000sqm to 908,000sqm in Central Geelong.

This calculation has been included for 'completeness' however given the additional potential 'other' floorspace is not linked to the employment projections, some such as at-grade car parks will be developed in time and some is unable to be classified, we do not recommend it be considered for the capacity analysis.

**TABLE 16: SHARE OF 'OTHER' SPACE IN 2050 – IF 2017 RATES HELD**

Land use Categories	% of Additional Floorspace	baseline	Upside	optimistic
Office, entertainment, accommodation, retail, health, education, residential and notional other floorspace		+412,104	+652,878	+735,897
Other - Car Parking and Transport	+13%	+53,931	+85,441	+96,306
Other - Public Domain	+53%			
Other -Blanks (Use not recorded)	+19%	+78,795	+124,832	+76,021
<b>Sub total (Other)</b>		<b>+132,726</b>	<b>+210,272</b>	<b>+172,326</b>
<b>Total additional floorspace</b>		<b>+544,830</b>	<b>+863,150</b>	<b>+908,223</b>

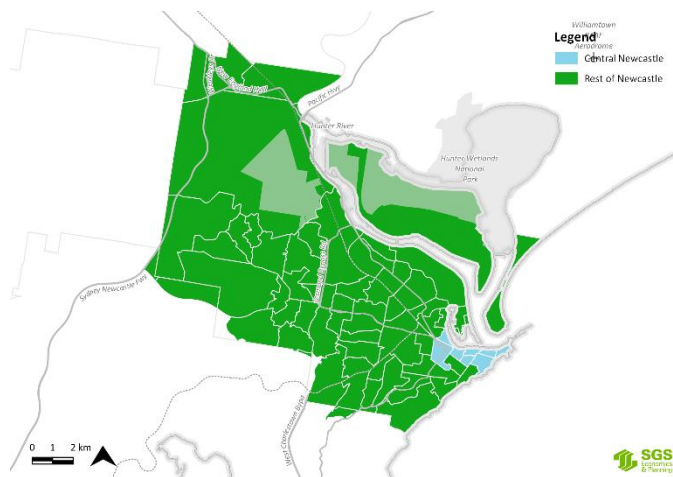
Source: SGS Economics and Planning

# Appendix B: Comparative Centre Benchmarks

## Central Wollongong and Central Newcastle

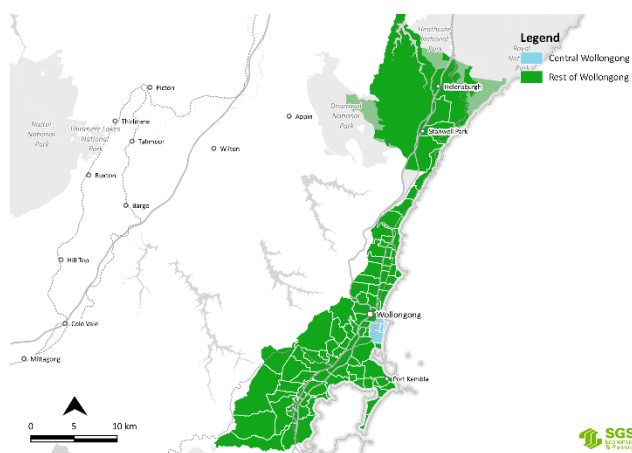
Wollongong and Newcastle are major regional centres separated from but linked to metropolitan Sydney. By train Wollongong is 1hr35m to central Sydney and Newcastle is 2hr30m to central Sydney so both are further than Geelong to Melbourne. Both Central Newcastle and Central Wollongong are somewhat more ‘mature’ as settlements and economies than Central Geelong. They represent good comparators when thinking about the future of central Geelong.

**FIGURE 23: CENTRAL WOLLONGONG**



Source: SGS Economics and Planning

**FIGURE 34: CENTRAL NEWCASTLE**



Source: SGS Economics and Planning

The population and jobs growth rates in Central Geelong have been high in the last five or so years, in comparison to Central Wollongong and Central Newcastle though not in absolute terms. Wollongong and Newcastle LGAs are more or less built out with greenfield and suburban growth now in neighbouring LGAs.

