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South East Queensland

POPULATION, HOUSING, JOBS, CONNECTIVITY AND LIVEABILITY

December 2022

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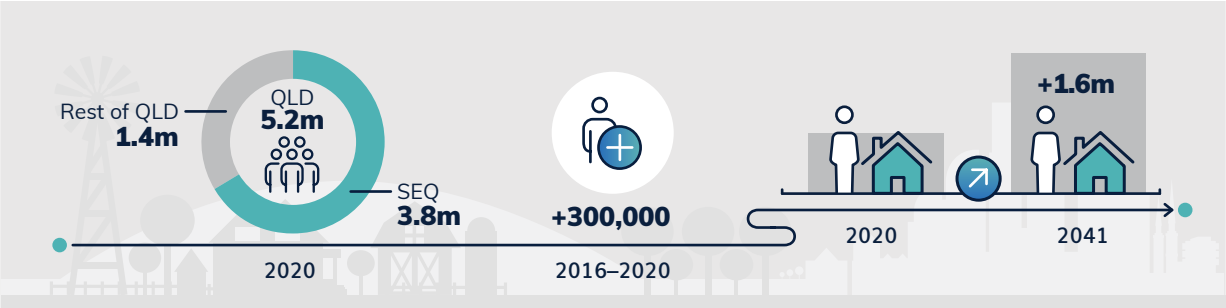
Executive Summary

South East Queensland (SEQ) is one of the fastest growing regions in Australia and home to one in seven Australians. Governments at all levels aim to support this growth by delivering a better-connected region, providing better infrastructure, creating more jobs, and protecting the region's liveability.

This report aims to support the Department's policy and project delivery by providing an evidence base on the spatial distribution of population and population growth, housing, jobs, skills, connectivity and liveability. This evidence base can be used to monitor how population, jobs, connectivity and liveability change over time and respond to investment.

Population growth

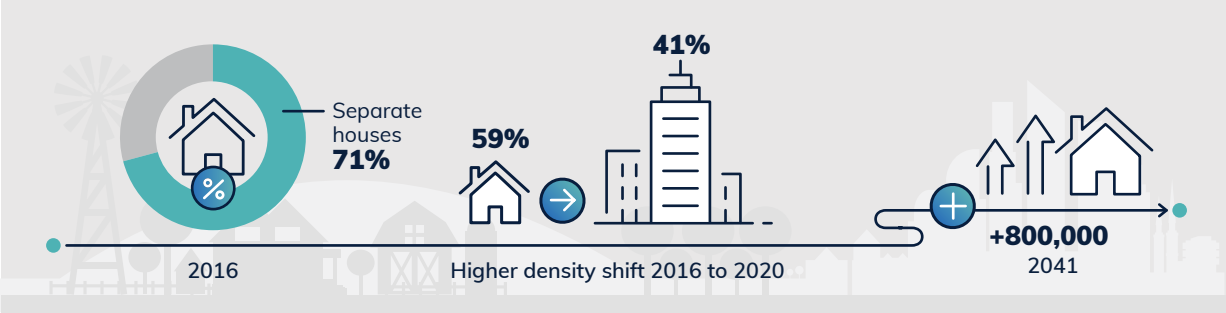
This report analyses the SEQ region population to understand the growth patterns and trends in the region over time. The SEQ region has **3.8 million population** as of 30 June 2020, which is about two-thirds of the total Queensland population. Between 2016 and 2020, SEQ added just over **300,000 new residents**, at an annual growth rate of 2.1 per cent. By 2041, the region is expected to accommodate an additional **1.6 million residents**, which is a 44 per cent increase since 2020.



1. The **main growth** LGAs between 2016 and 2020 were Brisbane (**88,200 extra residents**), Gold Coast (**59,900**) and Moreton Bay (**40,300**).
2. **Internal migration** was the most dominant source of population growth (**38 per cent**) between 2017 and 2020, followed by international migration (**33 per cent**) and natural increase (**29 per cent**).
3. The Ipswich LGA has the **highest annual average growth rate** of **3.5 per cent** from 2016 to 2020, followed by Sunshine Coast (**2.7 per cent**) and Gold Coast (**2.5 per cent**).
4. The small areas that **added the most residents** from 2016 to 2020 were **Pimpama** in the Gold Coast LGA, **Jimboomba** in Logan, and **North Lakes-Mango Hill** in Moreton Bay.
5. **328,000 new residents** are projected for the Ipswich LGA by 2041. Significant growth is also projected for Gold Coast (**308,000**) and Brisbane (**278,000**).
6. The small areas projected to add the most residents to 2041 are **Ripley** in Ipswich LGA (**117,000**) and **Greenbank** in Logan LGA (**74,000**).

Housing and housing affordability

In 2016, there were 1.36 million dwellings in SEQ, with **separate houses** being the **dominant dwelling type** (**71 per cent**). However, only 59 per cent of new residential building approvals from 2016 to 2020 were for separate houses, indicating a recent **shift towards higher density** forms of housing. By 2041, the SEQ region is expected to need more than **800,000 new dwellings** to accommodate the projected population increase.



1 **166,000 new residential building approvals** across the 12 SEQ LGAs between 2016 and 2021.

2 The Moreton Bay LGA had the most **new house approvals** (**17,414**). The Brisbane LGA had the most approvals of other new residential buildings (**30,015)**, reflecting **higher density** development.

3 The **small areas** with the most **residential building approvals** in the last 5 years were Pimpama in the Gold Coast LGA, Caloundra West in the Sunshine Coast and Ripley in Ipswich.

4 **Logan and Ipswich** LGAs are the major expansion areas, possessing **51 per cent** of **land suitable for development** in SEQ.

5 The Brisbane LGA is expected to add the most **new dwellings** between 2016 and 2041 (**155,200**), closely followed by the Gold Coast (**150,900**) and Ipswich LGAs (**146,000**).

6 Rental stress affects more SEQ households than mortgage stress. **17 per cent** of households in the Gold Coast LGA experienced **rental stress in 2016** – the highest share amongst Australia's 21 largest cities.

Jobs and industries

This report provides a snapshot of the spatial distribution of employment in SEQ as of 2016, and summarises the available evidence on recent employment growth in SEQ. As of August 2021, **1.93 million employed persons resided in SEQ**. The number of employed residents of SEQ increased by 186,800 persons between 2016 and 2021, representing an average **annual growth rate of 2.1 per cent**. By 2041, the region's growth is anticipated to require around **one million new jobs**.

1 **48 per cent** of SEQ employed people worked in the **Brisbane** LGA, while **16 per cent** worked in the **Gold Coast** LGA in 2016.

2 The number of people who work in the Brisbane LGA significantly outnumber its employed residents. However, the Redland and Moreton Bay LGAs have a notable shortfall of local jobs, with around 0.6 local workers per employed resident.

3 The Brisbane City SA2 is the main place of work with **122,500 employed persons**, representing **8.3 per cent of the SEQ** total in 2016, followed by South Brisbane (27,500), Southport North (24,200) and Rocklea-Acacia Ridge (23,300).

4 The **Gold Coast** SA4 had the largest increase in employed residents of all SA4s in SEQ from 2016 to 2021, gaining **44,700 employed persons**.

5 **14.5 per cent** of SEQ employment is in the **Health care** and **social assistance** industry as of August 2021, followed by Retail trade (10.2 per cent) and Construction (9.1 per cent).

6 The **Health care** and **social assistance** industry was the major source of employment growth in SEQ from 2016 to 2021. It added 43,900 employed persons, which was **23.5 per cent of total growth**.

Skills

A skilled workforce is an enabler of economic growth. Overall, SEQ had **30 per cent** of its working population with a **Bachelor degree or higher qualification** in 2016, the same as the national level (30 per cent). **Professionals** were the largest occupational group in SEQ (with a **21.1 per cent employment share**) and were the biggest occupational contributor to SEQ's employment growth from 2016 to 2021.

1 The Brisbane LGA had the highest proportion of **Professionals** (**27 per cent**), followed by the Sunshine Coast and Toowoomba (both **20 per cent**) in 2016.

2 Of the 12 LGAs, the Brisbane LGA has the largest share of people with a **Bachelor degree** or higher qualification, at **35 per cent**.

3 Inner Brisbane is the focal point of SEQ's knowledge economy, with **48 per cent** of its working population holding a **Bachelor degree** or higher qualification.

4 Professionals were the biggest occupational contributor to SEQ's employment growth from 2016 to 2021, with an increase of **82,200 persons**, which is **43.9 per cent** of the total employment increase.

5 Queensland is becoming more educated. **Postgraduate degree qualifications** are projected to grow the most by 2024–25 (**26.9 per cent**), followed by Bachelor degrees (**15.9 per cent**).

6 **Professionals** are projected to grow by **16.1 per cent** by 2024 (compared to 2019), followed by Community and personal service workers (**14.3 per cent**) and Managers (**12.1 per cent**) in Queensland.

Transport

Private vehicle was the most popular transport mode in SEQ, with **79 per cent** of employed residents travelling to work by **private vehicle** in 2016, while **10 per cent used public transport** and **6 per cent worked at home**. The public transport mode share declined across SEQ during the COVID-19 pandemic and remains well below pre-pandemic levels. Working from home grew strongly during the pandemic, and SEQ employees would prefer to keep work from home uptake well above pre-pandemic levels.

1 **69 per cent o**f employed residents of the Brisbane LGA journeyed to work by **private vehicles** and **18 per cent** by **public transport** in 2016.

2 Public transport use was much less common in other LGAs. In Lockyer Valley, Scenic Rim, Somerset and Toowoomba, less than **2 per cent** of employed residents used **public transport** to get to work.

3 Transport mode use varies across SEQ. Only **57 per cent** of Inner Brisbane employed residents used private vehicle to get to work, compared to **85 per cent** in the Rest of SEQ in 2016.

4 **Work from hom**e uptake by employees in Brisbane was **35 per cent** at the peak of the pandemic, compared to 27 per cent for the whole of SEQ.

Connectivity

This report analyses journey-to-work movements across SEQ to provide insights into how workers are currently using the transport network as part of their daily commuting patterns. Across the 12 LGAs of SEQ, over **70 per cent** of employed residents **worked within their LGA of residence** in 2016. **Ten per cent** of all SEQ workers **commuted to the Brisbane** CBD for work, while SEQ's average commuting distance was 17.5km. On average, residents could access 43 per cent of SEQ's jobs within a 45-minute car commute in 2019, down slightly from 2016, reflecting an increase in congestion and travel times in the region. The average **commuting** trip duration for Greater Brisbane **increased from 31 minutes** in 2010 to **34 minutes** in 2019.

1. **Self-containment rates** were highest for the **Toowoomba** (**89 per cent**) and Brisbane LGAs (85 per cent), and lowest for the Logan (40 per cent) and Redland LGAs (43 per cent).

2. **Over 70 per cent** of Inner Brisbane's workforce **commuted to work** from outside the ring in 2016 – the largest proportion across the four BCARR rings of SEQ.

3. While **31 per cent** of Inner Brisbane residents commuted to the CBD for work, this dropped to **17 per cent** for Middle Brisbane, 7 per cent for Outer Brisbane and 1 per cent for the Rest of SEQ.

4. **Average commuting distances** were lowest for employed residents of **Inner Brisbane** (8.7km), and highest for the Rest of SEQ (24.3km) in 2016.

5. Brisbane and Logan LGAs showed the **strongest 45-minute job access** in 2019, providing employed residents with access to an average of **65 per cent** and **61 per cent** of all SEQ jobs, respectively.

6. The Brisbane and Gold Coast LGAs experience similar levels of **traffic congestion**, but the Sunshine Coast has relatively low levels of traffic congestion.

Liveability

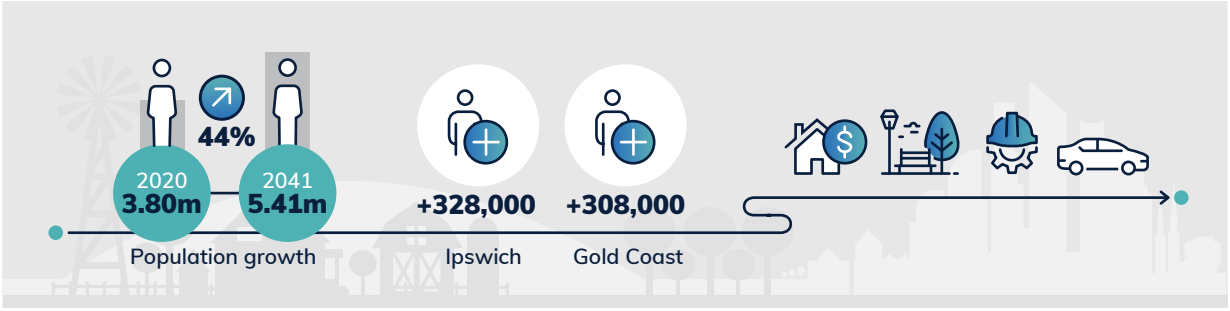
The report analyses three key indicators of liveability from the Australian Urban Observatory (AUO): **access to services** (including health, education, arts and culture infrastructure, and community and sports infrastructure), **walkability** and access to **public open space**.

Overall, at the LGA scale, **Brisbane scored highest** on the access to **services** and **walkability** metrics, but **Redland**, **Noosa**, **Gold Coast** and **Moreton Bay** outperformed Brisbane on access to **public open space**. The expansion growth areas (new and developing areas) scored lower than consolidation growth areas (infill developments) for all of the indicators.

1. The **Brisbane LGA scored highest** on all of the liveability indicators except for access to public open space. In particular, the most highly liveable areas were centred around Inner and Middle Brisbane.
2. **Toowoomba** also performed well, scoring in the top three for all of the **access to services** measures.
3. **Gold Coast** scored well for access to **arts and culture** infrastructure, as did Scenic Rim for access to community and sports infrastructure and Somerset for access to health infrastructure.
4. **Brisbane** and **Gold Coast** were the **most walkable** LGAs, while Scenic Rim, Somerset and Lockyer Valley were the least walkable LGAs.

Implications of growth

SEQ is expected to reach **5.41 million population by 2041**, a **44 per cent increase** on 2020. This growth is likely to be concentrated in the Ipswich and Gold Coast LGAs, adding over **300,000 new residents** each. This report draws together the evidence on current and future focal points for population growth in SEQ and explores some of the implications for housing, housing affordability, jobs, skills, liveability, transport and commuter flows over the coming decades.



1 The *ShapingSEQ* strategic plan aims to accommodate this population growth by locating **60 per cent of new dwellings** in the existing urban area (consolidation), a shift to medium and high-density forms of housing, and smaller lot sizes.

2 The Brisbane LGA is expected to accommodate **45 per cent of employment growth** (on a place of work basis), but only 19 per cent of SEQ's population growth from 2016 to 2041.

3 The Moreton Bay, Logan and Ipswich LGAs will capture a much **smaller share** of SEQ's **jobs growth** than its population growth.

4 This imbalance between population and jobs growth suggests many future residents of these 3 outer LGAs will spend **significant time commuting** to the Brisbane LGA **to access jobs**. These impacts could be managed through initiatives to improve transport connections and facilitate development of employment precincts in suburban growth areas.

5 In the short term, **Professionals** are expected to show the **largest growth in occupations**, with strong growth in workers with bachelor degrees and higher qualifications. A higher-skilled workforce will make SEQ more adaptable to technological changes.

6 Much of SEQ's future **population growth** is expected to be concentrated in **outer suburban areas** that currently offer relatively poor access to services and low walkability to residents.

7 **Consolidation growth** has far more **positive outcomes** than expansion growth for resident's level of access to services, public open space and walkability.

8 A trade-off exists between liveability and housing affordability— **housing** is usually **more affordable** in **non-coastal outer-suburban** expansion areas.

9 The areas projected to experience the largest population increase from 2020 to 2041 (such as Ripley, Greenbank and Coomera) are located close to at least one of the Queensland Government's **five key economic corridors**. These corridors contain SEQ's major employment precincts.

10 **Commuter travel** in SEQ is very **car-dependent.** The areas projected to grow in future, currently have low public transport use. Significant and timely investment in public transport will help reduce congestion and manage road network impacts.

CHAPTER 1

INTRODUCTION

1.1 Background

South East Queensland (SEQ) is the capital city region and economic powerhouse of Queensland. As one of the fastest-growing regions in Australia, SEQ is experiencing significant changes. By 2041, the region is expected to accommodate an additional 1.64 million residents and almost 800,000 new homes (Queensland Government 2018a, 2019). The region is also expecting to support one million new jobs.

This report aims to provide an evidence base on the spatial distribution of population and population growth, jobs and jobs growth, connectivity and liveability within SEQ. The data in this report focuses on the 2016 to 2021 period. This report can be used to monitor how population, jobs, connectivity and liveability evolve in response to the Department's policy and project initiatives.

The report addresses the following research questions:

1. What is the current spatial distribution of population and housing in SEQ, how has it changed in recent years, and how is it expected to change in the future? This has included consideration of density and the housing mix.
2. What is the spatial distribution of jobs in SEQ, and what is the evidence on recent job growth patterns in SEQ, its regions and targeted economic corridors and precincts? This has included consideration of industry, skills and the knowledge economy.
3. How are transport and connectivity functioning in the SEQ region, the growth centres and sub-regions? The focus here is on the use of different transport modes, origin-destination commuter flows, commuting distances, congestion and 30 or 45-minute job access.
4. How do access to services and housing affordability vary across SEQ regions, and what can this tell us about the liveability status of SEQ and its sub-regions?
5. What are the implications of population growth in SEQ for housing, employment, liveability and connectivity?

The challenges and opportunities of accommodating forecast population growth were a key impetus for this research and are reflected in this report's focus on the implications of population growth.

1.2 Study area

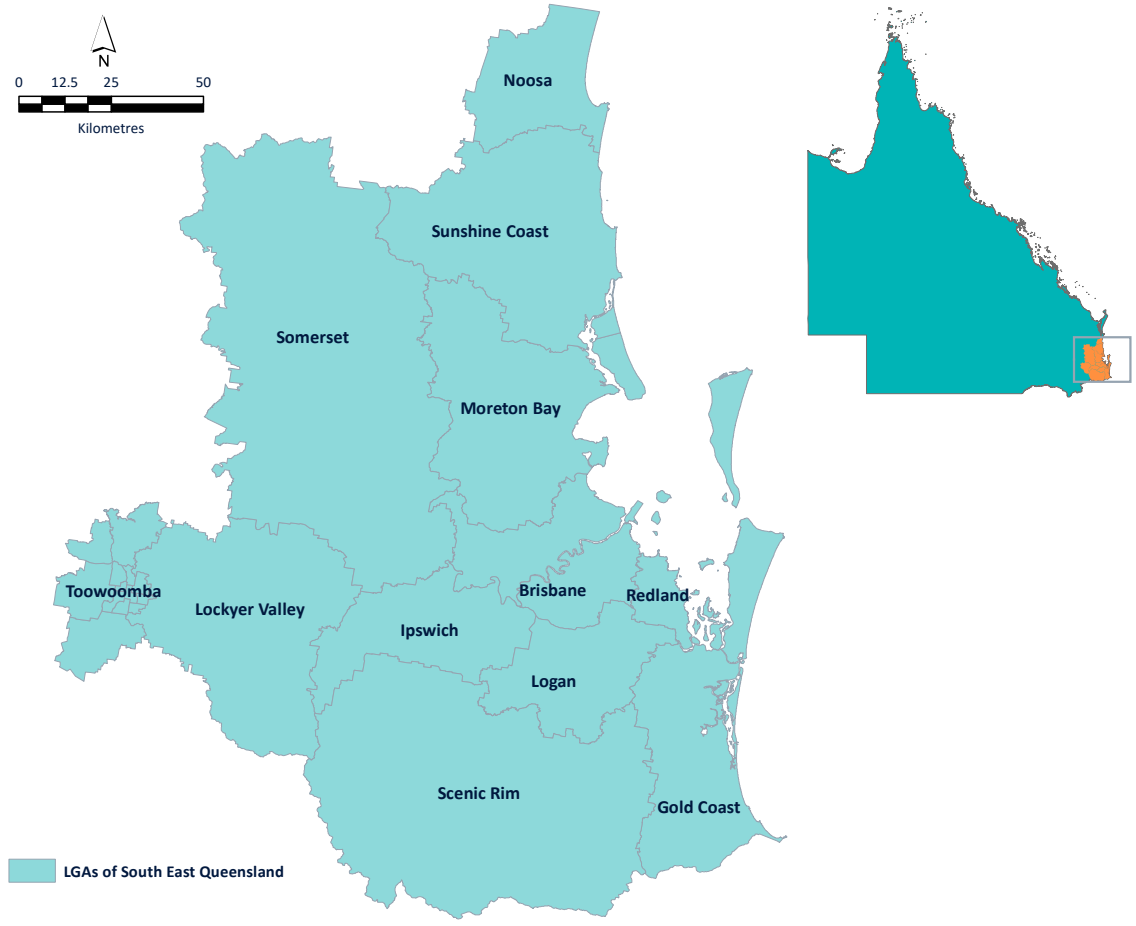
The SEQ region is polycentric in that it contains multiple major centres. The SEQ region comprises 12 local government areas (LGAs). The regional planning approach began in 1990, and this regional approach became statutory in 2004.