**TABLE 17: POPULATION AND JOBS IN WOLLONGONG AND NEWCASTLE, 2011 TO 2016**

	Population				Jobs			
Regions	2011	2016	Change 2011 to 2016	AAGR 2011 to 2016	2011	2016	Change 2011 to 2016	AAGR 2011 to 2016
Rest of Wollongong	186,203	192,743	6,540	+0.7%	66,960	66,223	-737	-0.2%
Central Wollongong	15,862	17,676	1,814	+2.2%	25,507	26,807	1,300	+1.0%
<b>Total</b>	<b>202,066</b>	<b>210,419</b>	<b>8,353</b>	<b>+0.8%</b>	<b>92,467</b>	<b>93,030</b>	<b>563</b>	<b>+0.1%</b>
Rest of Newcastle	145,748	150,221	4,473	+0.6%	88,069	88,655	586	+0.1%
Central Newcastle	10,470	11,073	603	+1.1%	24,239	25,721	1,482	+1.2%
<b>Total</b>	<b>156,218</b>	<b>161,293</b>	<b>5,075</b>	<b>+0.6%</b>	<b>112,308</b>	<b>114,376</b>	<b>2,068</b>	<b>+0.4%</b>
Rest of Geelong	214,093	236,427	22,334	+2.0%	76,111	83,623	7,512	+1.9%
Central Geelong	1,720	2,087	367	+4.0%	20,622	22,906	2,284	+2.1%
<b>Total</b>	<b>215,813</b>	<b>238,514</b>	<b>22,701</b>	<b>+2.0%</b>	<b>96,733</b>	<b>106,529</b>	<b>9,796</b>	<b>+1.9%</b>

Source: SGS Economics and Planning

As of 2016, only a small proportion of Greater Geelong's population resided in Central Geelong compared to Central Wollongong and Central Newcastle, though population growth in these two LGAs is now mostly restricted to infill, favouring the central areas. Wollongong, Newcastle, and Geelong have a similar share of employment in their central areas though in all cases the share increased a little between 2011 and 2016. With significant anticipated suburban population growth in Geelong LGA there will be a tendency toward an increased future share of population-related and other jobs in suburban areas (Rest of Geelong).

**TABLE 18: POPULATION AND JOBS IN WOLLONGONG AND NEWCASTLE, 2011 TO 2016**

	Population			Jobs		
Regions	2011	2016	Change 2011 to 2016	2011	2016	Change 2011 to 2016
Rest of Wollongong	92.1%	91.6%	-0.6%	72.4%	71.2%	-1.2%
Central Wollongong	7.9%	8.4%	+0.6%	27.6%	28.8%	+1.2%
Rest of Newcastle	93.3%	93.1%	-0.2%	78.4%	77.5%	-0.9%
Central Newcastle	6.7%	6.9%	+0.2%	21.6%	22.5%	+0.9%
Rest of Geelong	99.2%	99.1%	-0.1%	78.7%	78.5%	-0.2%
Central Geelong	0.8%	0.9%	+0.1%	21.3%	21.5%	+0.2%

Source: SGS Economics and Planning

**Melbourne CBD**

As is well known Melbourne's CBD experienced a population explosion in the last 20 years with average annual growth rates of 15%, from a low base, though the share of the metropolitan population in 2016 was still under 1%. Future population growth is still expected to be high, at 2.4% pa from 2016 to 2051. Employment growth has been strong at 2.3% pa over the 20 years to 2016. The share of metropolitan jobs in the CBD is expected to fall from 10.6% to 8.9%.