The area covered by the SEQ Regional Plan (Queensland Government 2017) includes the following LGAs and adjacent Queensland waters:

1. Brisbane City
2. Gold Coast City
3. Ipswich City
4. Lockyer Valley
5. Logan City
6. Moreton Bay
7. Noosa
8. Redland City
9. Scenic Rim
10. Somerset
11. Sunshine Coast
12. Toowoomba (SEQ part[1]).

Figure 1.1 maps SEQ. This report covers the 12 LGAs which comprise SEQ, according to the Queensland government legislative definition of the region.

Figure 1.1: Map of SEQ



Note: Only the Urban area of the Toowoomba LGA is shown on the map, as only the Urban area is part of SEQ.
Source: BCARR.

1 Only the Urban area of the Toowoomba LGA is part of the SEQ region. In addition to reporting on the urban part of Toowoomba, this study will also separately report for the Toowoomba LGA as a whole.

1.3 Methods

The Bureau of Infrastructure and Transport Research Economics (BITRE) previously published Research Report 134, *Population growth, jobs growth and commuting flow in South East Queensland* in 2013, which has heavily influenced the content of this report (BITRE 2013a). The current study closely follows the quantitative methods of the earlier report, by focusing on analysing the spatial distribution of population, jobs, housing, transport use and commuter flows. However, the scope of this study is broader in that it also considers access to services, access to jobs and housing affordability.

The data sources that form the basis of this study are all secondary data sources. The key data sources are listed by theme in Table 1.1.

Table 1.1: Principal data sources used in this study by theme

Theme	Data source
Population growth	ABS Estimated Resident Population ABS Census of Population and Housing Queensland Government Population Projections
Housing	ABS Building Approvals ABS Census of Population and Housing CoreLogic SGS Economics and Planning Queensland Government Dwelling Projections
Jobs	ABS Labour Force Survey ABS Census of Population and Housing National Skills Commission Projections
Skills	ABS Labour Force Survey ABS Census of Population and Housing Jobs Queensland National Skills Commission Projections
Transport	ABS Census of Population and Housing Department of Transport and Main Roads Google COVID–19 Community Mobility Reports University of South Australia i-move work from home survey, 2020–2021
Connectivity	ABS Census of Population and Housing Household, Income and Labour Dynamics in Australia (HILDA) HoustonKemp TomTom
Liveability	Australian Urban Observatory

Source: BCARR.

This study uses 2016 ABS Census of Population and Housing data. The research was largely undertaken before the release of the relevant 2021 census data items in mid to late 2022. The 2021 ABS census data lies beyond the scope of the current study.

The research uses both place of usual residence (PoR) and place of work (PoW) census data for analysis, depending on relevance to the issue being analysed. PoR records the geographic area in which a person usually lives, and PoW data provides information on where employed people over 15 years of age worked in the week prior to census night. For industry and occupational data, the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006 and Australian and New Zealand Standard Classification of Occupations (ANZSCO) 2013, have been used.

The geographic units used in the report include the SEQ region, LGAs and Statistical Area Level 2s (SA2s). The smallest unit of analysis for this report is generally SA2s[2]. SA2s are designed to reflect functional areas that represent a community considered a suburb and with locality boundaries. The SA2 is the smallest area for the release of many ABS statistics; they generally have a population range of 3,000 to 25,000 persons and an average population of about 10,000 persons.

SEQ's regional boundary can be closely approximated using SA2 boundaries. However, there are a small number of SA2 boundaries that cut across LGA boundaries (see Table 1.2 below). For example, Bribie Island SA2 (population 18,145 in 2016) is divided between the Moreton Bay and Sunshine Coast LGAs. However, the Moreton Bay part is larger (nearly two-thirds area) and has most of the settlements, and the Sunshine Coast part is mostly nature reserve and beaches. Therefore, this SA2 has been included under Moreton Bay LGA for this study. As detailed in , other affected SA2s are:

- Noosa Hinterland SA2, which has been included under Noosa LGA for this study
- Lockyer Valley East SA2, which has been considered part of Lockyer Valley LGA; and
- Ipswich North SA2, which has been considered part of the Ipswich LGA for this study.

These discrepancies have no impact on the overall SEQ boundaries or population, and very low impact on the individual LGA populations.

Table 1.2: SA2s which cut across LGA boundaries

SA2	LGA classified to	Reason
Bribie Island	Moreton Bay	Two-thirds of the land area under Moreton Bay LGA and very few settlements under Sunshine Coast LGA
Noosa Hinterland	Noosa	Over 95 per cent of land under Noosa LGA
Lockyer Valley East	Lockyer Valley	Over 95 per cent of land under Lockyer Valley LGA
Ipswich North	Ipswich	Over 95 per cent of land under Ipswich LGA and very few settlements under Brisbane LGA

Source: BCARR.

The main spatial breakdown of SEQ used in the analysis is the 12 contributing LGAs. Wherever data is available based on LGAs, this study has used LGA-based data (rather than aggregating SA2 data) for the spatial breakdown. The only exception is Toowoomba LGA, since only the urban part of the LGA is under SEQ, not the whole Toowoomba LGA. Estimates for the urban and rural parts of Toowoomba LGA are based on SA2 data.

In addition to the LGA-based spatial breakdown, SEQ is also disaggregated into BCARR rings and sub-regions as an additional way of summarising spatial differences in this report (see Table 1.3 and Figure 1.2 below). This is referred to as BCARR rings and sub-regions throughout this report.

- The Brisbane LGA has a much larger population than the other SEQ LGAs and has been further disaggregated into 2 rings.
  - The **Inner** ring corresponds to the Inner Brisbane sub-region.
  - The **Middle** ring is the aggregate of the Middle East, Middle North, Middle South and Middle West sub-regions.
- The **Outer** ring of the Greater Brisbane region has been defined as comprising the Redland, Moreton Bay, Logan and Ipswich LGAs.
- The **Rest of SEQ** comprises the Sunshine Coast, Noosa, Toowoomba (urban part), Gold Coast, Somerset, Lockyer Valley and Scenic Rim LGAs.

2 There are some pieces of analysis which require access to data at more detailed geographies. For example, analysis of employment precincts are based on destination zones (DZs), which are a disaggregation of SA2s. Analysis of population weighted density requires sub-SA2 data (e.g. SA1s, Mesh Blocks, suburbs).

This ring-based classification (BCARR rings/sub-regions) is based on that used in previous BITRE studies, and can add value by highlighting differences within the Brisbane LGA, and commonalities between the outer suburban LGAs.

Data for the whole Toowoomba LGA has been presented in the LGA tables. However, the SEQ totals and the ring and sub-region tables include data for only the urban part of the Toowoomba LGA.[3]

Table 1.3: Example table based on BCARR rings and sub-regions

BCARR ring/sub-region	Estimated resident population, June 2020
INNER Brisbane*	298,546
MIDDLE Brisbane – TOTAL*	974,234
Middle East	82,790
Middle North	228,486
Middle South	381,849
Middle West	281,109
OUTER Brisbane – TOTAL	1,212,039
Ipswich	229,818
Redland	160,331
Logan	341,985
Moreton Bay	479,905
TOTAL – GREATER BRISBANE	2,484,819
Rest of SEQ	1,279,937
Gold Coast	635,191
Sunshine Coast	332562
Noosa	60,487
Toowoomba (urban part)	139,526
Scenic Rim	43,625
Lockyer Valley	42,263
Somerset	26,283
TOTAL – SOUTH EAST QUEENSLAND	3,764,756
Toowoomba LGA	170,222

Notes: All BCARR sub-regions are a close SA2-based approximation of LGA boundaries, except for Toowoomba (urban part), which is a SA2 based approximation of the urban part of the LGA, and the Inner and Middle sub-regions of Brisbane (which together aggregate to form the City of Brisbane LGA).

* Inner and Middle Brisbane Rings combined equate to the City of Brisbane LGA.

Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020

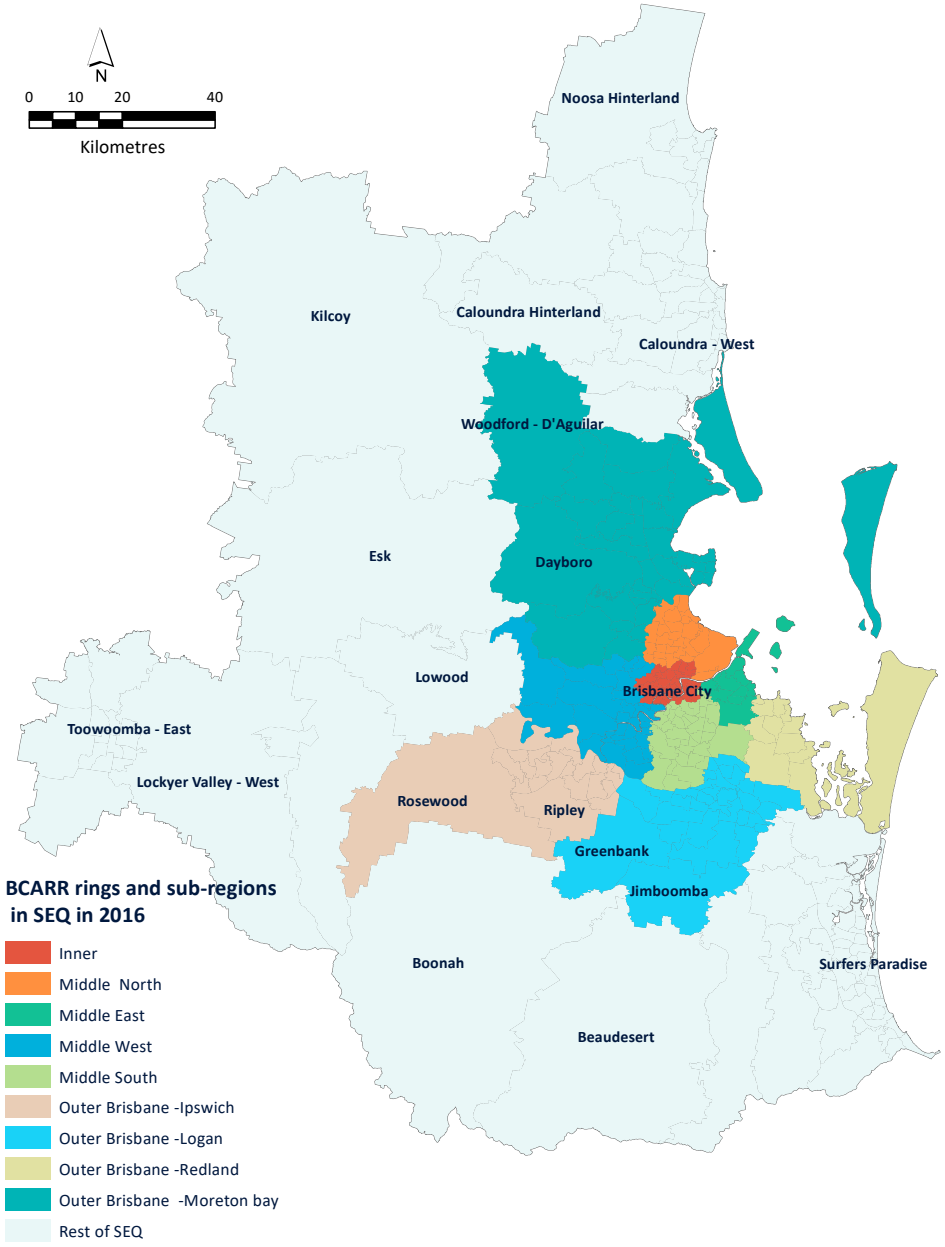
To understand the respective roles of infill and greenfield development in accommodating population growth, this study has identified some SA2s as growth areas. SA2s with population growth of 1600 or more persons from 2016 to 2020 are considered SA2 growth areas. These growth areas are further divided into Consolidation and Expansion growth areas.

3 The following 5 rural SA2s are thereby excluded: Crows Nest – Rosalie, Jondaryan, Millmerran, Pittsworth and Clifton – Greenmount.

Consolidation is development occurring on land inside the existing urban area boundary[4], and is often referred to as 'infill development'. Expansion is development occurring on land outside the existing urban area boundary, and is commonly referred to as 'greenfield development' . This study found 23 consolidation SA2s and 25 expansion SA2s, which are listed in Table 1.4 below.

These SA2s have been used in the liveability and connectivity chapters to explore how access to jobs, services and social infrastructure varies between new and already established growth areas.

Figure 1.2: Map of BCARR rings and sub-regions in SEQ in 2016



Notes: All BCARR sub-regions are a close SA2-based approximation of LGA boundaries, except for Toowoomba (urban part), which is a SA2 based approximation of the urban part of the LGA, and the Inner and Middle sub-regions of Brisbane (which together aggregate to form the City of Brisbane LGA).

Inner and Middle Brisbane Rings combined equate to the City of Brisbane LGA.

Source: BCARR.

4 Figure 32, on page 175 of ShapingSEQ (Queensland Government 2017), defines existing urban areas and is used to measure consolidation and expansion development.

Table 1.4: Consolidation and expansion growth areas in SEQ

SA2s consolidation growth areas	BCARR rings/ sub-regions in SEQ	SA2 expansion growth areas	BCARR rings/ sub-regions in SEQ
Biggera Waters	Gold Coast	Bellbird Park – Brookwater	Ipswich
Bli Bli	Sunshine Coast	Boronia Heights – Park Ridge	Logan
Bribie Island	Moreton Bay North	Caloundra – West	Sunshine Coast
Brisbane City	Inner	Cashmere	Moreton Bay South
Caboolture	Moreton Bay North	Chambers Flat – Logan Reserve	Logan
Caboolture – South	Moreton Bay North	Coomera	Gold Coast
Calamvale – Stretton	Middle South	Dakabin – Kallangur	Moreton Bay South
Coorparoo	Middle South	Greenbank	Logan
Forest Lake – Doolandella	Middle West	Jimboomba	Logan
Fortitude Valley	Inner	Murrumba Downs – Griffin	Moreton Bay South
Hope Island	Gold Coast	Narangba	Moreton Bay North
Morningside – Seven Hills	Inner	Noosa Hinterland	Noosa
Mountain Creek	Sunshine Coast	North Lakes – Mango Hill	Moreton Bay South
Newstead – Bowen Hills	Inner	Ormeau – Yatala	Gold Coast
Oxenford – Maudsland	Gold Coast	Pallara – Willawong	Middle South
Peregian Springs	Sunshine Coast	Pimpama	Gold Coast
Robina	Gold Coast	Redbank Plains	Ipswich
Scarborough – Newport – Moreton Island	Moreton Bay North	Redland Bay	Redland
South Brisbane	Inner	Ripley	Ipswich
Surfers Paradise	Gold Coast	Rochedale – Burbank	Middle South
Taigum – Fitzgibbon	Middle North	Springfield Lakes	Ipswich
West End	Inner	Thornlands	Redland
Wurtulla – Birtinya	Sunshine Coast	Toowoomba – West	Toowoomba (part)

Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020, *ShapingSEQ* (Queensland Government 2017, p.172) and ShapingSEQ (Queensland Government 2017, p.35).

1.4 Report structure

The report has nine main chapters in addition to preliminaries and concluding parts. There are seven analytical chapters and a discussion chapter that examines the implications of population growth for jobs, liveability and connectivity.

Chapter 2 provides some policy context on SEQ regional governance arrangements and planning policies. This chapter identifies the key players in metropolitan planning in SEQ. However, it does not provide any original analysis to identify any weaknesses and strengths of the existing system. It focuses on the following planning documents:

- *Shaping*SEQ, South East Queensland Regional Plan 2017
- SEQ-Economic Foundations Paper, 2018

Chapter 3 presents a comprehensive analysis of population and population growth. Population growth is connected to each of the priorities. Chapter 3 of the report provides a snapshot of the population distribution of SEQ, the spatial pattern of population growth, sources of population growth, population density, and projections of future population for the SEQ region.

Chapter 4 examines housing in SEQ and includes an analysis of dwelling mix, building approvals, infill and greenfield development, and lot sizes. The chapter also analyses housing affordability in SEQ. By 2041, the SEQ region will need almost 800,000 new homes to accommodate the anticipated population growth (Queensland Government 2019).

Chapter 5 covers jobs and job growth. It presents a snapshot of the state of employment and its spatial distribution across SEQ, including analysis of job density, employment growth and the key industry drivers of that growth.

Chapter 6 covers the skills of the workforce. This includes a snapshot of occupation and educational attainment, as well as analysis of changes in occupation mix, and future projections for different occupation and skill categories.

Chapter 7 is on transport modes. This chapter includes a snapshot of transport mode use by commuters and also analyses changes in mode use over time.

Chapter 8 focuses on the connectivity of commuter travel within SEQ. This chapter analyses self-containment, origin-destination commuter flows, commuting trip distances and durations, 30- and 45- minute job access, and congestion metrics.

Chapter 9 is on liveability and focuses on presenting evidence on access to services, walkability and access to public open space. This chapter highlights some of the relative strengths and challenges to liveability faced by different SEQ sub-regions and smaller areas.

Chapter 10 discusses the implications of population growth in SEQ for housing, employment, liveability and connectivity. This chapter draws together the evidence on current and future focal points for population growth in SEQ, and explores consequences for housing, housing affordability, liveability and transport and commuter flows. It also discusses how job growth is connected with growth centres and the implications for connectivity. It also gives an overview of the study and outlines some limitations and future directions.

Overall, this study aims to pull together the evidence on how jobs, connectivity and liveability are functioning in the SEQ region, and by doing so, assist in identifying areas where more focus is needed to improve outcomes.

CHAPTER 2

GOVERNANCE

Key points

- *ShapingSEQ* is a state planning instrument providing a framework to manage growth, change, land use and development in SEQ. The *ShapingSEQ* strategic regional plan sets the direction for how to sustainably manage and accommodate an additional 1.64 million people to achieve the 50-year vision for SEQ.
- The Queensland Government released an economic foundations paper in 2018 to guide regional economic development planning activities and provides the foundation for developing a framework for investment in the region.

2.1 Introduction

This chapter provides some policy context on SEQ regional governance arrangements and planning policies. This section will identify the key players of metropolitan planning in SEQ and provide an overview of the following key documents:

- *ShapingSEQ*, South East Queensland Regional Plan 2017
- SEQ Economic Foundations Paper 2018

2.2 *ShapingSEQ* – South East Queensland Regional Plan 2017

ShapingSEQ is the Queensland Government's statutory regional plan to guide the future of the SEQ region. *ShapingSEQ* is a state planning instrument providing a framework to manage growth, change, land use and development in SEQ (Queensland Government 2017, p.15). *ShapingSEQ* replaces the South East Queensland Regional Plan 2009–2031 and is the region's pre-eminent strategic land use plan made under the Sustainable Planning Act 2009 and given effect by the Planning Act 2016. *ShapingSEQ* will inform State Infrastructure Plan (SIP) (Part B) updates.

ShapingSEQ was prepared in collaboration with the region's 12 local governments, key industry groups and the wider community to ensure the aspirations of all regional stakeholders were considered. The role of the SEQ Regional Planning Committee was broadened to oversee the alignment of state and local government priorities.

ShapingSEQ's vision provides a 50-year outlook for SEQ, when the region's population is expected to grow to about seven million or more. Five themes underpin SEQ's 50-year vision: Grow, Prosper, Connect, Sustain and Live. These five themes are woven through all aspects of the plan and presented in Table 2.1.

ShapingSEQ provides essential context for BCARR's study of the spatial patterns of population and population growth, jobs, connectivity and liveability within SEQ. For example, the directions set for the desired long-term pattern of residential development, including focusing on growth in the existing urban area, are critical to the analysis in Chapters 3 and 4 on Population growth and Housing. A further example is using various elements of Goal 2 Prosper (e.g. activity centres, knowledge and technology precincts) to inform the analysis of Jobs and Skills in Chapters 5 and 6.

Table 2.1: List of goals and elements from ShapingSEQ 2017

Goals	Elements
Goal 1: Grow **1. Sustainably accommodating a growing population**	a. Efficient land use b. Focusing on residential density c. New communities d. Housing diversity e. Growing rural towns and villages
Goal 2: Prosper **2. A globally competitive economic powerhouse**	a. High-performing outward-focused economy b. Regional Economic Clusters c. Regional activity centres network d. Knowledge and technology precincts e. Major enterprise and industrial areas f. Tourism g. Special uses h. Rural prosperity
Goal 3: Connect **3. Moving people, products and information efficiently**	a. An efficient movement system b. Active transport c. Integrated planning d. Prioritised infrastructure investment e. Regional infrastructure networks f. Digital infrastructure
Goal 4: Sustain **4. Promoting ecological and social sustainability**	a. Aboriginal and Torres Strait Islander people b. Biodiversity c. Koala conservation d. Regional landscapes e. Water-sensitive communities f. Natural economic resources g. Health and wellbeing h. Fairness i. Climate change j. Safety k. Affordable living
Goal 5: Live **5. Living in better-designed communities**	a. Valuing good design b. Working with the weather c. Inspiration from local character d. Working with natural systems e. Creating legible and connected streets and spaces f. Embedding opportunities for adaptation and change g. The power of place-making

Source: *ShapingSEQ* (Queensland Government 2017, p.37).