**TABLE 19: HISTORICAL AND FORECASTED POPULATION GROWTH IN MELBOURNE CBD, 1996 TO 2051**

	1996	2016	2051	AAGR 1996 to 2016	AAGR 2016 to 2051
Melbourne CBD Population	2,546	41,473	96,154	+15.0%	+2.4%
% of Greater Melbourne Population	0.1%	0.9%	1.1%		
Melbourne CBD Jobs	171,501	256,842	409,252	+2.0%	+1.3%
% of Greater Melbourne Jobs	10.8%	10.6%	8.9%		

Source: SGS Economics and Planning

## Population Growth Scenario Benchmarks

The upside and optimistic estimates are based on Scenario D of the Settlement Strategy, which is in line with the G21 Regional Growth Plan aspirational growth scenario of 2.5% population growth per annum. This scenario is almost double the long term historical growth rate (1.3% per annum) and notably higher than the current official forecast (2.1% per annum). For this reason we believe it is a suitable population level to use in the upside and optimistic estimates.

Table below compares the various population forecasts from the Settlement Strategy, ID Forecast, Victoria in Future, and ABS data.

**TABLE 20: POPULATION GROWTH SCENARIO BENCHMARKS**

Population sources	2016	2036	Population growth (2016-36)	
			Change	AAGR
Settlement Strategy (A - Long term historic)	239,000	307,400	68,400	1.3%
Settlement Strategy (B - Current official)	239,000	320,800	81,800	1.5%
Settlement Strategy (C - Strong Growth)	239,000	352,300	113,300	2.0%
Settlement Strategy (D - G21 Regional Growth Plan)	239,000	387,900	148,900	2.5%
Settlement Strategy (E - Growth Surge)	239,000	427,121	188,121	2.9%
id.forecast	239,531	361,014	121,483	2.1%
2019 Victoria in Future - DELWP	239,529	360,245	120,716	2.1%
<b>Recent Growth</b>	<i>Note different years used for recent growth data</i>			
ABS ERP (2006-11)	201,495	215,837	14,342	1.4%
ABS ERP (2011-16)	215,837	239,529	23,692	2.1%
ABS ERP (2016-18)	239,529	252,217	12,688	2.6%

Source: SGS Economics and Planning



# Appendix C: Concordance Land Use and Jobs

The table represents the share of jobs by industry categories in each of the land use categories in Central Geelong, based on CLUE data.

**TABLE 21: CONCORDANCE LAND USE AND JOBS**

Land Use Categories	Office	Entertainment	Accommodation	Retail	Health	Education	Residential	Other - Notional	Other (remainder)
Agriculture, Forestry and Fishing	0%	0%	0%	0%	0%	0%	0%	0%	100%
Mining	0%	0%	0%	0%	0%	0%	0%	100%	0%
Manufacturing	46%	0%	0%	39%	0%	0%	0%	15%	0%
Electricity, Gas, Water and Waste Services	100%	0%	0%	0%	0%	0%	0%	0%	0%
Construction	87%	0%	0%	8%	0%	0%	0%	5%	0%
Wholesale Trade	67%	0%	0%	33%	0%	0%	0%	0%	0%
Retail Trade	8%	1%	0%	85%	0%	0%	0%	5%	1%
Accommodation and Food Services	1%	49%	37%	9%	0%	0%	0%	3%	2%
Transport, Postal and Warehousing	12%	0%	0%	23%	0%	0%	0%	0%	66%
Information Media and Telecommunications	45%	19%	0%	1%	0%	1%	0%	1%	33%
Financial and Insurance Services	86%	0%	0%	10%	0%	0%	0%	2%	2%
Rental, Hiring and Real Estate Services	95%	0%	0%	1%	0%	0%	0%	2%	2%
Professional, Scientific and Technical Services	85%	0%	0%	0%	3%	11%	0%	2%	0%
Administrative and Support Services	90%	0%	0%	9%	0%	0%	0%	1%	0%

Public Administration and Safety	95%	0%	0%	0%	0%	0%	0%	1%	3%
Education and Training	1%	0%	0%	0%	0%	98%	0%	0%	1%
Health Care and Social Assistance	2%	0%	0%	0%	97%	0%	0%	0%	0%
Arts and Recreation Services	50%	22%	0%	0%	1%	3%	0%	24%	0%
Other Services	21%	8%	0%	31%	0%	0%	0%	5%	34%