The planning framework outlined in *ShapingSEQ* sets the direction for sustainably managing and accommodating around an additional 1.64 million people to achieve the 50-year vision for SEQ. The main focus is to accommodate the growing population sustainably through efficient land use, housing diversity and residential density. It focuses on providing 60 per cent of new housing development in the existing urban area and promoting 'missing middle[5]' forms of housing.

Another priority is making SEQ a globally competitive economy by creating a high-performing, outwardly focused economy, regional economic clusters, and knowledge and technology precincts. *ShapingSEQ* also focuses on promoting ecologically and socially sustainable development and better-designed communities. It aims to prioritise public and active transport and identify region-shaping infrastructure, including freight, to increase accessibility and productivity.

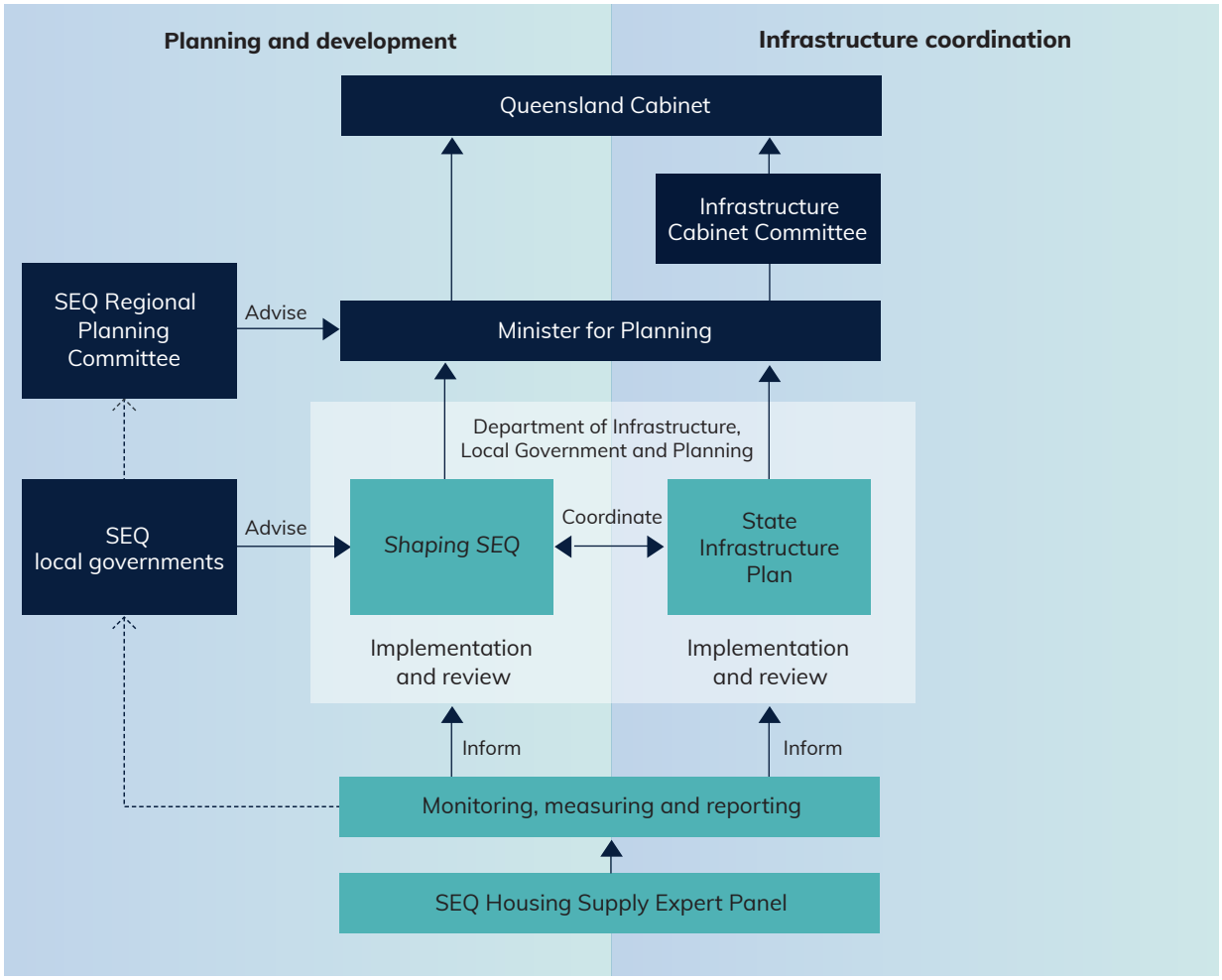
Implementing *ShapingSEQ* at a regional scale is primarily the role of state and local governments. It will also involve a wide range of stakeholders from the community, industry and non-government organisations. Figure 2.1 outlines the key roles and responsibilities for delivering *ShapingSEQ*. The Queensland Cabinet will oversee the ongoing delivery of *ShapingSEQ*. The Minister for Planning is responsible for preparing, implementing and reviewing *ShapingSEQ*, advising the Queensland Cabinet on related matters, and assembling and convening the SEQ Regional Planning Committee.

The Minister for Planning established the SEQ Regional Planning Committee (RPC) under section 14(1) of the Planning Act 2016. Its membership includes the region's 12 mayors and relevant Queensland Government ministers. Its purpose is to advise the Queensland Government, through the Minister for Planning, on the preparation and implementation of *ShapingSEQ*.

The Department of Infrastructure, Local Government and Planning will lead and work with other state government agencies, local governments and stakeholders to facilitate and coordinate the implementation of *ShapingSEQ*.

5 '"Missing middle' is a form of housing that offers greater density and diversity in a manner compatible with surrounding lower density residential environments. Most 'missing middle' housing is oriented toward the street or laneway. It covers housing types between detached houses and high-rise, and may include 'Fonzie' flats (a small, self-contained apartment on the same land as a house), 'plexes' (duplexes, triplexes, quadplexes etc), row/terrace housing and medium-rise apartments" (Queensland Government 2017 p.44).

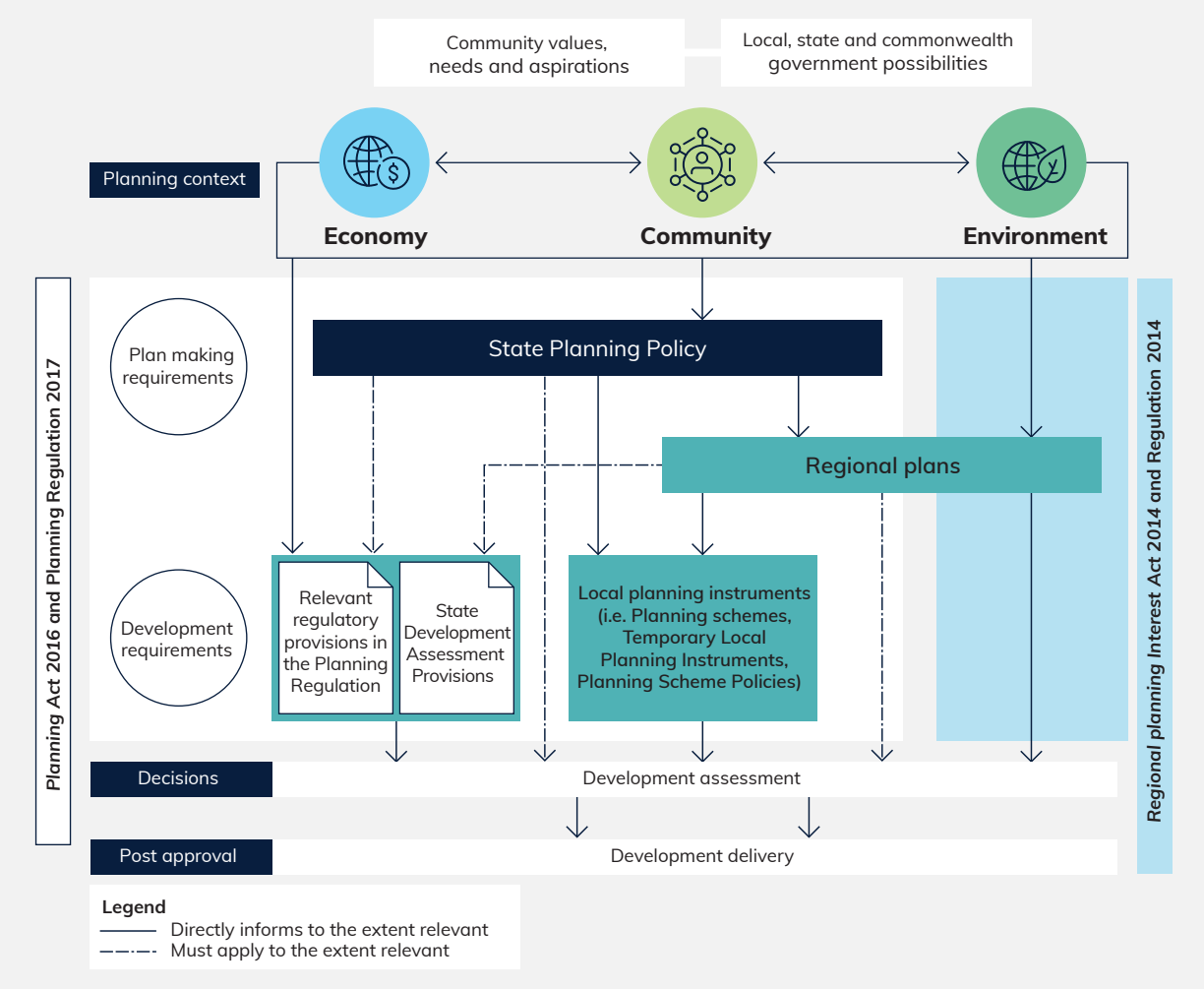
Figure 2.1: Governance arrangements



Source: *Shaping*SEQ (Queensland Government 2017, Figure 27, p. 149)

ShapingSEQ is essential to Queensland's planning framework (Figure 2.2). It provides a regional framework to manage growth, change, land use and development in SEQ by reflecting state policy and informing a range of other more detailed planning instruments and functions.

Figure 2.2: ShapingSEQ's relationship with other plans and programs



Source: *ShapingSEQ* (Queensland Government 2017, Figure 28, p. 151)

2.3 SEQ Economic Foundations Paper, 2018

The SEQ Economic Foundations Paper was drafted by the Queensland Government's Cities Transformation Taskforce (CTT). The foundations paper aims to guide regional economic development planning activities. It provides the basis for developing a framework for investment in the region that will support the growth of priority industries; support the expansion, efficiency and connectivity of key corridors and clusters; and ensure the effective connectivity of key labour market areas to centres of employment activity. The five priority industry clusters are:

1. Advanced manufacturing
2. Agribusiness
3. Traded health and education
4. Transport and communications
5. Tourism and creative.

The paper also identifies key enablers to support growth in these priority industry clusters. These include land (and other natural resources), infrastructure, open information, human capital, financial capital, policy and technology. The report identifies key economic corridors (see Figure 2.3) that serve as both key inter-regional and cross-regional corridors for passengers and freight, namely the East-West Corridor, Capital City Knowledge Corridor, South Corridor, North Corridor and South-West Corridor.

Figure 2.3: SEQ clusters, corridors and growth fronts that will underpin regional growth

Regional initiatives					
Sub-regional initiatives					
	East-West Corridor	Capital City Knowledge Corridor	South Corridor	South-West Corridor	North Corridor
Regional Economic Clusters	• Australia Trade Coast • South west industrial corridor • Ipswich • Western Gateway	• Capital City	• Pacific Motorway • Meadowbrook–Loganholme • Yatala Stapylton–Beenleigh • Southport–Broadbeach • Robina Varsity Lakes • Southern Gateway	• Bromelton SDA	• Strathpine–Brendale–Petrie • North Lakes–Mango Hill • Kawana • Northern Gateway
Urban Growth Fronts	• Ripley • Springfield • Westbrook • Under-Utilised Urban Footprint		• Southern Redland Bay • Yarrabilba • Coomera • Under-Utilised Urban Footprint	• Greater Flagstone • Beaudesert • Park Ridge • Under-Utilised Urban Footprint	• Caloundra South • Beerwah East • Palmview • Caboolture West • Under-Utilised Urban Footprint
Place making initiatives					

Source: SEQ Economic Foundations Paper (Queensland Government 2018a, p.8)

The economic foundations paper is particularly relevant to BCARR's analysis of Jobs and Skills in Chapters 5 and 6 as it identifies what the Queensland Government sees as the key spatial corridors for future jobs as well as the priority industries for jobs growth.

2.4 Conclusion

The chapter discussed some key strategic planning documents for SEQ. The main focus of the *ShapingSEQ* strategic plan is to sustainably accommodate an additional 1.64 million people through efficient land use, housing diversity and residential density. It focuses on providing 60 per cent of new housing development in the existing urban area and promoting 'missing middle' forms of housing. The Queensland Government drafted an SEQ Economic Foundations Paper to guide regional economic development planning activities.

These documents are extensively connected and will provide essential guidelines and frameworks to manage and facilitate growth in the SEQ region. They provide important context for this BCARR report on the spatial patterns of population, housing, jobs, liveability and connectivity by setting out key concepts and directions for the future development of SEQ.

CHAPTER 3

POPULATION GROWTH

Key points

- About two-thirds of the Queensland population lives in the South East Queensland (SEQ) region. As of 30 June 2020, SEQ has 3.8 million people, with 33.5 per cent living in the Brisbane Local Government Area (LGA), 16.7 per cent in the Gold Coast LGA, and 12.6 per cent in the Moreton Bay LGA.
- In 2020, Greater Brisbane accommodated 66 per cent of the SEQ population. The remaining 34 per cent live in the rest of SEQ, primarily in the Gold Coast (16.9 per cent) and Sunshine Coast (8.8 per cent) sub-regions.
- Within Greater Brisbane, nearly half of the population (48.8 per cent) live in the Outer Ring, 39.2 per cent in the Middle Ring, and 12.0 per cent in the Inner Ring.
- Over the last four years (2016–2020), the SEQ population has grown from 3.46 million to 3.76 million, with an annual growth rate of 2.1 per cent. With a total of 300,510 residents gained by the SEQ region, the main growth LGAs were Brisbane (88,247), Gold Coast (59,888) and Moreton Bay (40,347).
- The Ipswich LGA has the highest annual average growth rate of 3.5 per cent from 2016 to 2020, followed by Sunshine Coast (2.7 per cent) and Gold Coast LGA (2.5 per cent). Logan and Moreton Bay LGAs also had growth rates that exceeded the SEQ rate.
- Greater Brisbane has a 2.0 per cent annual growth rate between 2016 to 2020. Inner Brisbane (2.8 per cent) and Outer Brisbane (2.3 per cent) have grown faster than Middle Brisbane (1.5 per cent). Greater Brisbane accommodated nearly 64 per cent of the population growth of SEQ over the last four years. Outside of Greater Brisbane, the Gold Coast housed a significant share of SEQ's growth (at 19.9 per cent).
- The most dominant source of population growth for the SEQ region was internal migration, which was responsible for 38 per cent of growth between 2017 and 2020. International migration contributed a further 33 per cent of the population growth in SEQ, with natural increase responsible for the rest of the growth.
- Brisbane LGA had the highest population-weighted density (PWD) among the SEQ LGAs, and Gold Coast LGA had the second-highest PWD in 2020.
- SEQ's overall PWD was 4196 persons per km² in 2020, which increased by 485 persons per km² from 2016.
- Inner Brisbane has the highest population density of the SEQ rings/sub-regions and experienced the highest increase in PWD (2425 persons per km²) over the past four years. Outside of Greater Brisbane, Gold Coast has had the highest increase in PWD over the last four years (501 persons per km²).
- By 2041, SEQ is expected to add 1.64 million new residents and reach 5.41 million population. In SEQ, significant future population growth is projected in Outer Brisbane areas, such as the Ripley, Jimboomba, and Greenbank SA2s, which are located in the Ipswich and Logan LGAs.
- The Ipswich LGA is projected to add 327,804 new residents by 2041, the largest growth in the SEQ region. Gold Coast LGA is projected to add a further 308,495 residents and the City of Brisbane LGA a further 278,150 new residents.
- The proportion of the SEQ population aged 65 and over is expected to increase from 15.5 per cent in 2021 to 20.3 per cent in 2041. Overall, SEQ will have a much older population in the future; this will necessitate careful planning of social services in the region.

3.1 Introduction

This chapter provides an analysis of the SEQ region population to understand the growth patterns and trends in the region over time. Population growth is intrinsically connected to housing, jobs, transport and liveability. By 2041, the region is expected to accommodate an additional 1.64 million residents (Queensland Government 2018a).

The chapter is divided into four sections – population snapshot, population growth, population-weighted density and future population projections. Firstly, the chapter provides a snapshot of the population in 2020, based on the Australian Bureau of Statistics (ABS) Estimated Residential Population (ERP) data as of 30 June 2020 (see Box 3.1).[6] The second section of the chapter analyses population growth from 2016 to 2020, using the ERP data for 2016 and 2020. In addition, this section also gives information about the sources of population growth and information on changes in the population composition by age. The third part of the chapter provides information on population-weighted density (PWD) in the SEQ region. The last section shows the projected future population and its spatial distribution.

Most of the spatial analysis is based on the following geographies: the 12 LGAs, the SEQ sub-regions, and SA2s. The definition of SEQ sub-regions is provided in Chapter 1, Table 1.3.

Box 3.1 What is Estimated Resident Population?

According to the ABS, ERP refers to all usual residents, regardless of nationality or citizenship, who usually live in Australia, excluding foreign diplomatic personnel and their families (ABS n.d.). It includes usual residents who are overseas for less than 12 months and excludes overseas visitors who are in Australia for less than 12 months. The ERP is based on the Census of Population and Housing results, adjusted for the net undercount and Australian usual residents temporarily overseas on census night. Two main steps are involved in estimating the national and state/territory population:

- calculating the base population (Census year population estimates)
- updating this base population (post-censal population estimates).

The post-censal population estimates are derived by ageing the base population, then adjusting for subsequent components of population growth (births, deaths, overseas and interstate migration) (ibid).

6 This was the latest available ERP data at the time the research was undertaken in late 2021. However, the ABS has subsequently produced updated and revised ERP estimates, most recently in July 2022.

3.2 Population snapshot

SEQ is the third most populous area in Australia. Table 3.1 below shows the capital cities population as of 30 June 2020 along with SEQ. Around 15 per cent of the Australian population lives in the SEQ region.

Table 3.1: Population of capital cities and SEQ as of 30 June 2020

Capital cities	Estimated Resident Population, 2020	Proportion of Australian total (per cent)
Sydney	5,367,206	20.9
Melbourne	5,159,211	20.1
Brisbane	2,560,720	10.0
Adelaide	1,376,601	5.4
Perth	2,125,114	8.3
Hobart	238,834	0.9
Darwin	147,231	0.6
Canberra	431,380	1.7
SEQ	3,764,756	14.7
Australia	**25,687,041**	**100.0**

Source: Australian Bureau of Statistics (ABS), regional population 2019–20.

Population snapshot of SEQ in 2020: LGAs

The ABS ERP for the 12 LGAs of the SEQ region was 3.80 million as of 30 June 2020, up from 3.49 million in 2016. Table 3.2 gives the LGA population snapshot. Among the 12 LGAs, the highest population is in Brisbane LGA, at 1.27 million. Gold Coast (635,191) and Moreton Bay (479,639) have the second and third highest populations. The Sunshine Coast, Logan and Ipswich LGAs also make a significant contribution, with each having between 200,000 and 350,000 residents. The Somerset LGA has the lowest ERP in the region (26,279) in 2020.

Proportionately, Brisbane LGA has the highest share of the total population of the 12 LGAs (33.5 per cent). Gold Coast and Moreton Bay are the second and third most populated LGAs, with population shares of 16.7 per cent and 12.6 per cent, respectively. The Lockyer Valley, Scenic Rim, and Somerset LGAs each contribute less than 1.2 per cent of the region's ERP.

These 12 LGAs account for 73.3 per cent of the entire Queensland population. Nearly three-quarters of the state population is living in the region, which reinstates the region's significance. Taken together, the Brisbane, Gold Coast and Moreton Bay LGAs comprise almost 50 per cent of the State's population.

Table 3.2: Snapshot of the estimated residential population of LGAs in SEQ as of 30 June 2020

LGAs	Estimated Resident Population, June 2020	Population share within SEQ, 2020	Population share within QLD, 2020
Brisbane	1,272,999	33.5	24.6
Gold Coast	635,191	16.7	12.3
Ipswich	229,845	6.1	4.4
Lockyer Valley	42,267	1.1	0.8
Logan	341,985	9.0	6.6
Moreton Bay	479,639	12.6	9.3
Noosa	56,587	1.5	1.1
Redland	160,331	4.2	3.1
Scenic Rim	43,625	1.1	0.8
Somerset	26,279	0.7	0.5
Sunshine Coast	336,482	8.9	6.5
Toowoomba	170356	3.7	2.7
12 LGAs total	3,795,586	100.0	73.3
TOTAL QUEENSLAND	**5,176,186**		**100.0**

Note: The 12 LGAs total differs from the total for SEQ, as the rural areas of Toowoomba LGA are excluded from the definition of SEQ.
Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

Population snapshot of SEQ in 2020: BCARR rings and sub-regions

As previously shown in Figure 1.2, Greater Brisbane is divided into nine sub-regions, which includes the Inner sub-region (ring), plus four middle and four outer sub-regions. Brisbane LGA is comprised of the Inner and four middle sub-regions. Outer Brisbane comprises four LGAs that surround the Brisbane LGA and have a significant commuter connection with the Inner and Middle sub-regions. The rest of SEQ is made up of the seven remaining LGAs of the SEQ region. Inner Brisbane, Middle Brisbane, Outer Brisbane, and the Rest of SEQ are referred to as BCARR rings for this research.

Greater Brisbane is home to 66 per cent of the SEQ population. Table 3.3 provides the population snapshot of the SEQ BCARR rings and sub-regions. Twelve per cent of the Greater Brisbane population live in the Inner Ring. The Middle Ring has 39.2 per cent of the residential population of the Greater Brisbane area, while the Outer Ring comprises the highest share of the Greater Brisbane population, which is 48.8 per cent.

Within the Middle Ring, Middle South has the highest proportion of the residential population (15.4 per cent). By contrast, the Middle East has the lowest share of the residential population (3.3 per cent). Among the Outer Brisbane Ring, Moreton Bay has the highest percentage of the residential population (19.3 per cent), followed by Logan (13.8 per cent) and Ipswich (9.2 per cent). Outside of Greater Brisbane, the Gold Coast sub-region has the highest percentage (16.9 per cent) of ERP within the SEQ region, followed by Sunshine Coast (8.8 per cent). The Outer Brisbane ring has the highest population (1,212,039) among the BCARR rings, followed by Middle Brisbane (974,234).

Table 3.3: Snapshot of the estimated resident population of SEQ sub-regions as of 30 June 2020

BCARR rings/sub-regions	Estimated Resident Population, June 2020	Share of Greater Brisbane population (per cent)	Share of SEQ population (per cent)
INNER Brisbane*	298,546	12.0	7.9
MIDDLE Brisbane – TOTAL*	974,234	39.2	25.9
Middle East	82,790	3.3	2.2
Middle North	228,486	9.2	6.1
Middle South	381,849	15.4	10.1
Middle West	281,109	11.3	7.5
OUTER Brisbane – TOTAL	1,212,039	48.8	32.2
Ipswich	229,818	9.2	6.1
Redland	160,331	6.5	4.3
Logan	341,985	13.8	9.1
Moreton Bay	479,905	19.3	12.7
TOTAL – GREATER BRISBANE	2,484,819	100.0	66.0
Rest of SEQ	1,279,937		34.0
Gold Coast	635,191		16.9
Sunshine Coast	332,562		8.8
Noosa	60,487		1.6
Toowoomba (urban part)	139,526		3.7
Scenic Rim	43,625		1.2
Lockyer Valley	42,263		1.1
Somerset	26,283		0.7
TOTAL – SOUTH EAST QUEENSLAND	**3,764,756^**		**100.0**

Notes:

* The Inner and Middle Brisbane Rings together comprise the City of Brisbane LGA. See Table 1.3 and Figure 1.2 in Chapter 1 for these classifications.

^ The SEQ total differs from the 12 LGA total in the preceding table, which includes the whole of Toowoomba LGA. This table includes only the urban parts of Toowoomba LGA.

Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

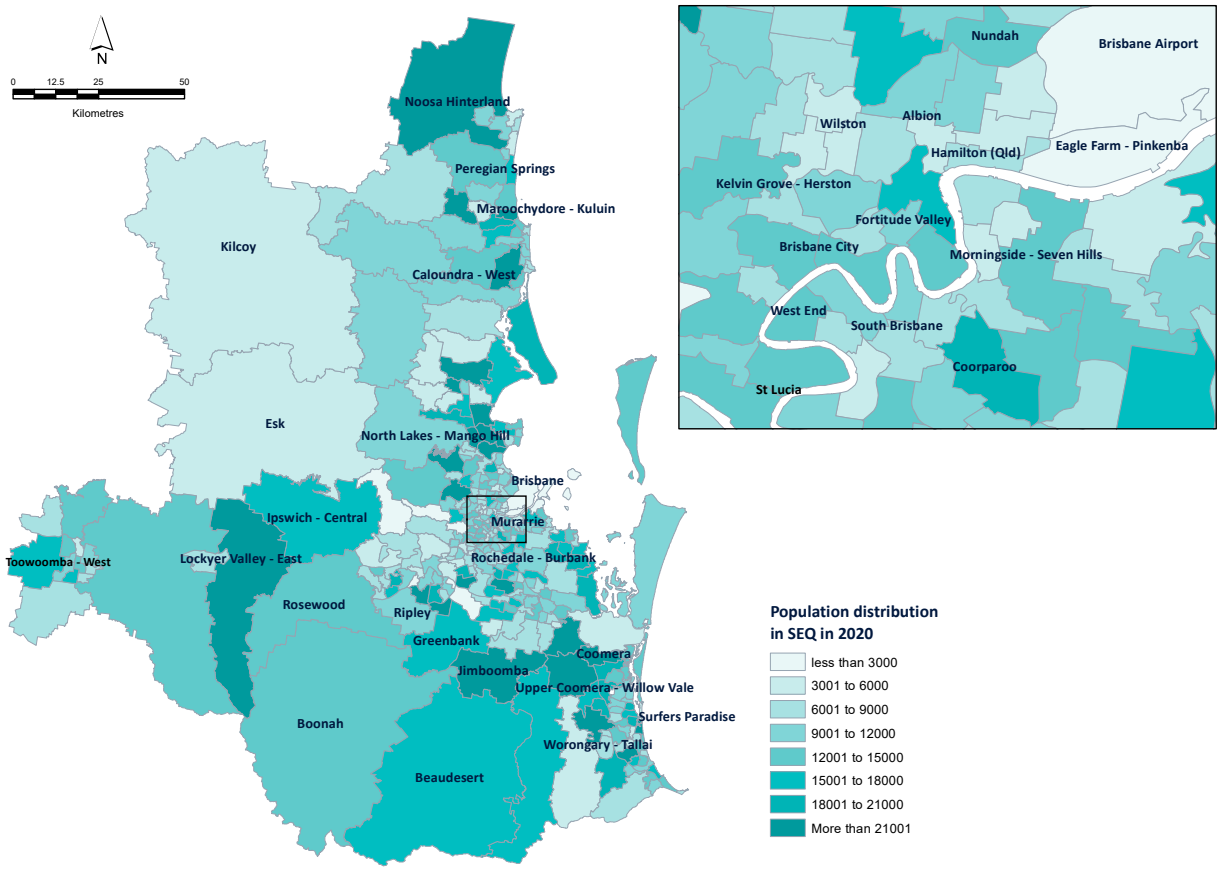
Population snapshot of SEQ in 2020: SA2s

To illustrate the spatial distribution of the population, Figure 3.1 shows the number of people living in each SA2 in 2020. Some of the SA2s have less than 30 population and were mainly nature reserve, such as Mount Coot-tha and Lake Manchester – England Creek. According to the 2016 Australian Statistical Geography Standard (ASGS) boundaries, the SEQ region contains 332 SA2s.

As shown in Table 3.4, the three most populous SA2s are North Lakes – Mango Hill (39,565), Upper Coomera – Willow Vale (37,148) and Jimboomba (35,571). They are located in the Moreton Bay, Gold Coast, and Logan LGAs, respectively (see Table 3.4). Among the ten most populous SA2s, four are located in the Moreton Bay LGA, and Gold Coast LGA contains three. Caboolture in the Moreton Bay LGA is one of the future growth areas identified by the Queensland Government. A detailed discussion of this growth area is included in Chapter 4.

Some of the least populous SA2s in the SEQ region include Eagle Farm – Pinkenba in the Middle North sub-regions (1,485 persons), Riverview in Ipswich (3,002) and Upper Caboolture in Moreton Bay (3,425). The average population size across the SA2s in the SEQ region is 11,340 people. The Noosa LGA has the lowest population average per SA2 (7,240).

Figure 3.1: Distribution of population by SA2s in SEQ as of 30 June 2020



Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

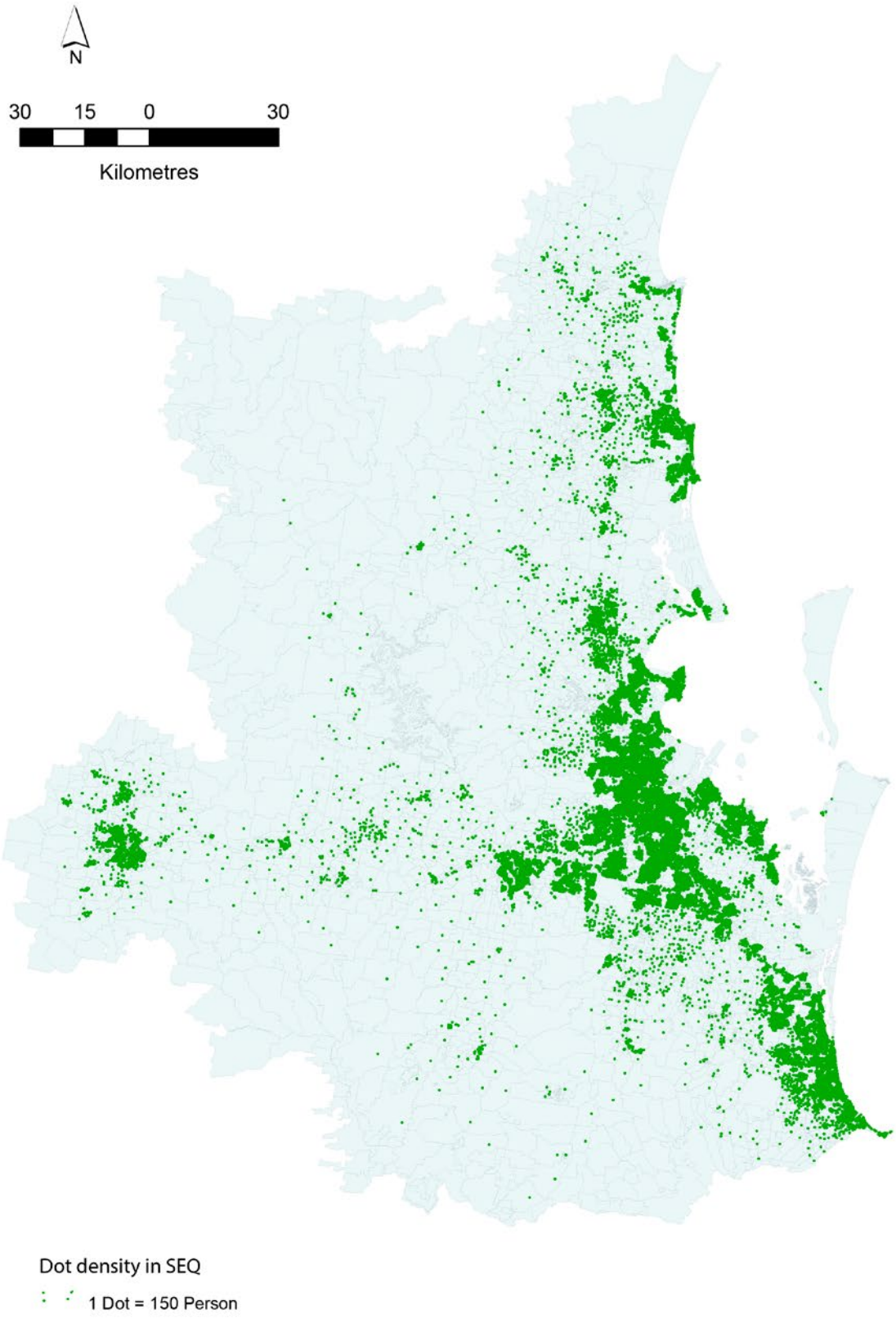
Table 3.4: Ten SA2s with the largest estimated resident population in SEQ as of 30 June 2020

SA2s	BCARR rings/ sub-regions	Estimated resident population, 2020	Population share within SEQ 2020
North Lakes – Mango Hill	Moreton Bay	39,565	1.1
Upper Coomera – Willow Vale	Gold Coast	37,148	1.0
Jimboomba	Logan	35,571	0.9
Forest Lake – Doolandella	Middle West	31,267	0.8
Caboolture	Moreton Bay	30,284	0.8
Surfers Paradise	Gold Coast	28,160	0.7
Caloundra – West	Sunshine Coast	27,992	0.7
Dakabin – Kallangur	Moreton Bay	27,952	0.7
Robina	Gold Coast	26,486	0.7
The Hills District	Moreton Bay	24,604	0.7

Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

Figure 3.2 shows the distribution of the population of SEQ in 2016. Here one dot represents 150 population. Population density is higher along the coast and in the middle region. The North West and South West of SEQ have lower population density.

Figure 3.2: Distribution of population in SEQ in 2016



Source: BCARR analysis of Census of Population and Housing, 2016: Mesh Block Counts, Australia, 2016.

3.3 Population growth

Population growth of SEQ from 2016 to 2020: LGAs

The total population of the 12 LGAs has increased by an average of 2.1 per cent per annum between 2016 and 2020, adding 302,842 people. The highest growth occurred in Brisbane LGA (88,247), followed by Gold Coast (59,888), Moreton Bay (40,347) and Sunshine Coast (33,641). They are the four main SEQ growth centres over the last four years (see Table 3.5).

However, the Ipswich LGA is growing at a faster rate. Among the 12 LGAs, Ipswich has experienced the highest annual growth (3.5 per cent), followed by Sunshine Coast (2.7 per cent) and Gold Coast (2.5 per cent) (see Table 3.5). Logan and Moreton Bay LGAs have also grown by more than 2 per cent annually in the same period. The Toowoomba LGA has the lowest annual growth in the region (0.9 per cent) from 2016 to 2020, followed by Somerset and Noosa.

Brisbane LGA accounted for 29.1 per cent of the increased population from 2016 to 2020, which is the highest in the region. Other than Brisbane, Gold Coast (19.8 per cent), Moreton Bay (13.3 per cent), and Sunshine Coast (11.1 per cent) each accounted for over 10 per cent of population growth throughout 2016 to 2020. Somerset has the lowest growth within the SEQ region, followed by Scenic Rim, Noosa and Lockyer Valley, with these 4 LGAs each contributing less than 1 per cent of the region's growth in the same period.

Table 3.5: Population growth in the LGAs of SEQ from 2016 to 2020

LGAs	Estimated resident population, 2020	Estimated resident population, 2016	Changes 2016–2020	Average annual growth rate (per cent)	Share of growth (per cent)
Brisbane	1,272,999	1,184,752	88,247	1.8	29.1
Gold Coast	635,191	575,303	59,888	2.5	19.8
Ipswich	229,845	200,103	29,742	3.5	9.8
Lockyer Valley	42,267	39,499	2,768	1.7	0.9
Logan	341,985	314,511	27,474	2.1	9.1
Moreton Bay	479,639	439,292	40,347	2.2	13.3
Noosa	56,587	53,922	2,665	1.2	0.9
Redland	160,331	152,216	8,115	1.3	2.7
Scenic Rim	43,625	40,984	2,641	1.6	0.9
Somerset	26,279	25,153	1,126	1.1	0.4
Sunshine Coast	336,482	302,841	33,641	2.7	11.1
Toowoomba	170,356	164,168	6,188	0.9	2.0
12 LGAs total	**3,795,586**	**3,492,744**	**302,842**	**2.1**	**100.0**

Note: The 12 LGAs total differs from the total for SEQ, as the rural areas of Toowoomba LGA are excluded from the definition of SEQ.
Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020 and 2016.

Population growth of SEQ from 2016 to 2020: BCARR rings and sub-regions

From 2016 to 2020, SEQ had a 2.1 per cent average annual growth rate and added 300,510 more population (Table 3.6). Altogether Greater Brisbane grew 2.0 per cent annually from 2016 to 2020. Within Greater Brisbane, Ipswich and Inner Brisbane have the highest population growth (2.8 per cent). Middle Brisbane has an average annual growth rate lower than the SEQ average, while Outer Brisbane slightly exceeds the SEQ average yearly growth rate. Between 2016 and 2020, Greater Brisbane added 191,929 people, which accounts for nearly 64 per cent of the total growth of SEQ. Within Greater Brisbane, Outer Brisbane has added 105,433 more people over the past four years.

Outer Brisbane has accommodated 54.9 per cent, Middle Brisbane 28.6 per cent, and Inner Brisbane 16.5 per cent of population growth within the Greater Brisbane region throughout 2016 to 2020. Within the outer sub-regions, Moreton Bay has the highest share of the increase in population (21.0 per cent). Within the Middle ring, the Middle South sub-region added the most population.

Within SEQ, the Rest of SEQ is responsible for 36.1 per cent of population growth, followed by the Outer Brisbane ring (35.1 per cent), Middle Brisbane (18.3 per cent) and Inner Brisbane (16.5 per cent). In the Rest of SEQ, Gold Coast (19.9 per cent) and Sunshine Coast (11.1) have been responsible for a significant share of SEQ's population growth.

Table 3.6: Population growth in SEQ sub-regions from 2016 to 2020

BCARR rings/sub-regions	Estimated resident population, June, 2016	Estimated resident population, June, 2020	Changes (2016–2020)	Average annual growth rate, 2016–2020 (per cent)	Proportion of Greater Brisbane's increase 2016–2020 (per cent)	Proportion of SEQ's increase, 2016–2020 (per cent)
INNER Brisbane*	266,968	298,546	31,578	2.8	16.5	10.5
MIDDLE Brisbane – TOTAL*	**919,316**	**974,234**	54,918	1.5	28.6	18.3
Middle East	79,187	82,790	3,603	1.1	1.9	1.2
Middle North	214,765	228,486	13,721	1.6	7.1	4.6
Middle South	356,779	381,849	25,070	1.7	13.1	8.3
Middle West	268,585	281,109	12,524	1.1	6.5	4.2
OUTER Brisbane – TOTAL	**1,106,606**	**1,212,039**	105,433	2.3	54.9	35.1
Ipswich	200,203	229,818	29,615	3.5	15.4	9.9
Redland	152,216	160,331	8,115	1.3	4.2	2.7
Logan	314,511	341,985	27,474	2.1	14.3	9.1
Moreton Bay	439,676	479,905	40,229	2.2	21.0	13.4
TOTAL – GREATER BRISBANE	**2,292,890**	**2,484,819**	191,929	2.0	100.0	63.9
Rest of SEQ	1,171,356	1,279,937	108,581	2.2		36.1
Gold Coast	575,303	635,191	59,888	2.5		19.9
Sunshine Coast	299,225	332,562	33,337	2.7		11.1
Noosa	57,538	60,487	2,949	1.3		1.0
Toowoomba (urban part)	133,654	139,526	5,872	1.1		2.0
Scenic Rim	40,984	43,625	2,641	1.6		0.9
Lockyer Valley	39,503	42,263	2,760	1.7		0.9
Somerset	25,149	26,283	1,134	1.1		0.4
TOTAL – SOUTH EAST QUEENSLAND^	**3,464,246**	**3,764,756**	**300,510**	**2.1**		**100.0**

Notes:

* The Inner and Middle Brisbane Rings together comprise the City of Brisbane LGA. See Table 1.3 and Figure 1.2 in Chapter 1 for these classifications.

^ The SEQ total differs from the 12 LGA total in the preceding table, which includes the whole of Toowoomba LGA. This table includes only the urban parts of Toowoomba LGA

Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

Population growth of SEQ from 2016 to 2020: SA2s

Tables 3.7 and 3.8 below show the population growth of the SA2s in SEQ from 2016 to 2020. According to Table 3.7, Pimpama (12,609) had the most significant increase in population over the four years, followed by Jimboomba (9,011) and North Lakes – Mango Hill (8,226). The highest average annual growth rates occurred in Pimpama (23.5 per cent), Ripley (19.7 per cent) and Eagle Farm – Pinkenba (14.9 per cent). While most of the top growth SA2s were located in Outer Brisbane or Rest of SEQ, there is some evidence of urban infill in established suburbs such as Newstead-Bowen Hills and Eagle Farm-Pinkenba. The rapid recent population growth in Eagle Farm-Pinkenba reflects Mirvac's ongoing development of the Eagle Farm Residential Precinct, adjoining the Eagle Farm Racecourse.