Source: CLUE, 2017

# Appendix D: Floorspace to job ratios by land use

**TABLE 22: FLOORSPACE TO JOB RATIOS ADOPTED FOR CENTRAL GEELONG**

	Sqm per job	Source	Commentary
Office	15	CLUE	<p>The average floorspace ratio from CLUE is 18sqm per job, however, higher quality office spaces (A and B grade) generally have lower floorspace to job ratios. A lower ratio has been chosen on the assumption that new office floorspace (to which the ratio applies) will be A and B grade.</p> <p>For reference, SGS assumed 29sqm per job in South Wollongong, 25sqm per job in Box Hill, between 24 and 30 sqm per job in Yarra, and 15sqm per job in South Sydney.</p>
Entertainment	36	CLUE	<p>For reference, SGS assumed 80sqm per job in Box Hill and between 30 and 36sqm per job in Yarra.</p>
Accommodation	50	Previous SGS work	<p>The average floorspace ratio based on CLUE is 11sqm per job which reflects current low-rise accommodation in Central Geelong which is not expected to be maintained going forward.</p> <p>For reference, SGS assumed 35sqm per job in South Wollongong and 68sqm per job in South Sydney. The floorspace ratio estimate for Central Geelong reflects a mid-point between these two figures.</p>
Retail	33	CLUE	<p>For reference, SGS assumed 30sqm per job in both Box Hill and South Wollongong</p>
Health	30	Previous SGS work	<p>The average floorspace ratio based on CLUE is 50sqm per job, which is considered high (consultation with Barwon Health). We assume a considerably lower rate given the likelihood of greater efficiency of use of existing and future floorspace.</p> <p>For reference, SGS assumed 30sqm per job in Box Hill and 43sqm per job in Sydney South.</p>
Education	45	Previous SGS work	<p>The average floorspace ratio based on CLUE is 21sqm per job, which is considered low.</p> <p>For reference, SGS assumed 61sqm per job in Box Hill and 44sqm per job in Sydney South.</p>

Other – Notional/ Remainder	46	CLUE	The average floorspace to job ratio for each category in the notional other category ranged from 28sqm to 229sqm. SGS has used the median figure from the range.
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Source: SGS Economics and Planning

# Appendix E: SALUP Model (or SAM)

Small Area Land Use Projections Model (SALUP) or the Small Area Model (SAM) creates a suite of forecast variables which are:

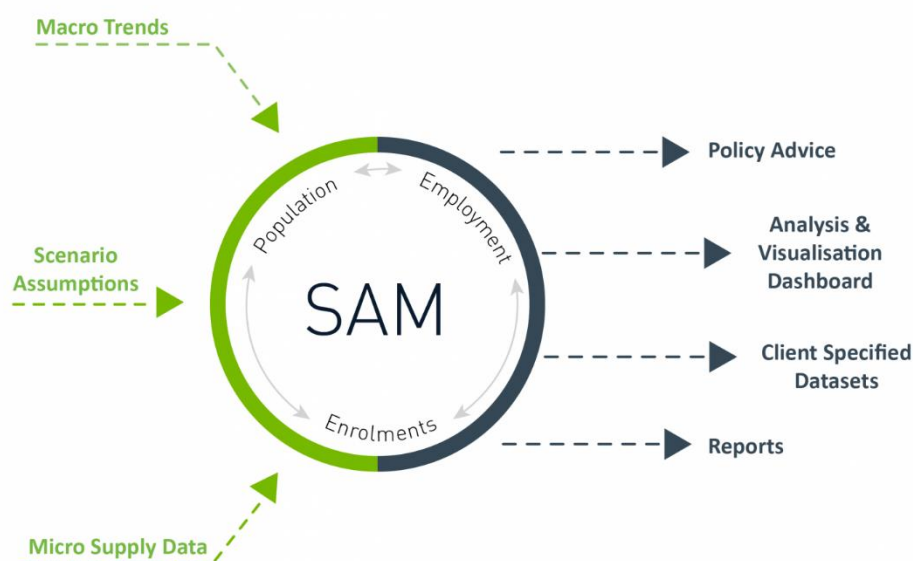
- Estimated using a combination of ‘top-down’ and ‘bottom-up’ methodologies, ensuring that macroeconomic drivers are integrated with micro spatial data and trends
- Disaggregated to a fine-grain spatial scale, allowing for custom geographies to be defined based on the scope of analysis, such as an activity centre or renewal precinct
- Developed using a dynamic and systematic algorithm which enables robust scenario testing and impact analysis
- Presented via a web-accessible and interactive platform which allows for analysis and visualisation.
- A vital aspect of SAM is that it can produce these forecasts using a transparent set of inputs, assumptions, and techniques. These parameters can, therefore, be altered to create sets of clearly defined scenarios, which are a key focus of policy evaluation.