Table 3.7: SA2s with the largest increase in population in SEQ from 2016 to 2020

SA2s	BCARR rings/ sub-regions	Estimated resident population, 2020	Estimated resident population, 2016	Changes in number 2016–2020	Average annual growth rate, 2016–2020 (per cent)
Pimpama	Gold Coast	22,093	9,484	12,609	23.5
Jimboomba	Logan	35,571	26,560	9,011	7.6
North Lakes – Mango Hill	Moreton Bay	39,565	31,339	8,226	6.0
Springfield Lakes	Ipswich	23,535	16,037	7,498	10.1
Caloundra – West	Sunshine Coast	27,992	20,815	7,177	7.7
Coomera	Gold Coast	19,724	13,685	6,039	9.6
Murrumba Downs – Griffin	Moreton Bay	23,557	18,181	5,376	6.7
Ripley	Ipswich	9,759	4,755	5,004	19.7
Upper Coomera – Willow Vale	Gold Coast	37,148	32,204	4,944	3.6
Newstead – Bowen Hills	Inner	16,042	11,355	4,687	9.0

Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

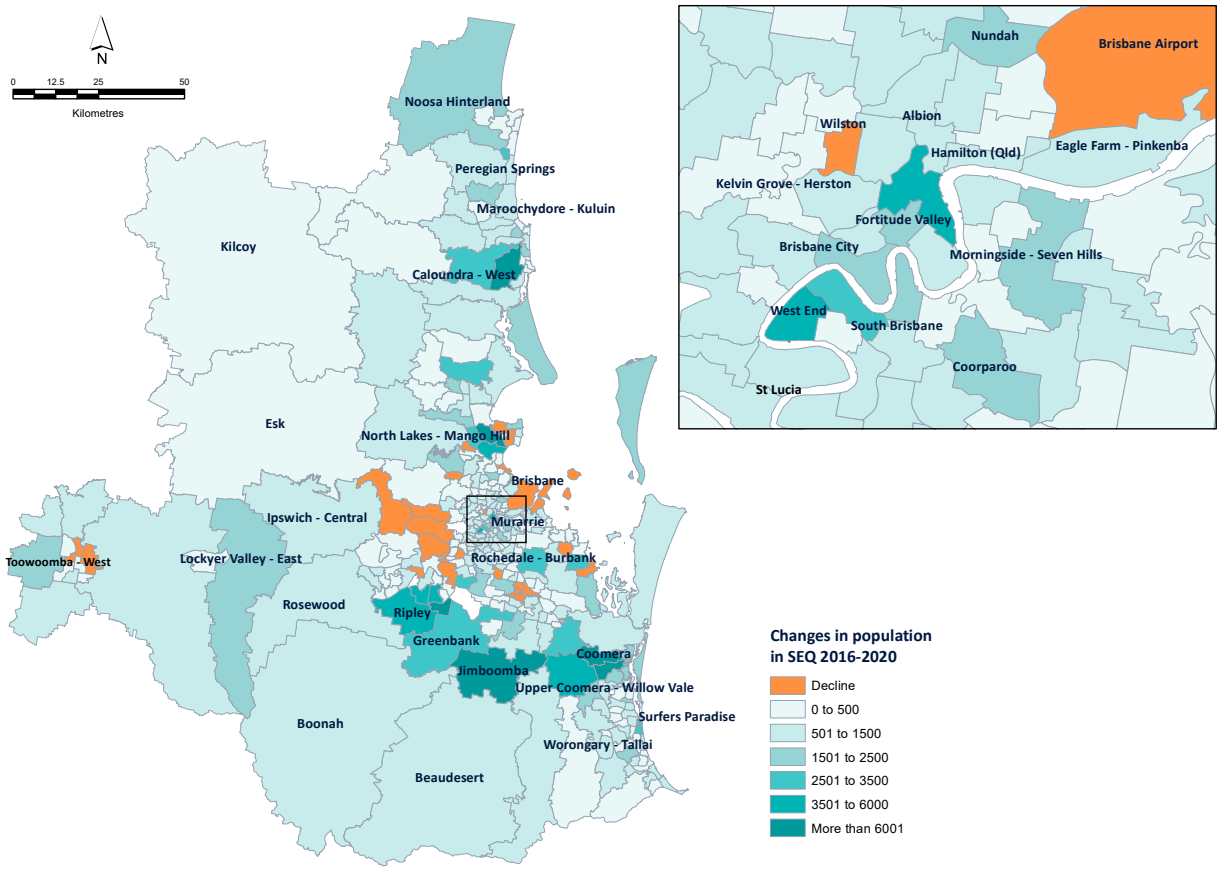
Table 3.8: SA2s with the largest proportional change in population in SEQ from 2016 to 2020

SA2s	BCARR rings/ sub-regions	Estimated resident population, 2020	Estimated resident population, 2016	Changes in Number 2016–2020	Average annual growth rate, 2016–2020 (per cent)
Pimpama	Gold Coast	22,093	9,484	12,609	23.5
Ripley	Ipswich	9,759	4,755	5,004	19.7
Eagle Farm – Pinkenba	Middle North	1,485	852	633	14.9
Springfield Lakes	Ipswich	23,535	16,037	7,498	10.1
Coomera	Gold Coast	19,724	13,685	6,039	9.6
Rochedale – Burbank	Middle South	9,541	6,665	2,876	9.4
Newstead – Bowen Hills	Inner	16,042	11,355	4,687	9.0
Peregian Springs	Sunshine Coast	10,536	7,489	3,047	8.9
Chambers Flat – Logan Reserve	Logan	7,260	5,245	2,015	8.5
Pallara – Willawong	Middle South	6,771	4,892	1,879	8.5

Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

Figure 3.3 shows population changes across the SA2s in SEQ between 2016 and 2020. A feature of the map is the cluster of SA2s with large population increases to the south of Brisbane, extending from Ripley in the Ipswich LGA, through Jimboomba in the Logan LGA, and on to Pimpama and Coomera in the northern part of the Gold Coast (as previously highlighted in Table 3.7).

Figure 3.3: Changes in population in SEQ SA2s 2016–2020



Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2016 to 2020.

Figure 3.3 also shows some pockets of population decline. Table 3.9 shows the SA2s that experienced the largest population decreases between 2016 and 2020. The largest decline was for the Woodridge SA2 in the Logan LGA, which lost 481 residents between 2016 and 2020.

Table 3.9: SA2s with the largest decrease in population in SEQ from 2016 to 2020

SA2s	BCARR rings/ sub-regions	Estimated resident population, 2020	Estimated resident population, 2016	Change in Number 2016–2020	Average annual growth rate, 2016–2020 (per cent)
Woodridge	Ipswich	12,530	13,011	–481	–0.9
Rothwell – Kippa-Ring	Logan	17,450	17,717	–267	–0.4
Toowoomba – East	Logan	9,780	10,012	–232	–0.6
Slacks Creek	Toowoomba	10,627	10,837	–210	–0.5
Kingston (Qld.)	Middle North	10,544	10,730	–186	–0.4

Source: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

Sources of population growth in SEQ

Natural increase, internal migration (including interstate migration, intrastate migration) and overseas migration are the three primary sources of population growth in Australia. Table 3.10 shows the components of population change in the capital cities of Australia. Brisbane is the most popular destination for internal migrants in Australia. Brisbane has received the largest net internal migration inflow of the capital cities, whereas Sydney and Melbourne lost a large number of internal migrants from 2018–19 to 2019–20. Brisbane had a similar net natural increase (34,850) and net overseas migration (34,958).

Table 3.10: Components of population change in the capital cities from 2018–2019 to 2019–2020

Capital cities	Net natural increase	Net internal migration	Net overseas migration
Melbourne	67,130	- 7,014	133,452
Sydney	75,812	- 55,642	124,002
Brisbane	34,850	29,693	34,958
Perth	29,447	- 667	36,184
Adelaide	9,763	- 6,301	26,565
Canberra	6,786	- 844	5,478
Hobart	1,665	551	3,839
Darwin	3,078	- 5,077	674

Source: Australian Bureau of Statistics, Regional population 2018–2019 to 2019–2020 financial year.

Table 3.11 shows the sources of population growth of the 12 LGAs of the SEQ region from 2017 to 2020. The total population increase for that period was 225,698. Internal migration is the most dominant source of population growth in the region. Gold Coast, Sunshine Coast and Moreton Bay LGAs have received the highest internal migration between 2017 and 2020, reflecting people's coastal living preferences. The Toowoomba LGA has received negative internal migration in this period (–95). Overseas migration is the second most important source of population growth in the region. Brisbane LGA has received the most overseas migrants in the region (35,672), followed by Gold Coast (15,287).

Table 3.11: Sources of population growth in the LGAs from 2017–18 to 2019–20

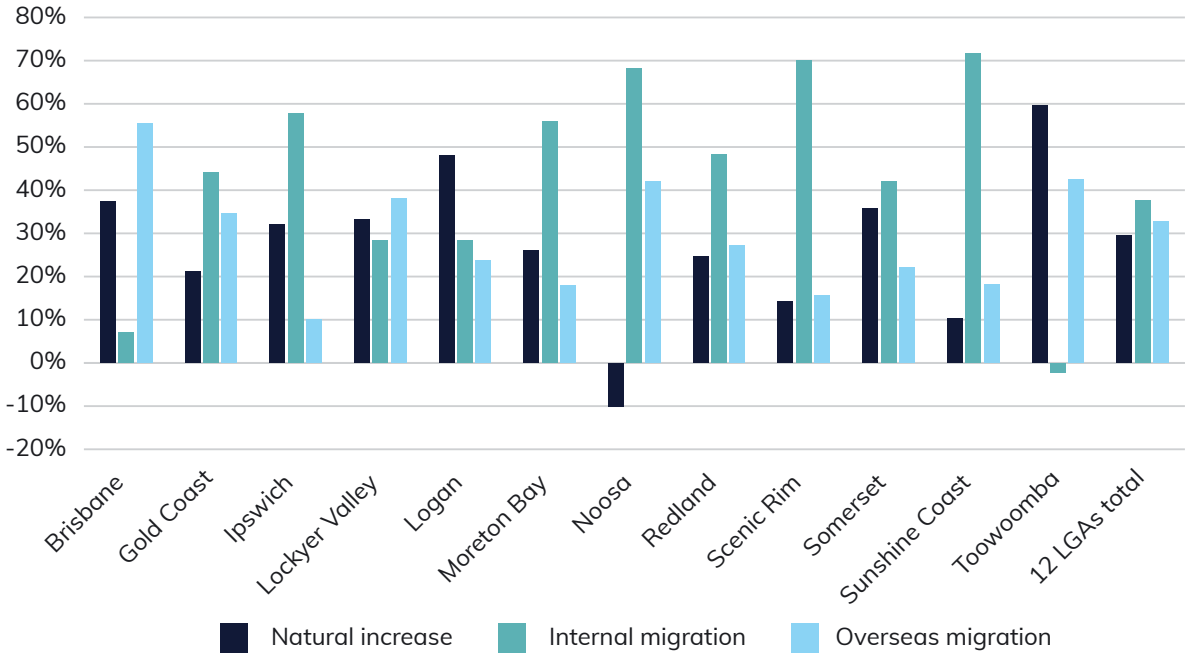
LGAs	Estimated resident population, 2017	Estimated resident population, 2020	Estimated resident population, changes 2017–2020	Total natural increase 2017–2020	Total net internal migration 2017–2020	Total net overseas migration 2017–2020
Brisbane	1,208,663	1,272,999	64,336	24,076	4,588	35,672
Gold Coast	591,141	635,191	44,050	9,379	19,384	15,287
Ipswich	206,500	229,845	23,345	7,498	13,484	2,363
Lockyer Valley	40,219	42,267	2,048	683	582	783
Logan	320,487	341,985	21,498	10,314	6,079	5,105
Moreton Bay	449,213	479,639	30,426	7,950	17,042	5,434
Noosa	54,642	56,587	1,945	–197	1,325	817
Redland	154,590	160,331	5,741	1,412	2,775	1,554
Scenic Rim	41,749	43,625	1,876	266	1,316	294
Somerset	25,529	26,279	750	268	316	166
Sunshine Coast	311,142	336,482	25,340	2,626	18,134	4,580
Toowoomba	166,013	170,356	4,343	2,593	- 95	1,845
12 LGAs total	**3,569,888**	**3,795,586**	**225,698**	**66,868**	**84,930**	**73,900**

Source: BCARR analysis of ABS.Stat, ERP and components by LGA (ASGS 2020), 2017 to 2020.

The highest natural increase in the population has occurred in Brisbane (24,076), Logan (10,314), Gold Coast (9,379) and Ipswich (7,498). Noosa has experienced a net negative change in population due to deaths exceeding births in this period (–197).

From 2017 to 2020, 37.6 per cent growth came from internal migration, 32.7 per cent from overseas migration and 29.6 from natural increase in the 12 LGAs of SEQ (see Figure 3.4). Toowoomba has the highest proportion of its population increase due to natural increase, which accounts for nearly 60 per cent of its growth. Logan (48.0 per cent) and Brisbane (37.4 per cent) have the next highest natural increase as their source of growth. However, for Noosa, this category made a negative contribution to the LGA's population growth during this period. Internal migration was the major source of population growth in the Sunshine Coast (71.6 per cent), Scenic Rim (70.1 per cent) and Noosa (68.1 per cent) LGAs in the period of 2017–2020. Moreton Bay and Ipswich also received over 50 per cent of their population growth from net internal migration. Only the Toowoomba LGA recorded a negative contribution from net internal migration.

Figure 3.4: Sources of population growth as a proportion of the population increase from 2017–18 to 2019–20 by LGAs



Source: BCARR analysis of ABS.Stat, ERP and components by LGA (ASGS 2020), 2017 to 2020.

In the Brisbane LGA, overseas migration was the main source of population growth (55.4 per cent). Overseas migration was also an important contributor to population growth for Toowoomba (42.5 per cent), Noosa (42.0 per cent) and Lockyer Valley (38.2 per cent) from 2017 to 2020. However, overseas migration made a relatively minor contribution to population growth in the Ipswich and Scenic Rim LGAs.

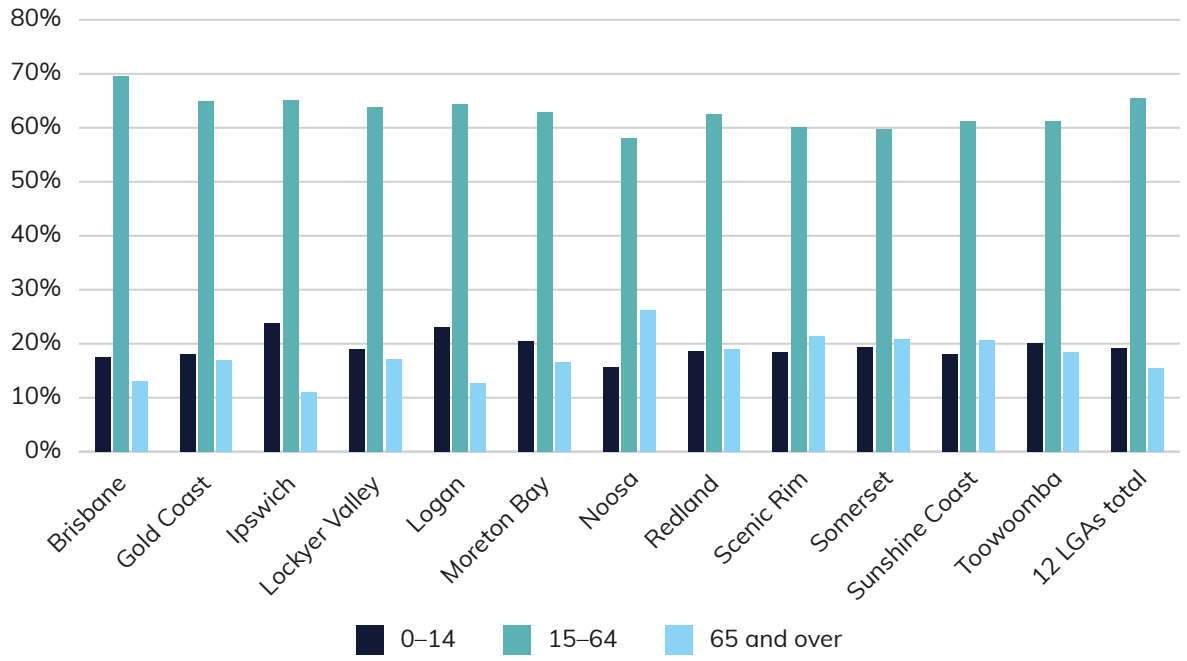
Composition of population growth: age breakdown

This section gives the data on the age composition of the SEQ population and how it has changed over the four years. Figure 3.5 divides the population into 0–14, 15 to 64, and 65 and above age groups, representing children, working-age and older populations. Overall, in the 12 LGAs, 15.5 per cent of people are aged 65 and over, and 19.1 per cent are children, and the rest are the working-age population. Ipswich LGA has the highest representation of children, and Noosa has the lowest representation of children. Brisbane LGA has the highest percentage of the working-age population, and Noosa LGA has the lowest working-age population. On the other hand, Ipswich has the lowest percentage of the older age population. Noosa and Somerset have the highest proportion of the population aged 65 and over in the SEQ region.

Figure 3.6 shows changes in population composition over time in the 12 LGAs. Overall, across the 12 LGAs, the population aged 65 and over has increased more than the other two age groups. All the LGAs, except Toowoomba and Brisbane, have experienced more than 15 per cent increases in their older age population, which shows the widespread effect of an ageing population on the SEQ region. Ipswich (23.0 per cent), Logan (19.9 per cent) and Somerset (21.0 per cent) all show particularly rapid growth in the population aged 65 and over during this period. In contrast, the population of children showed negative growth in Somerset (–2.9 per cent) and Noosa (–0.9 per cent) between 2016 and 2020.

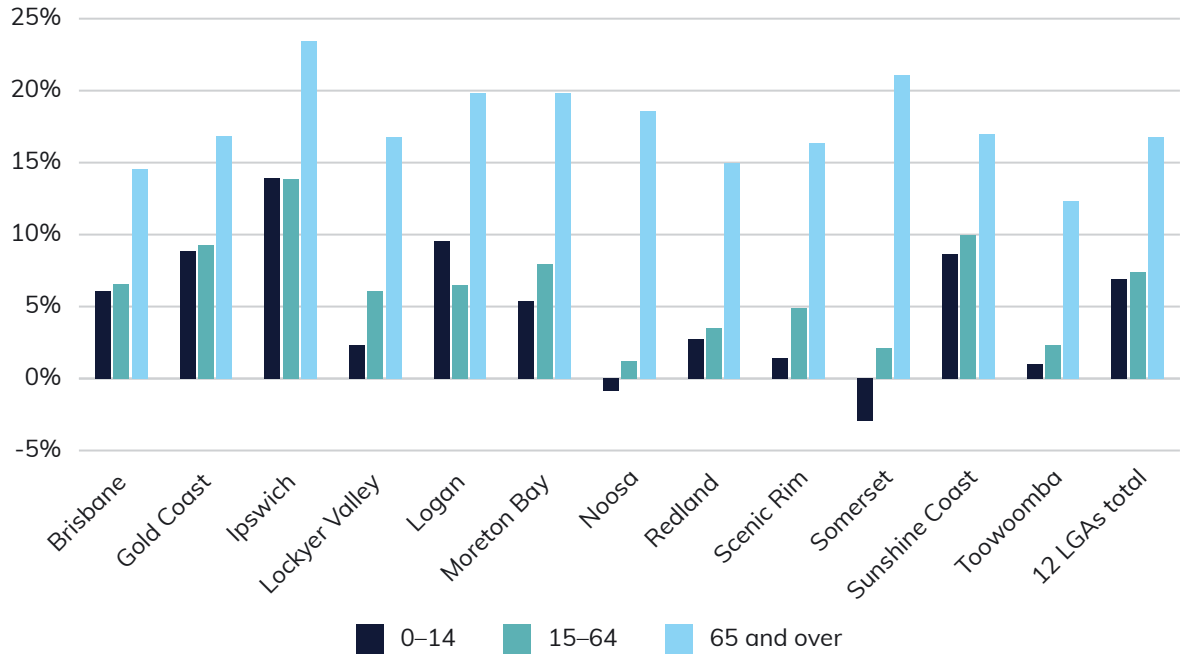
Also of interest is the very strong population growth in the Ipswich LGA across all age groups, with a 13.9 per cent increase in the population aged 0 to 14 years, a 13.9 per cent increase in people aged 15 to 64 years, and 23.0 per cent increase in the older age population.

Figure 3.5: Distribution of population by age groups for 12 SEQ LGAs in 2020



Source: BCARR analysis of ABS.Stat, Regional population by age and sex, 2020.

Figure 3.6: Changes in population by age group in 12 SEQ LGAs, 2016–2020



Source: BCARR analysis of ABS.Stat, Regional population by age and sex, 2016–2020.

3.4 Population-weighted density (PWD)

This report uses PWD instead of average population density. Average population density covers rural land, nature reserves, industrial and other land uses, whereas PWD excludes those land uses. A city where a large proportion of people live in dense areas will have a much higher PWD than the average population density. For more details, see Box 3.2.

Box 3.2 What is PWD? Why is it important?

PWD is a weighted average of the density of all the parcels of land in the city, with the population of each parcel of land providing the weighting. PWD gives equal weight to each person rather than to the land (Barnes 2001). This means land that is not populated is excluded from the measurement (Morton 2014). This altered method of measurement increases the density results that would have otherwise been presented using the average density calculation that includes all of the lands within the official city boundaries. Morton (2014) considers PWD more as a measurement of clustering of people. The results present unequal weighting based on the relative density of the neighbourhood.

PWD can be calculated in census years based on Mesh Block population counts, where Mesh Blocks are used to represent parcels of land, and Mesh Blocks with a zero population are excluded from the measurement. BCARR has developed estimates of Mesh Block populations for 2020 that adjust the 2016 census Mesh Block population counts based on the change in the ABS' ERP between 2016 and 2020 at the SA2 scale. The estimated Mesh Block populations for 2020 are then used to derive PWD estimates for the required SEQ geographies.

Population-weighted density in 2020: LGAs

Population density varies across the SEQ region. The level of population density in any area depends on housing density, average household size, and non-residential land in an area. Therefore this report measures the population-weighted density. The densest LGA in SEQ is Brisbane LGA (5,445 persons per km²), followed by Gold Coast (5,308 persons per km²) and Logan (2,887 persons per km²). The Somerset, Lockyer Valley and Scenic Rim LGAs have the lowest PWD (See Table 3.12).

Table 3.12: Population-weighted density in the LGAs as at 30 June 2020

LGAs	Population-weighted density, 2020
Brisbane	5,445
Gold Coast	5,308
Ipswich	2,828
Lockyer Valley	629
Logan	2,887
Moreton Bay	2,852
Noosa	1,643
Redland	2,504
Scenic Rim	641
Somerset	594
Sunshine Coast	2,724
Toowoomba	1,765
12 LGAs total	**3,976**

Note: The PWD estimates in this table are calculated by directly aggregating the Mesh Block data to the LGA scale and differ from the estimates in Table 3.13, which were derived via a two-stage calculation method (from Mesh Blocks to SA2s to sub-regions).

Sources: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020 and Census of Population and Housing: Mesh Block Counts, Australia, 2016 (ABS 2017b).

Population-weighted density in 2020: BCARR rings and sub-regions[7]

The PWD in the SEQ region overall is 4,196 persons per km². Inner Brisbane has the highest PWD in the region, which is 12,444 persons per km². No other sub-region has such a high density, which is not surprising since it contains the Brisbane CBD (see Table 3.13). Middle South (4,333 persons per km²) and Middle North (4,130 persons per km²) have the second and third highest PWD in the Greater Brisbane region after Inner Brisbane. Middle Brisbane ring has a PWD of 3,986 people per km², whereas the Outer Brisbane average is 2,813 persons per km². In the Outer Brisbane sub-region, Ipswich and Moreton Bay have the highest densities.

Outside of Greater Brisbane, Gold Coast has the highest density per km², followed by the Sunshine Coast, Toowoomba urban area and Noosa. Toowoomba urban area has a higher population density than Toowoomba LGA as a whole (see Table 3.12 and 3.13), which is expected. The Somerset, Lockyer Valley and Scenic Rim LGAs have the lowest population density in the region.

Table 3.13: Population-weighted density in the SEQ sub-regions as of 30 June 2020

BCARR rings/sub-regions	Population-weighted density, 2020
INNER Brisbane*	12,444
MIDDLE Brisbane – TOTAL*	3,986
Middle East	3,377
Middle North	4,129
Middle South	4,333
Middle West	3,579
OUTER Brisbane –TOTAL	2,813
Ipswich	2,973
Redland	2,492
Logan	2,726
Moreton Bay	2,906
TOTAL – GREATER BRISBANE	4,430
Rest of SEQ	3,742
Gold Coast	5,385
Sunshine Coast	2,776
Noosa	1,526
Toowoomba (urban part)	2,027
Scenic Rim	644
Lockyer Valley	627
Somerset	602
TOTAL – SOUTH EAST QUEENSLAND	**4,196**

Note: The PWD estimates in this table are derived via a two-stage calculation method (from Mesh Blocks to SA2s to sub-regions), and differ from the estimates in Table 3.12, which were directly aggregated from Mesh Blocks to LGAs.

* The Inner and Middle Brisbane Rings together comprise the City of Brisbane LGA. See Table 1.3 and Figure 1.2 in Chapter 1 for these classifications.

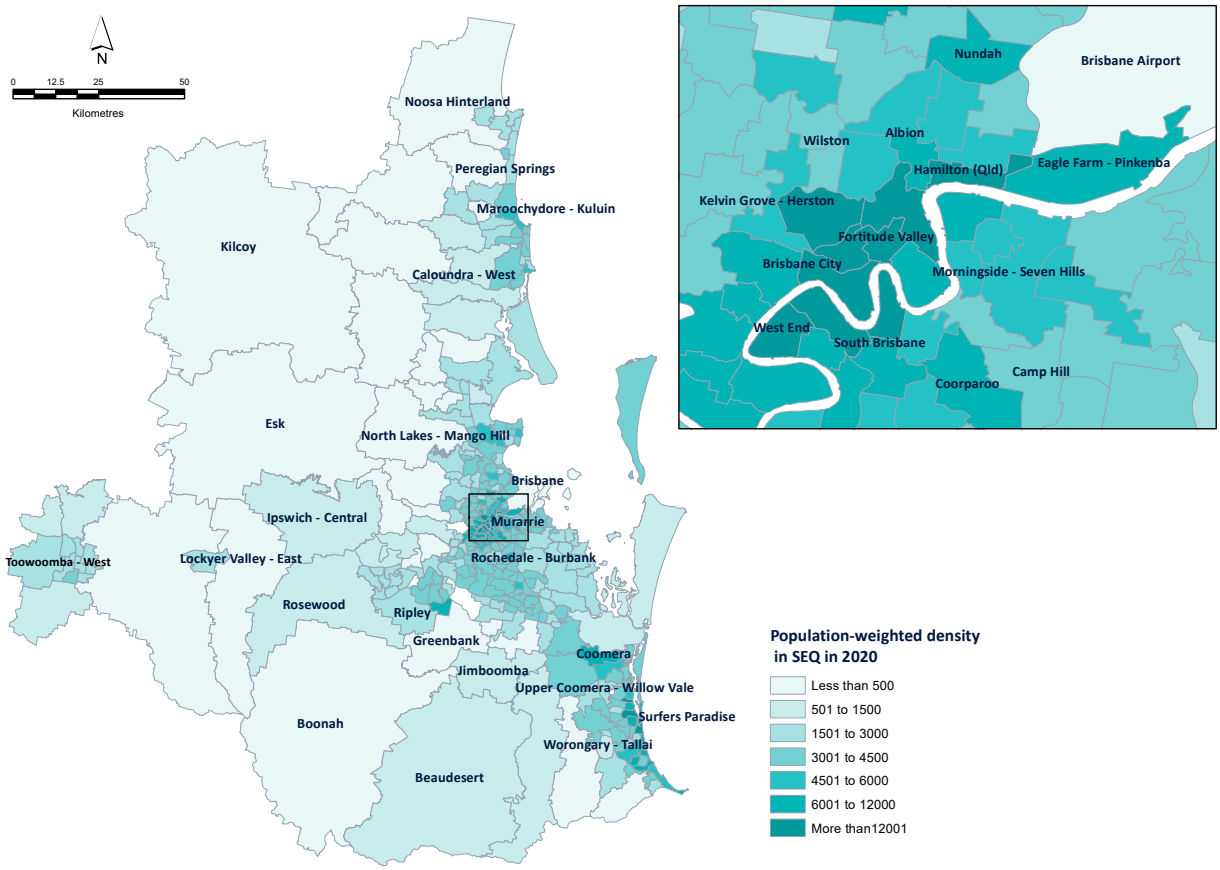
Sources: BCARR analysis of ABS Cat.3218.0 Regional Population Growth Data, 2020 and Census of Population and Housing: MeshBlock Counts, Australia, 2016 (ABS 2017b).

7 The population –weighted density estimates for sub-regions are based on aggregating data from Mesh Blocks to SA2s and then sub-regions, and differ from the LGA-based estimates in the previous section.

Population-weighted density of SEQ in 2020: SA2s

The level of PWD varies a lot across the SA2s in the SEQ region. Figure 3.7 below shows the PWD across SEQ. The density is more along the coast, becoming less toward inland areas. There is a clear pattern of high-density SA2s along the Brisbane River. The ten most densely populated SA2s in SEQ are shown in Table 3.14. The most densely populated SA2s are Fortitude Valley, Brisbane City and South Brisbane. Of the ten most densely populated SA2s, eight are located in Inner Brisbane. The other densely populated SA2s are mainly in the Gold Coast sub-region. Thirteen out of 332 SA2s have a population density of more than 10,000 persons per km².

Figure 3.7: Distribution of population-weighted density in SEQ in 2020



Sources: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020 and Census of Population and Housing: Mesh Block Counts, Australia, 2016.

Table 3.14: The ten most densely populated SA2s in SEQ as of 30 June 2020

SA2s	BCARR rings/sub-regions	Population-weighted density, 2020
Fortitude Valley	Inner	49,133
Brisbane City	Inner	46,208
South Brisbane	Inner	25,046
Hamilton (Qld)	Inner	24,885
Newstead – Bowen Hills	Inner	22,504
Spring Hill	Inner	21,549
Southport – North	Gold Coast	20,808
Kelvin Grove – Herston	Inner	15,773
Surfers Paradise	Gold Coast	14,720
West End	Inner	14,709

Sources: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020 and Census of Population and Housing: Mesh Block Counts, Australia, 2016 (ABS 2017b).

Table 3.15 shows the least densely populated SA2s in the SEQ region, and they are primarily rural or industrial areas. Lake Manchester – England Creek, Brisbane Port – Lytton and Enoggera Reservoir are the three least-populated SA2s in the region. Around 29 SA2s in SEQ have PWD of less than 500 persons per km², and 45 SA2s have less than 1000 persons per km².

Table 3.15: Five least densely populated SA2s in SEQ as of 30 June 2020

SA2s	BCARR rings/sub-regions	Population-weighted density, 2020
Lake Manchester – England Creek	Middle West	0
Brisbane Port – Lytton	Middle East	4
Enoggera Reservoir	Middle West	5
Carole Park	Ipswich	24
Lockyer Valley – West	Lockyer Valley	200

Sources: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020 and Census of Population and Housing: Mesh Block Counts, Australia, 2016 (ABS 2017b).

Change in population-weighted density from 2016 to 2020: LGAs

The SEQ region has around 8.7 per cent population growth from 2016 to 2020, with an average annual growth rate of 2.1 per cent. The population growth has led to a density increase in the region. Table 3.16 shows the density changes across the 12 LGAs in the SEQ region between 2016 to 2020. Gold Coast LGA has the most significant changes in this period; PWD increased from 4,808 persons per km² in 2016 to 5,308 in 2020.

Table 3.16: Changes in population-weighted density of LGAs, 2016 to 2020

LGAs	Population-weighted density, 30 June 2020	Population-weighted density, 30 June 2016	Changes 2016–2020
Brisbane	5,445	5,068	377
Gold Coast	5,308	4,808	500
Ipswich	2,828	2,462	366
Lockyer Valley	629	588	41
Logan	2,887	2,655	232
Moreton Bay	2,852	2,612	240
Noosa	1,643	1,566	77
Redland	2,504	2,378	127
Scenic Rim	641	602	39
Somerset	594	568	25
Sunshine Coast	2,724	2,451	272
Toowoomba	1,765	1,701	64
12 LGAs total	**3,976**	**3,657**	**318**

Note: The PWD estimates in this table are calculated by directly aggregating the Mesh Block data to the LGA scale, and differ from the estimates in Table 3.17, which were derived via a two-stage calculation method (from Mesh Blocks to SA2s to sub-regions).

Sources: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2016–2020 and Census of Population and Housing: Mesh Block Counts, Australia, 2016 (ABS 2017b).

Brisbane LGA has the second-highest shift in population density which is 378 persons per km², followed by Ipswich (366 persons per km²). Other LGAs which have significant changes in PWD were Logan (232 persons per km²), Moreton Bay (240 persons per km²) and Sunshine Coast (272 persons per km²). The lowest changes in PWD occur in Somerset (25 persons per km²), Scenic Rim (39 persons per km²) and Toowoomba (64 persons per km²).

Change in population-weighted density from 2016 to 2020: BCARR rings and sub-regions

Table 3.17 below shows the PWD changes in the SEQ sub-regions. Overall the SEQ region density has increased 485 persons per km² between 2016 to 2020. The highest increase (2425 persons per km²) in PWD has occurred in Inner Brisbane, from 10,019 persons per km² to 12,444 persons per km² from 2016 to 2020. In the Middle ring, the largest increases in density occurred in the Middle North and Middle South. In the Outer Ring, a significant increase in density occurred in Ipswich and Moreton Bay. Greater Brisbane's PWD has increased by 539 persons per km² from 2016 to 2020. Outside of Greater Brisbane, Gold Coast has the highest increase in PWD in the region, followed by Sunshine Coast.

Table 3.17: Changes in population-weighted density in the SEQ sub-regions from 2016 to 2020

BCARR rings/sub-region	Population-weighted density, 2020	Population-weighted density, 2016	Changes 2016–2020
INNER Brisbane*	12,444	10,019	2,425
MIDDLE Brisbane – TOTAL*	3,986	3,719	268
Middle East	3,377	3,221	156
Middle North	4,129	3,817	313
Middle South	4,333	4,043	290
Middle West	3,579	3,356	223
OUTER Brisbane – TOTAL	2,813	2,568	245
Ipswich	2,973	2,468	505
Redland	2,492	2,379	113
Logan	2,726	2,660	67
Moreton Bay	2,906	2,614	292
TOTAL – GREATER BRISBANE	4,430	3,891	539
Rest of SEQ	3,742	3,365	377
Gold Coast	5,385	4,837	547
Sunshine Coast	2,776	2,494	282
Noosa	1,526	1,489	37
Toowoomba (urban part)	2,027	1,979	49
Scenic Rim	644	602	42
Lockyer Valley	627	590	37
Somerset	602	569	32
TOTAL – SOUTH EAST QUEENSLAND	4,196	3,711	485

Note: The PWD estimates in this table are derived via a two-stage calculation method (from Mesh Blocks to SA2s to sub-regions), and differ from the estimates in Table 3.16, which were directly aggregated from Mesh Blocks to LGAs.

* The Inner and Middle Brisbane Rings together comprise the City of Brisbane LGA. See Table 1.3 and Figure 1.2 in Chapter 1 for these classifications.

Sources: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2016–2020 and Census of Population and Housing: Mesh Block Counts, Australia (ABS 2017b).

Change in population-weighted density from 2016 to 2020: SA2s

Table 3.18 shows the highest and lowest PWD changes in the SA2s of the SEQ region from 2016 to 2020. The highest increases in density occurred in Fortitude Valley, Brisbane City and South Brisbane. All of them are located in Inner Brisbane, and these 3 SA2s also had the highest PWD in 2020. Most of the density increase has occurred in the Inner Brisbane and Gold Coast areas.

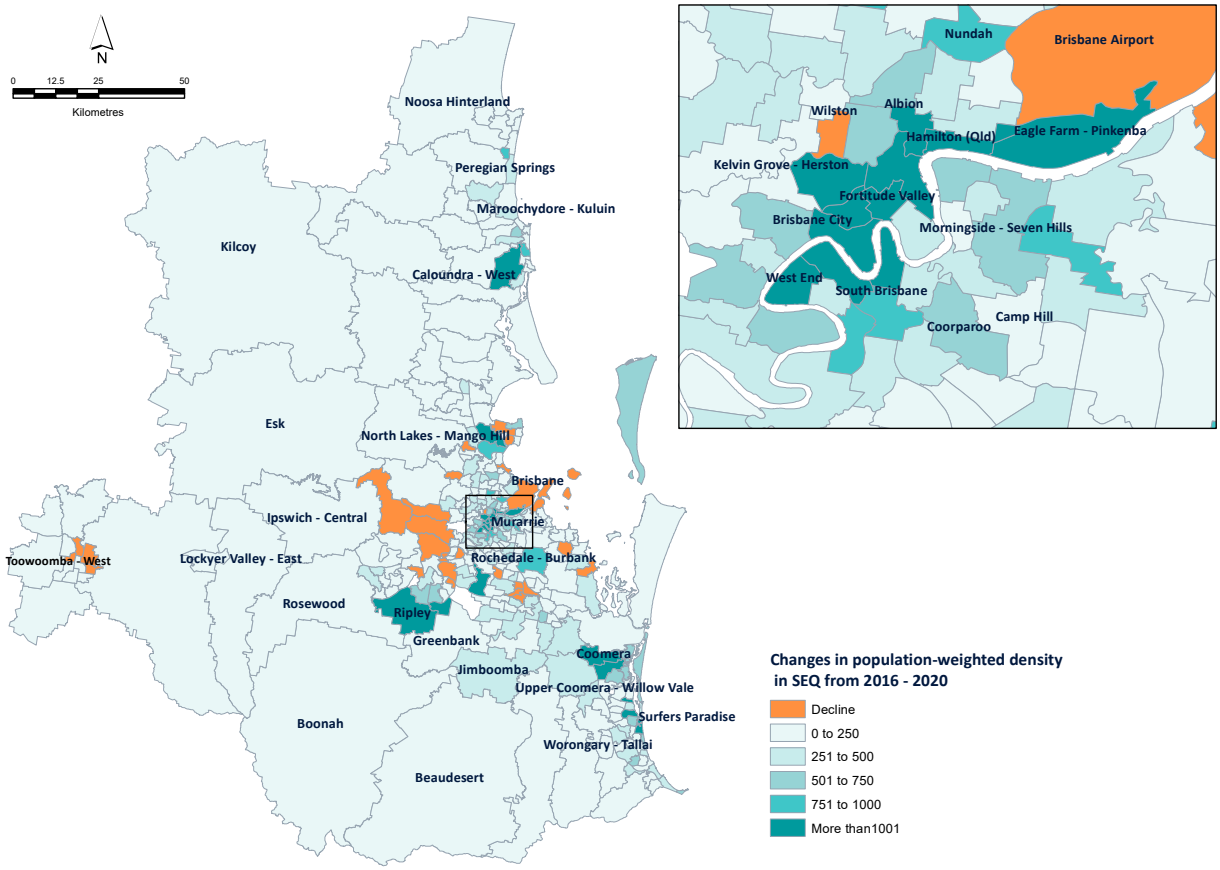
Table 3.18: Highest and lowest changes of population-weighted density in SA2s from 2016 to 2020

SA2s	BCARR rings/ sub-region	Highest changes 2016–2020	SA2s	BCARR rings/ sub-region	Lowest changes 2016–2020
Fortitude Valley	Inner	10,389	**Woodridge**	Logan	–200
Brisbane City	Inner	7,018	**Riverview**	Ipswich	–118
South Brisbane	Inner	6,721	**Logan Central**	Logan	–102
Newstead – Bowen Hills	Inner	6,575	**Sandgate – Shorncliffe**	Middle North	–80
Pimpama	Gold Coast	3,851	**Slacks Creek**	Logan	–73

Sources: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2016–2020 and Census of Population and Housing: Mesh Block Counts, Australia (ABS 2017b).

Among the 332 SA2s, nearly three hundred of them experienced a positive increase of PWD, five had no changes, and the rest of them experienced negative density changes. Woodbridge, Riverview and Logan Central had the largest decrease of PWD in the region. Figure 3.8 shows changes in PWD in SEQ from 2016 to 2020.

Figure 3.8: Changes in population-weighted density in SEQ from 2016 to 2020



Sources: BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2016–2020 and Census of Population and Housing: Mesh Block Counts, Australia (ABS 2017b).

3.5 Projected future population

This section presents the Queensland Government's projections of the future population of SEQ at the LGA, sub-region and SA2 scale (Queensland Government 2018b). The projections were published in 2018 and cover the period out to 2041. Given the timing of their release, the projections do not factor in the impacts of the pandemic on migration flows and future population growth. The Queensland Government report presents low, medium and high projections, and this report largely relies on the medium series of population projections. Further information on the Queensland Government projections is provided in Box 3.3.

Projected future population: LGAs

Table 3.19 shows the SEQ low, medium and high population projections. According to the high projections, the 12 LGAs of SEQ are projected to increase their total population by 57.4 per cent to reach a population of 5.97 million by 2041. With the low projections, the population is projected to be 4.98 million in 2041, which is a 31.3 per cent increase.

Table 3.19: SEQ low, medium and high population projection for 2021–2041 and estimated resident population 2020

12 LGA's total projection	Estimated resident population, 2020	2041 projection	Percentage increase
Low	3,795,586	4,983,609	31.3
Medium	3,795,586	5,442,029	43.4
High	3,795,586	5,973,170	57.4

Note: Based on data for 12 LGAs, and so includes rural areas of Toowoomba LGA that are not part of SEQ.

Sources: BCARR analysis of Queensland Government population projections, 2018 and BCARR analysis of ABS Cat.3218.0 Regional Population Growth Data, 2020.

Box 3.3 What is a population projection, and how is it calculated?

The Queensland Government's population projections (Queensland Government 2018b) consider issues such as fertility and mortality rates, overseas and internal migration, demand for housing versus supply of dwellings, data reliability and availability, the rate of population change, and a region's share of the overall state population. The future size, distribution, and age structure of the population of Queensland and its regions will be the outcome of future levels of fertility, mortality and migration. As such, a demographic cohort component model (incorporating assumptions about future levels of these components of population change) is used to model these populations.

Future population change for smaller geographical levels, such as LGAs and SA2s, is less likely to result from demographic factors alone. Population change in small geographical urban areas is mainly a function of available land supply and constraints and consequent dwelling construction. For example, large amounts of available land supply are expected to result in significant future population growth in areas such as Ripley, Jimboomba (Yarrabilba) and Greenbank (Greater Flagstone). Constraints on land availability for future dwelling construction are projected to result in slowing population growth in areas such as Noosa.