SALUP/SAM includes detailed information across three key variable types. These are:

**Dwellings and population**, which includes a range of household and demographic attributes

**Employment**, which includes labour force status, industry and occupation attributes by place of usual residence and place of work

**Students**, which includes primary/secondary/tertiary student attributes by education provider type, place of usual residence and place of institution.



# Appendix F: Retail Floorspace Figures

The demand forecasts identify of +34,170 sqm (upside) to +83,265 sqm (optimistic) of additional retail floorspace to 2050 in Central Geelong study area. SGS retail strategy suggested up to 132,514 sqm to 2036 for a larger central Geelong area (see table 20). Critically, this figure represents a broad definition of retail which includes Bulky and Hospitality. 'Shop' only retail demand suggests a gap of 62,000 by 2036 ().

Larger floorplate bulky formats in particular are likely to be in fringe CBD precincts in ex-industrial and warehouse areas (e.g. West or South Geelong).

Furthermore, the retail strategy figures are 'supportable floorspace' and do not account for supply side competition or constraints.

Other notes on the retail strategy figures include:

- The **base case** simulation is an important starting point from which future changes to the retail system can be assessed.
- It does not necessarily reflect the only or best outcome. Nor is it intended to accurately predict a centres future turnover per say.
- Centre's may in reality perform above or below simulated levels for a range of localized reasons.
- It reflects how the system might operate if all centres performed at an *average* level. This is hypothetical, but useful for strategy planning and determining supportable floorspace.
- There are several dynamics in the retail system which mean the suggested level of 'service provision' could potentially be provided with less floorspace and also jobs. Sensitivity testing around Retail Turnover Densities (Turnover of a store per sqm metre) was included in the original SGS report and my evidence. Typically this is trending up (meaning stores are becoming more 'productive'/efficient per sqm) due to store layout, online (omni-channelling) and other factors. A similar trend is occurring with jobs (not considered in the retail strategy) through technologies such as self-checkout, for example.