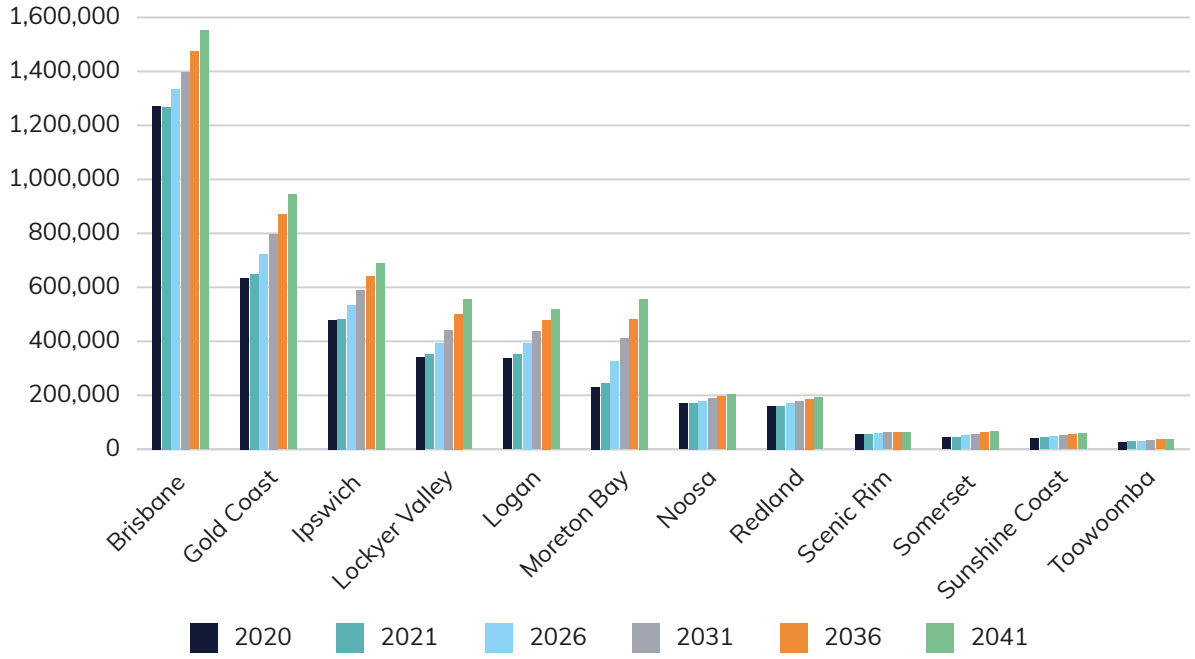
Moreover, the 2018 edition of the Queensland Government's population projections also incorporate information on estimated dwelling yields in Priority Development Areas (PDAs), formerly known as Urban Development Areas, in the Greater Brisbane geographical region. PDAs are parcels of land within Queensland that have been identified for specific accelerated development with a focus on economic growth. Data on PDAs were provided by Economic Development Queensland.

Figure 3.9 and Table 3.20 shows the projected population increase of the 12 LGAs between 2020 and 2041. This is based on the Queensland Government's medium series of forecasts. The 2020 ABS ERP data is used as a reference point. Overall, the 12 LGAs population in 2041 is projected to be 5.44 million, which is a 43.4 per cent increase compared to the 2020 ERP (Figure 3.10).

Between 2020 and 2041, the largest population increases are projected for the Ipswich (327,804), Gold Coast (308,495) and Brisbane (278,150) LGAs. Logan and Moreton Bay are also expected to add more than 200,000 new residents each. The Noosa LGA has the lowest projected growth of the 12 LGAs, at just 8,412 extra persons.

Among the 12 LGAs, Ipswich LGA is expected to experience the highest percentage increase in population, around 142 per cent, which is three times higher than the SEQ projection. Significant increases in population are also projected for Logan (62.1 per cent), Scenic Rim (54.2 per cent) and Sunshine Coast (53.9 per cent) over the next 20 years. Amongst the LGAs, Noosa (14.9 per cent), Toowoomba (19.9 per cent) and Redland (20.0 per cent) are projected to have the lowest rates of growth, according to Queensland Government projections. As mentioned earlier, some of the LGAs have land constraints which are expected to inhibit future growth, such as Noosa. Other LGAs might have more scope for future development, with plenty of land availability. These factors are considered during the development of the population projections.

Figure 3.9: Projected population of LGAs (medium projection), 2021–2041 and estimated resident population, 2020



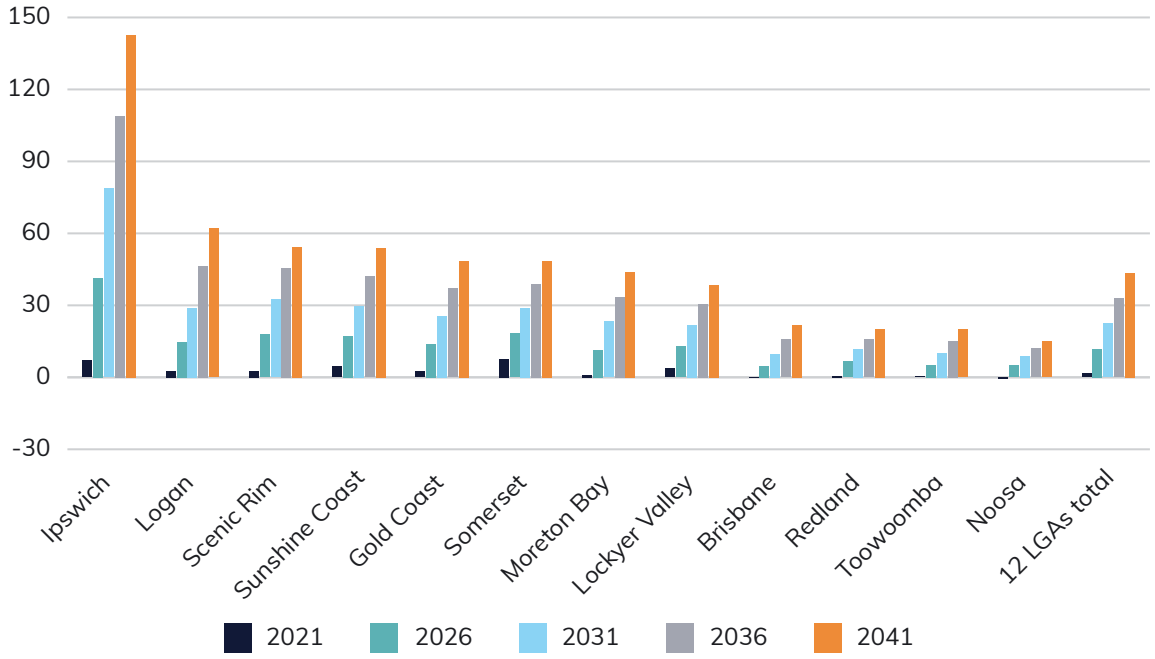
Sources: BCARR analysis of Queensland Government population projections, 2018 and BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

Table 3.20: Projected population of LGAs (medium projection), 2021–2041 and estimated resident population 2020

LGAs	Estimated resident population, 2020	Population according to 2041 medium projection	Change in population, 2020–2041 (medium projection)	Percentage change in population, 2020–2041 (medium projection)
Brisbane	1,272,999	1,551,149	278,150	21.9
Gold Coast	635,191	943,686	308,495	48.6
Moreton Bay	479,639	690,602	210,963	44.0
Logan	341,985	554,327	212,342	62.1
Sunshine Coast	336,482	518,004	181,522	53.9
Ipswich	229,845	557,649	327,804	142.6
Toowoomba	170,356	204,332	33,976	19.9
Redland	160,331	192,431	32,100	20.0
Noosa	56,587	64,999	8,412	14.9
Scenic Rim	43,625	67,290	23,665	54.2
Lockyer Valley	42,267	58,542	16,275	38.5
Somerset	26,279	39,017	12,738	48.5
12 LGAs total	**3,795,586**	**5,442,029**	**1,646,443**	**43.4**

Sources: BCARR analysis of Queensland Government population projections, 2018 and BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

Figure 3.10: Percentage change in LGAs medium population projection, 2021–2041, based on ERP 2020



Source: BCARR analysis of Queensland Government population projections, 2018.

Projected future population: BCARR rings and sub-regions

Table 3.21 shows the population projections for the SEQ sub-regions. Within Greater Brisbane, Inner Brisbane is projected to grow from 298,546 to 406,004, which is a 36 per cent increase over the 20 years. Middle Brisbane is projected to grow 17.5 per cent (170,426 new residents) and Outer Brisbane 64.6 per cent, which is 783,456 additional new residents. In Outer Brisbane, Ipswich is projected to grow 142 per cent, followed by Logan (62 per cent) and Moreton Bay (44 per cent). The Ipswich sub-region alone is projected to add 327,937 more new residents in 20 years.

Redland has the least projected growth within the Outer Brisbane ring. Within the rest of SEQ, Sunshine Coast (54.7 per cent), Scenic Rim (54.2 per cent), and Gold Coast (48.6 per cent) have the highest projected growth rates, while Gold Coast and Sunshine Coast have the largest projected increases in population (at 308,495 and 181,790 persons, respectively).

To illustrate more visibly, Figures 3.11 and 3.12 show growth projections for Brisbane's Inner, Middle and Outer rings as well as the Rest of SEQ, looking at how the population is expected to change at 5-year intervals between 2021 and 2041. It shows that Outer Brisbane will accommodate more of the future population growth along with Inner Brisbane.

Table 3.21: SEQ sub-regions population projection 2021–2041 and estimated resident population, 2020

BCARR rings/sub-regions	Estimated resident population, 2020	Projected population, 2041	2041 number increase	2041 per cent increase
INNER Brisbane*	298,546	406,004	107,458	36.0
MIDDLE Brisbane – TOTAL*	974,234	1,144,660	170,426	17.5
Middle East	82,790	92,059	9,269	11.2
Middle North	228,486	268,513	40,027	17.5
Middle South	381,849	462,367	80,518	21.1
Middle West	281,109	321,721	40,612	14.4
OUTER Brisbane – TOTAL	1,212,039	1,995,495	783,456	64.6
Ipswich	229,818	557,755	327,937	142.7
Redland	160,331	192,431	32,100	20.0
Logan	341,985	554,327	212,342	62.1
Moreton Bay	479,905	690,982	211,077	44.0
TOTAL – GREATER BRISBANE	2,484,819	3,546,159	1,061,340	42.7
Rest of SEQ	1,279,937	1,862,046	582,109	45.5
Gold Coast	635,191	943,686	308,495	48.6
Sunshine Coast	332,562	514,352	181,790	54.7
Noosa	60,487	68,651	8,164	13.5
Toowoomba (urban part)	139,526	170,508	30,982	22.2
Scenic Rim	43,625	67,290	23,665	54.2
Lockyer Valley	42,263	58,545	16,282	38.5
Somerset	26,283	39,014	12,731	48.4
TOTAL – SOUTH EAST QUEENSLAND	**3,764,756**	**5,408,205**	**1,643,449**	**43.7**

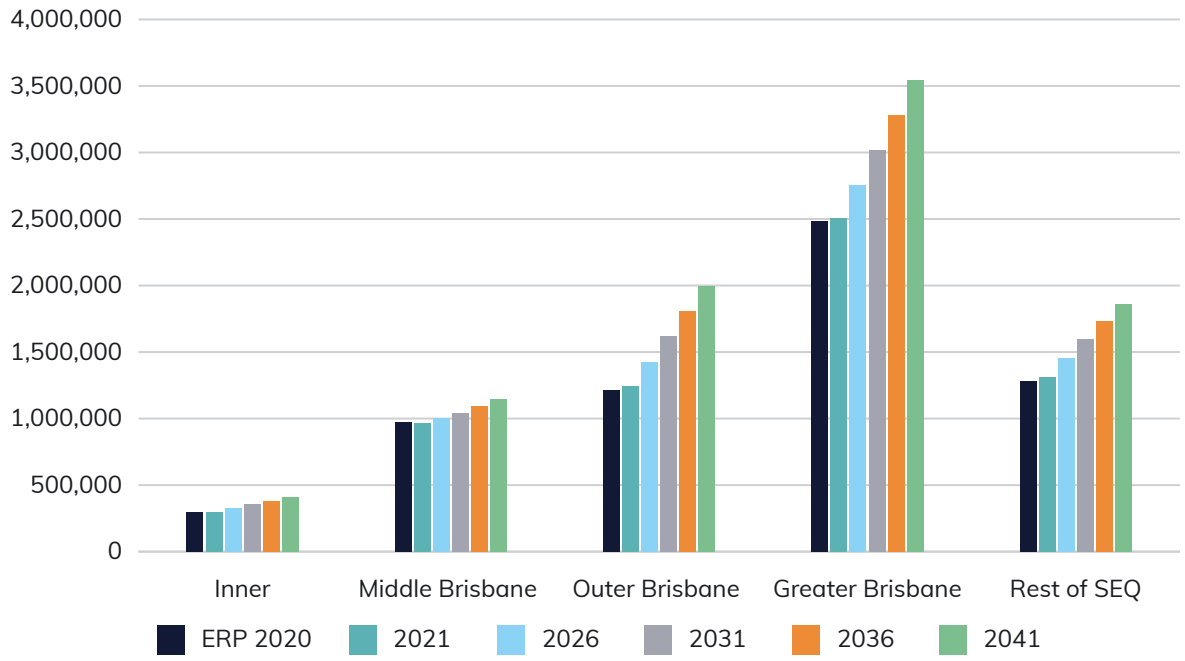
Notes:

* The Inner and Middle Rings together comprise the City of Brisbane LGA. See Table 1.3 and Figure 1.2 in Chapter 1 for these classifications.

^ The SEQ total differs from the 12 LGA total in the preceding table, which includes the whole of Toowoomba LGA. This table includes only the urban parts of Toowoomba LGA.

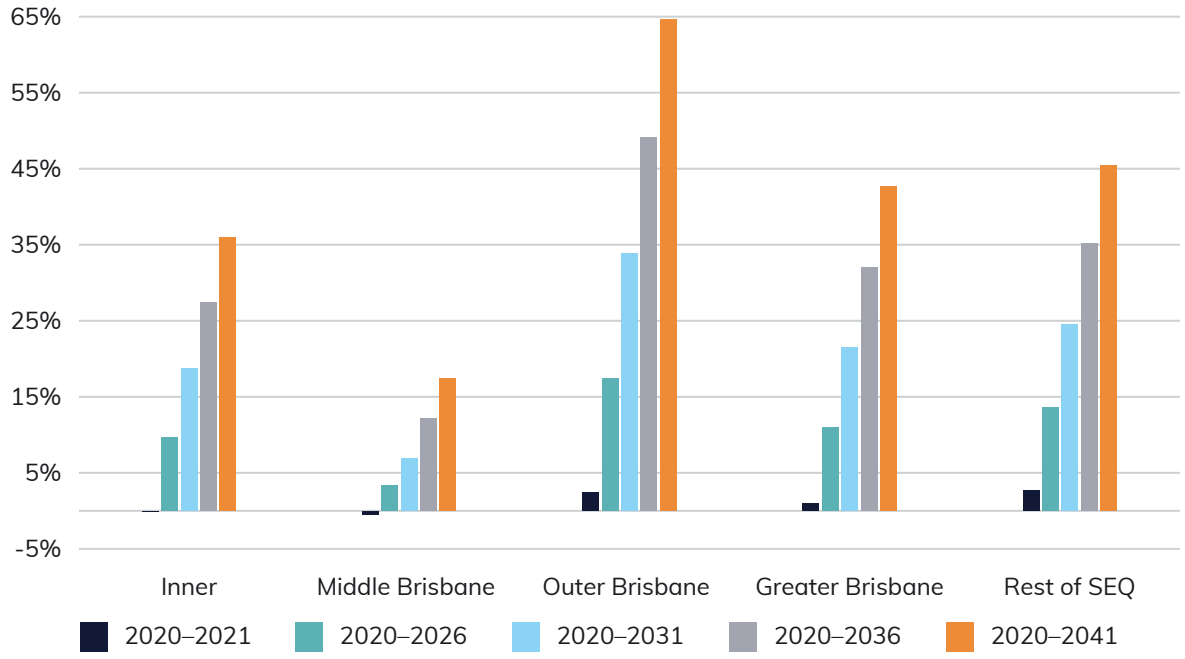
Sources: BCARR analysis of Queensland Government population projections, 2018 (medium projections) and BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

Figure 3.11: SEQ BCARR rings population projections from 2021 to 2041 and estimated resident population, 2020



Sources: BCARR analysis of Queensland Government population projections, 2018 (medium projections) and BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

Figure 3.12: Projected population growth rates of SEQ sub-regions, 2020–2041



Source: BCARR analysis of Queensland Government population projections, 2018 (medium projections).

Projected future population: SA2s

Table 3.22 shows the SA2s that are projected to have the largest population increase between 2020 and 2041. The largest projected increases are for Ripley (116,575), Greenbank (74,109) and Jimboomba (57,890). Ripley is a newly developing area in the Ipswich LGA, which is expected to see an 1195 per cent increase in its population over the 20 years. As can be seen from Figure 3.13, Greenbank and Jimboomba are neighbouring SA2s in the Logan LGA, located on the southern fringe of the existing Brisbane urban area. In addition to the very rapid growth projected for Ripley, the Greenbank and Rosewood SA2s are also projected to have more than a 400 per cent increase in their population between 2020 and 2041.

Four of the 10 SA2s with the largest projected population increases are located in the Ipswich LGA, which is the fastest-growing region in SEQ. Others are located in the Logan, Gold Coast and Sunshine Coast LGAs.

Table 3.22: SA2s with the largest projected population increase in number between 2020 and 2041

SA2s	BCARR rings/ sub-region	2041 projection	Estimated resident population, 2020	Change in population, 2020–2041	Percentage change, 2020–2041
Ripley	Ipswich	126,334	9,759	116,575	1,195
Greenbank	Logan	89,924	15,815	74,109	469
Jimboomba	Logan	93,461	35,571	57,890	163
Coomera	Gold Coast	75,606	19,724	55,882	283
Rosewood	Ipswich	67,975	13,478	54,497	404
Caloundra – West	Sunshine Coast	81,280	27,992	53,288	190
Springfield Lakes	Ipswich	73,256	23,535	49,721	211
Landsborough	Sunshine Coast	49,658	13,094	36,564	279
Bellbird Park – Brookwater	Ipswich	54,874	18,554	36,320	196
Surfers Paradise	Gold Coast	50,209	28,160	22,049	78

Sources: BCARR analysis of Queensland Government population projections, 2018 (medium projections) and BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

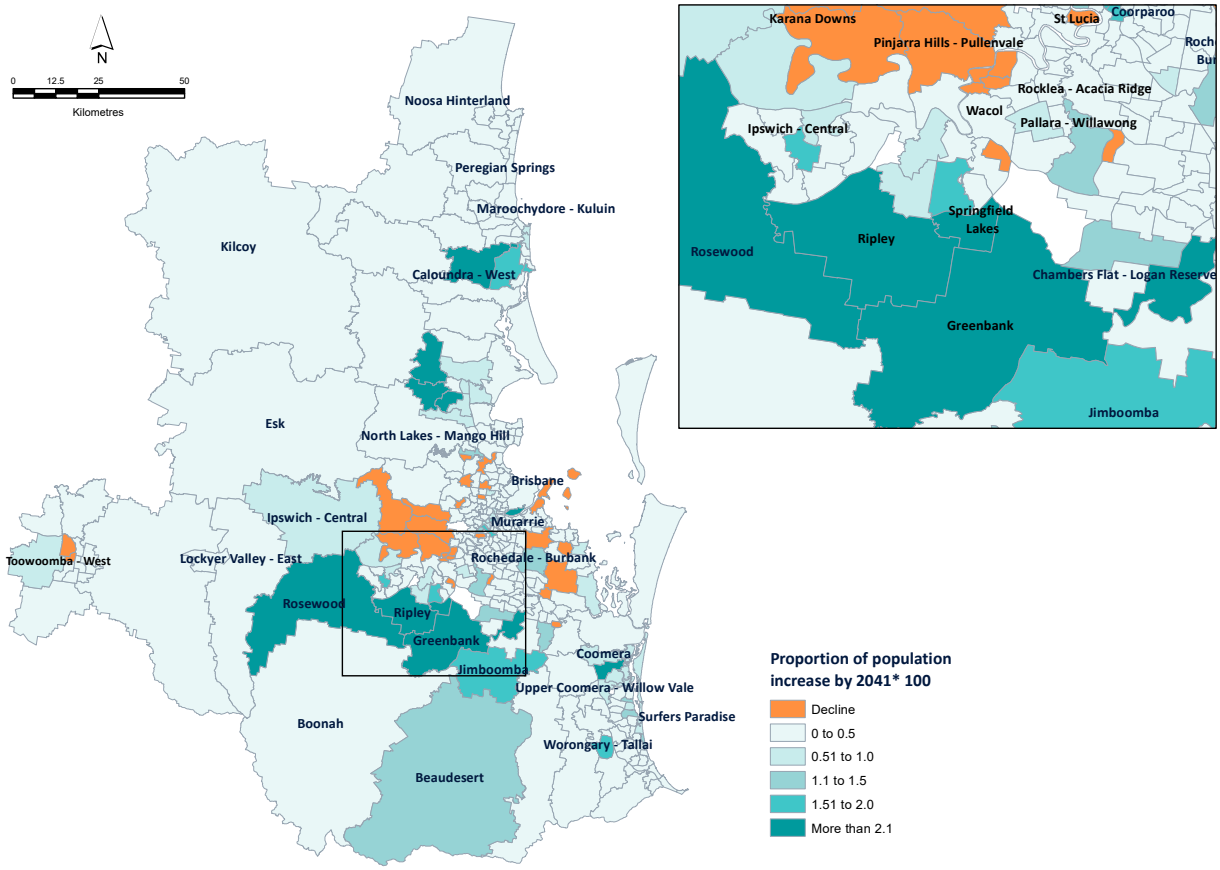
Table 3.23 shows the SA2s that are expected to experience the most rapid population growth over the 20 year period. Most of these SA2s are located in the Ipswich, Moreton Bay, Logan, Gold Coast and Sunshine Coast sub-regions. As discussed above, Ripley and Greenbank are projected to see the most rapid population increase along with Upper Caboolture (434 per cent). Upper Caboolture is another future growth area of SEQ. As discussed in the next chapter, the Caboolture West priority growth area is forecast to accommodate more than 65,000 people by 2041.