**TABLE 23: BASE CASE SCENARIO TOTAL RETAIL FLOORSPACE PROVISION, 2016 TO 36**

Precinct	Existing and planned to 2036 (as of March 2018) total retail floorspace supply				Base case scenario total retail floorspace demand projections (row N) Based on 2% population growth, \$4,632 average RTD and demand allocated to existing and planned supply locations only				Total supply less demand		
	A) Existing Floorspace in 2016	B) Vacant Floorspace	C) Planned new/ add floorspace	D = A+B+C) Total	E) 2016	F) 2026	G) 2036	H = G - E) 2016-36	I = E - D) 2016	J = F - D) 2026	K = G - D) 2036
<b>GREATER GEELONG</b>	<b>903,812</b>	<b>55,967</b>	<b>149,786</b>	<b>1,109,564</b>	<b>853,599</b>	<b>1,120,759</b>	<b>1,527,750</b>	<b>674,151</b>	<b>255,965</b>	<b>-11,194</b>	<b>-418,186</b>
<b>Regional</b>	<b>187,304</b>	<b>25,985</b>	<b>0</b>	<b>213,289</b>	<b>189,091</b>	<b>253,737</b>	<b>345,803</b>	<b>156,712</b>	<b>24,198</b>	<b>-40,448</b>	<b>-132,514</b>
Central Geelong	187,304	25,985	0	213,289	189,091	253,737	345,803	156,712	24,198	-40,448	-132,514
<b>Sub-Regional</b>	<b>132,416</b>	<b>1,370</b>	<b>61,924</b>	<b>195,710</b>	<b>125,759</b>	<b>180,747</b>	<b>281,484</b>	<b>155,725</b>	<b>69,951</b>	<b>14,963</b>	<b>-85,774</b>
Belmont	42,590	1,370	0	43,960	40,209	51,635	64,809	24,600	3,751	-7,675	-20,849
Waurin Ponds	41,760	0	0	41,760	39,556	51,541	64,455	24,899	2,204	-9,781	-22,695
Corio SC	27,463	0	0	27,463	26,136	33,002	44,081	17,945	1,327	-5,539	-16,618
Leopold Gateway Plaza	20,604	0	0	20,604	19,858	26,930	36,376	16,518	746	-6,326	-15,772
Armstrong Creek Town Centre	0	0	40,000	40,000	0	17,640	49,574	49,574	40,000	22,360	-9,574
Southern Major Centre - WGGA	0	0	16,552	16,552	0	0	17,569	17,569	16,552	16,552	-1,017
Central Major Centre - NGGA	0	0	5,372	5,372	0	0	4,619	4,619	5,372	5,372	753

Source: City of Greater Geelong Retail Strategy

**TABLE 24: BASE CASE SCENARIO SHOP RETAIL FLOORSPACE PROVISION, 2016 TO 36**

Precinct	Existing and planned to 2036 (as of March 2018) shop retail floorspace supply				Base case scenario shop retail floorspace demand projections (row N) Based on 2% population growth, \$5,613 average RTD and demand allocated to existing and planned supply locations only				Total supply less demand		
	A) Existing Floorspace in 2016	B) Vacant Floorspace	C) Planned new/ add floorspace	D = A+B+C) Total	E) 2016	F) 2026	G) 2036	H = G - E) 2016-36	I = E - D) 2016	J = F - D) 2026	K = G - D) 2036
<b>GREATER GEELONG</b>	<b>489,815</b>	<b>55,967</b>	<b>105,081</b>	<b>650,863</b>	<b>473,340</b>	<b>621,638</b>	<b>851,824</b>	<b>378,484</b>	<b>177,522</b>	<b>29,224</b>	<b>-200,962</b>
<b>Regional</b>	<b>105,407</b>	<b>25,985</b>	<b>0</b>	<b>131,392</b>	<b>108,580</b>	<b>143,360</b>	<b>193,942</b>	<b>85,362</b>	<b>22,812</b>	<b>-11,968</b>	<b>-62,550</b>
Central Geelong	105,407	25,985	0	131,392	108,580	143,360	193,942	85,362	22,812	-11,968	-62,550
<b>Sub-Regional</b>	<b>113,772</b>	<b>1,370</b>	<b>53,596</b>	<b>168,739</b>	<b>107,041</b>	<b>154,053</b>	<b>239,666</b>	<b>132,625</b>	<b>61,698</b>	<b>14,686</b>	<b>-70,927</b>
Belmont	31,071	1,370	0	32,441	28,918	36,740	46,076	17,159	3,523	-4,299	-13,635
Waurin Ponds	38,268	0	0	38,268	35,847	46,999	59,224	23,377	2,421	-8,731	-20,956
Corio SC	26,420	0	0	26,420	25,028	31,624	42,369	17,342	1,392	-5,204	-15,950
Leopold Gateway Plaza	18,014	0	0	18,014	17,249	23,338	31,454	14,205	765	-5,324	-13,440
Armstrong Creek Town Centre	0	0	35,500	35,500	0	15,353	42,677	42,677	35,500	20,147	-7,177
Southern Major Centre - WGGA	0	0	14,222	14,222	0	0	15,329	15,329	14,222	14,222	-1,108
Central Major Centre - NGGA	0	0	3,875	3,875	0	0	2,536	2,536	3,875	3,875	1,339

Source: City of Greater Geelong Retail Strategy

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