Table 3.23: SA2s with largest population percentage increase between 2020 to 2041

SA2s	BCARR rings/ sub-region	Estimated resident population, 2020	2041 projection	Changes in population, 2020–2041	Percentage change, 2020–2041
Ripley	Ipswich	9,759	126,334	116,575	1,195
Greenbank	Logan	15,815	89,924	74,109	469
Upper Caboolture	Moreton Bay	3,425	18,306	14,881	434
Rosewood	Ipswich	13,478	67,975	54,497	404
Eagle Farm – Pinkenba	Middle North	1,485	7,246	5,761	388
Morayfield	Moreton Bay	5,412	24,771	19,359	358
Wamuran	Moreton Bay	4,381	18,673	14,292	326
Coomera	Gold Coast	19,724	75,606	55,882	283
Landsborough	Sunshine Coast	13,094	49,658	36,564	279
Springfield Lakes	Ipswich	23,535	73,256	49,721	211
Chambers Flat – Logan Reserve	Logan	7,260	22,404	15,144	209

Sources: BCARR analysis of Queensland Government population projections, 2018 (medium projections) and BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

Figure 3.13: Projected growth rate of SA2 population from 2020 to 2041



Source: BCARR analysis of Queensland Government population projections, 2018 (medium projections) and BCARR analysis of ABS Cat. 3218.0 Regional Population Growth Data, 2020.

Table 3.24 shows the top five projected population increase SA2s over the four sub-periods: 2021–2026, 2026–2031, 2031–2036 and 2036–2041. This shows how these SA2s will evolve over time and the shifting focus areas of development in SEQ. Ripley in the Ipswich LGA is the principal growth SA2 in all four sub-periods. However, Jimboomba is more prominent early in the period, Greenbank becomes a more significant contributor to growth as time progresses, and Springfield Lakes emerges as an important contributor after 2036. These projected top growth SA2s are located mainly in the Ipswich, Logan and Gold Coast LGAs.

Table 3.24: Top five population increase SA2s 2021–2026, 2026–2031, 2031–2036 and 2036–2041

SA2s	BCARR rings	2021–2026	SA2s	BCARR rings	2026–2031
Ripley	Ipswich	29,585	Ripley	Ipswich	27,674
Jimboomba	Logan	17,798	Greenbank	Logan	16,148
Coomera	Gold Coast	12,661	Coomera	Gold Coast	15,798
Rosewood	Ipswich	12,358	Caloundra – West	Sunshine Coast	15,047
Caloundra – West	Sunshine Coast	11,620	Rosewood	Ipswich	14,999

SA2s	BCARR rings	2031–2036	SA2s	BCARR rings	2036–2041
Ripley	Ipswich	23,554	Ripley	Ipswich	29,953
Greenbank	Logan	21,348	Greenbank	Logan	22,670
Coomera	Gold Coast	14,682	Springfield Lakes	Ipswich	14,460
Jimboomba	Logan	13,478	Rosewood	Ipswich	13,346
Caloundra – West	Sunshine Coast	12,935	Coomera	Gold Coast	13,018

Sources: BCARR analysis of Queensland Government population projections, 2018 (medium projections) and BCARR analysis of ABS Cat.3218.0 Regional Population Growth Data, 2020.

Projected future population by age groups

Table 3.25 and Figure 3.14 shows the population projection by age groups and LGA in ten and twenty years. The Ipswich LGA will have the most significant percentage of the younger population both in 2031 and 2041, followed by Logan, Moreton Bay and Somerset LGAs. Brisbane, Ipswich and Gold Coast are projected to have the highest percentage of the working-age population both in 2041 and in 2031. The highest proportion of the older population in both 2031 and 2041 is projected to be in Noosa (30.3 and 33.0 per cent), Scenic Rim (26.4 and 29.2 per cent) and Redland (25.5 and 28.3 per cent).

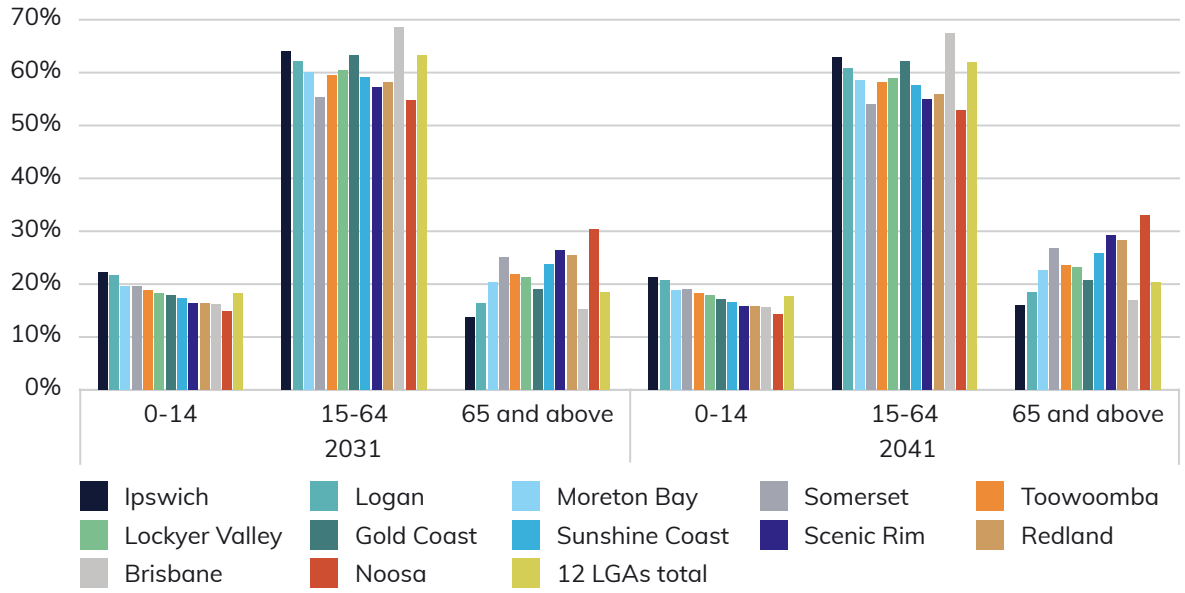
Table 3.25: Projected population (medium series) by five–year age groups by LGA, 2031 and 2041

LGAs	2031			2041		
	0–14 years	15–64 years	65 and above	0–14 years	15–64 years	65 and above
Brisbane	16.3	68.5	15.2	15.6	67.4	17.0
Gold Coast	17.8	63.2	19.0	17.2	62.1	20.7
Ipswich	22.3	64.0	13.8	21.3	62.8	15.9
Lockyer Valley	18.3	60.5	21.2	17.9	58.9	23.2
Logan	21.6	62.1	16.3	20.7	60.9	18.5
Moreton Bay	19.6	60.0	20.4	18.9	58.6	22.5
Noosa	14.9	54.8	30.3	14.3	52.8	33.0
Redland	16.4	58.1	25.5	15.7	56.0	28.3
Scenic Rim	16.4	57.2	26.4	15.8	54.9	29.2
Somerset	19.6	55.4	25.0	19.1	54.1	26.8
Sunshine Coast	17.2	59.1	23.7	16.6	57.6	25.8
Toowoomba	18.8	59.4	21.8	18.3	58.1	23.6

Source: BCARR analysis of Queensland Government population projection, 2018 (medium projection).

Noosa, Brisbane, and Redland are expected to have the lowest proportion of children in 2031 and 2041. Noosa, Somerset and Scenic Rim are expected to have the lowest proportion of the working-age population in 2031. The lowest proportion of the population aged 65 and over in both 2031 and 2041 is expected to be in Ipswich (13.8 and 15.9 per cent), Brisbane (15.2 and 17.0 per cent) and Logan (16.3 and 18.5 per cent). These findings will need to inform future service design in the LGAs.

Figure 3.14: Projected population (medium series) by five–year age groups by LGAs, 2031 and 2041



Source: BCARR analysis of Queensland Government population projection, 2018.

3.6 Conclusion

This chapter summarised the population distribution of the SEQ region in 2020 and how it has changed from 2016 to 2020. In 2020, the SEQ population was 3.76 million, and the region added 300,510 residents in four years. The average population growth per annum was 2.1 per cent between 2016 to 2020 in SEQ.

Over this four year period, the LGAs that accommodated most of SEQ's growth were Brisbane (88,247), Gold Coast (59,888) and Moreton Bay (40,347). At the small area scale, the Pimpama SA2 had the largest population increase in the four years, followed by Jimboomba and North Lakes – Mango Hill.

The most densely populated sub-regions were in Inner Brisbane and Gold Coast, and also the largest increases in density happened in these two sub-regions. Fortitude Valley and Brisbane City SA2s had the highest PWD among the SA2s.

The chapter also presented future population projections for SEQ through to 2041. By 2041 the population is projected to grow by 1.64 million to reach 5.41 million, a 44 per cent population increase over 20 years. Much of this additional population is projected to be accommodated in the Ipswich and Gold Coast LGAs, which are projected to add 327,804 and 308,495 new residents, respectively. SEQ is projected to have a much older population by 2041.

CHAPTER 4

HOUSING AND HOUSING AFFORDABILITY

Key points

- At the time of the 2016 census, there were a total of 1.36 million dwellings in South East Queensland (SEQ). Separate houses are the dominant dwelling type, comprising 71.4 per cent of the total dwelling stock in SEQ. Flats or apartments are the second most common type of dwelling (15.2 per cent), followed by semi-detached houses (12.5 per cent).
- Flats or apartments have a very high concentration in the Inner Brisbane sub-region along the river. The Gold Coast, Sunshine Coast and Noosa sub-regions along the coast also have a relatively high proportion of flats or apartments. Gold Coast has the highest concentration of semi-detached dwellings in SEQ.
- The 12 LGAs of SEQ have a total of 166,139 residential building approvals from 2016 to 2021. Within those, 98,693 (or 59 per cent) were for new houses, and the rest were new other residential building approvals (e.g. flats, apartments and semi-detached dwellings).
- The Brisbane LGA has the highest number of residential building approvals from 2016 to 2021 (46,916), followed by Gold Coast, Moreton Bay and the Sunshine Coast. The Moreton Bay LGA had the most new house approvals (17,414), while the Brisbane LGA had the most approvals of other new residential buildings (30,015), reflecting higher density development in the area.
- Fifty nine per cent of SEQ's residential building approvals in the past five years were within the existing urban area boundary, and thus reflect consolidation rather than expansion. The Pimpama SA2, in the Gold Coast LGA, has the most residential building approvals in the past five years (4,691), followed by Caloundra West (3,976) in the Sunshine Coast LGA and Ripley (3,344) in the Ipswich LGA. All three are expansion areas, located outside the existing urban area.
- Overall, lot sizes are getting smaller across SEQ, with the median declining by $30m^2$ from 2016 to 2020.
- SEQ is expected to add just over 800,000 new dwellings between 2016 and 2041. The largest addition of new dwellings is projected for the Brisbane LGA (155,200), followed by Gold Coast (150,900) and Ipswich (146,000). Around 60 per cent of the new dwellings are to be added through consolidation, rather than expansion. The Logan LGA has the highest stock of identified future developable land (9,654 ha).
- In 2019, the dwelling price to income ratio was highest in Noosa (10.0), followed by Gold Coast (7.9) and Sunshine Coast (7.7). The Brisbane LGA had a ratio of 6.3. On this measure, the Ipswich, Lockyer Valley and Toowoomba LGAs are identified as more affordable than other parts of the SEQ region.
- Overall, mortgage stress is low in SEQ compared to rental stress. The proportion of households with mortgage stress was highest in the Logan and Scenic Rim LGAs (8.2 per cent) and lowest in the Toowoomba LGA (5.1 per cent) in 2016.
- The Gold Coast LGA has the highest proportion of households in rental stress (16.8 per cent), followed by the Ipswich, Logan and Sunshine Coast LGAs. Scenic Rim had the lowest rental stress in 2016.
- Greater Brisbane's Rental Affordability Index (RAI) score was 121 in 2021, meaning the average household seeking to rent a dwelling needs to spend 25 per cent of its total income. Greater Brisbane's RAI has declined over the past 12 months, although before that, it had improved from 2016 to 2020. Overall, based on the RAI, rental affordability was considered acceptable for Brisbane as of June 2021.
- Some SA2s have seen a notable decline in rental affordability over the 12 months ended June 2021. In Greater Brisbane, this includes Rochedale, Acacia Ridge to Drewvale, Alexandra Hills, Wellington Point, and Stafford to Fortitude Valley. In the rest of SEQ, affordability has significantly decreased in the Gold Coast, with areas such as Helensvale, Broadbeach and Robina now severely unaffordable. A similar trend is evident from Maroochydore to Noosa on the Sunshine Coast.

4.1 Introduction

By 2041, the SEQ region is expected to have more than 800,000 new homes to accommodate new residents (Queensland Government 2019). The South East Queensland Regional Plan 2017, named ShapingSEQ (Queensland Government 2017), aims to promote more dense and diverse housing by 2041. The four indicators identified in ShapingSEQ for measuring and monitoring housing success in the next 25 years relate to adequate land supply, dwelling growth, housing diversity (by dwelling type) and housing density (ibid).

This chapter gives an overview of the current state of housing in SEQ, which includes:

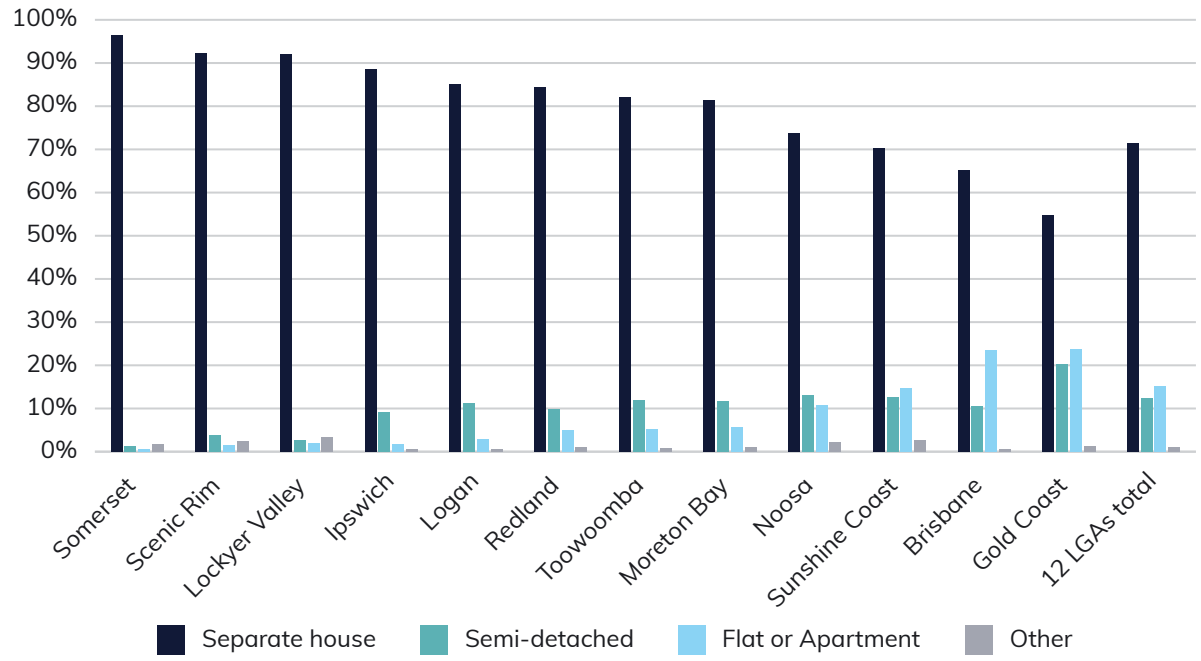
- Mix of dwelling types
- Residential building approvals by type
- Lot sizes
- Future stock of land and dwellings
- Housing affordability.

Most of the spatial analysis presented in this chapter is based on the following geographies: the 12 LGAs of SEQ; the BCARR rings and sub-regions; and SA2s. The definition of SEQ sub-regions is provided in Chapter 1, Table 1.3**.**

4.2 Mix of dwelling types

Historically, the SEQ region had a dispersed, low-density settlement pattern. Figure 4.1 below shows the dwelling type mix for the 12 LGAs of SEQ in 2016. Separate houses were dominant across the 12 LGAs of SEQ, as 71.4 per cent of dwellings were separate houses, 15.1 per cent were flats and apartments and 12.4 per cent were townhouses. The Gold Coast LGA had the lowest proportion of separate houses (54.8 per cent), followed by the Brisbane LGA (65.2 per cent). Gold Coast had the highest proportion of flats or apartments (23.7 per cent) and semi-detached dwellings (20.2 per cent) among the LGAs of SEQ. The Brisbane LGA also had a relatively high share of apartments (23.5 per cent).

Figure 4.1: Dwelling stock by dwelling type in the LGAs of SEQ in 2016



Note: Excludes not stated or not applicable dwelling type. Only the urban part of Toowoomba LGA is part of SEQ.

Source: BCARR analysis of ABS Census of Population and Housing, 2016.

The Somerset LGA had separate houses contributing 96.4 per cent of its dwelling stock, which was the highest in the SEQ region. Separate houses also contributed to more than 90 per cent of the dwelling stock in the Scenic Rim and Lockyer Valley LGAs. The Logan, Redland, Toowoomba and Moreton Bay LGAs had more than 80 per cent separate houses.

Table 4.1 summarises the dwelling stock and the mix of different dwelling types in SEQ and its sub-regions. In 2016, SEQ had a total of 1.36 million dwellings captured in the census, of which 64 per cent were in Greater Brisbane. Just over 71 per cent of SEQ dwellings were separate houses, while 14.4 per cent were flats and apartments and 12.5 per cent were semi-detached dwellings.

The proportion of separate houses in the dwelling stock was lowest for Inner Brisbane (38.7 per cent), higher for Middle Brisbane (74.4 per cent) and higher again for Outer Brisbane (84.2 per cent). While the more rural parts of the Rest of SEQ had a very high proportion of separate houses in their dwelling stock, the Gold Coast, Noosa and Sunshine Coast had a much more diverse mix of dwellings. The proportion of flats and apartments in the dwelling stock was highest for Inner Brisbane (53.5 per cent) and Gold Coast (23.7 per cent), and less than 2 per cent for Lockyer Valley, Scenic Rim and Somerset. The proportion of semi-detached dwellings was highest for the Gold Coast (20.2 per cent), urban Toowoomba (14.5 per cent) and Brisbane's Middle East (14.4 per cent), and was less than 4 per cent for Lockyer Valley, Scenic Rim and Somerset.

Table 4.1: Dwelling stock by dwelling type in SEQ sub-regions, 2016

BCARR rings/sub-regions	Proportion of dwellings that are separate houses (per cent)	Proportion of dwellings that are semi-detached dwellings (per cent)	Proportion of dwellings that are flats and apartments (per cent)	Total dwelling count
INNER Brisbane*	38.7	7.3	53.5	118,301
MIDDLE Brisbane – TOTAL*	74.4	11.8	13.2	342.609
Middle East	80.3	14.4	4.4	29.774
Middle North	71.2	12.4	15.8	87,032
Middle South	71.5	13.5	14.2	130,876
Middle West	79.3	8.2	12.2	94,927
OUTER Brisbane – TOTAL	84.2	10.8	4.1	408,256
Ipswich	88.6	9.1	1.7	72,524
Redland	84.5	9.7	4.9	59,503
Logan	85.2	11.2	3.0	109,488
Moreton Bay	81.5	11.7	5.7	166,741
TOTAL – GREATER BRISBANE	74.1	10.7	14.4	869,166
Rest of SEQ	65.9	15.7	16.7	490,368
Gold Coast	54.8	20.2	23.7	237,735
Sunshine Coast	69.9	12.6	14.8	127,878
Noosa	75.1	12.5	10.3	27,910
Toowoomba (urban part)	79.1	14.5	5.8	55,083
Scenic Rim	92.3	3.9	1.5	16,683
Lockyer Valley	92.1	2.6	1.9	14,781
Somerset	96.4	1.1	0.5	10,298
TOTAL – SOUTH EAST QUEENSLAND^	**71.2**	**12.5**	**15.2**	**1,359,534**

Notes: Excludes not stated or not applicable dwelling type.

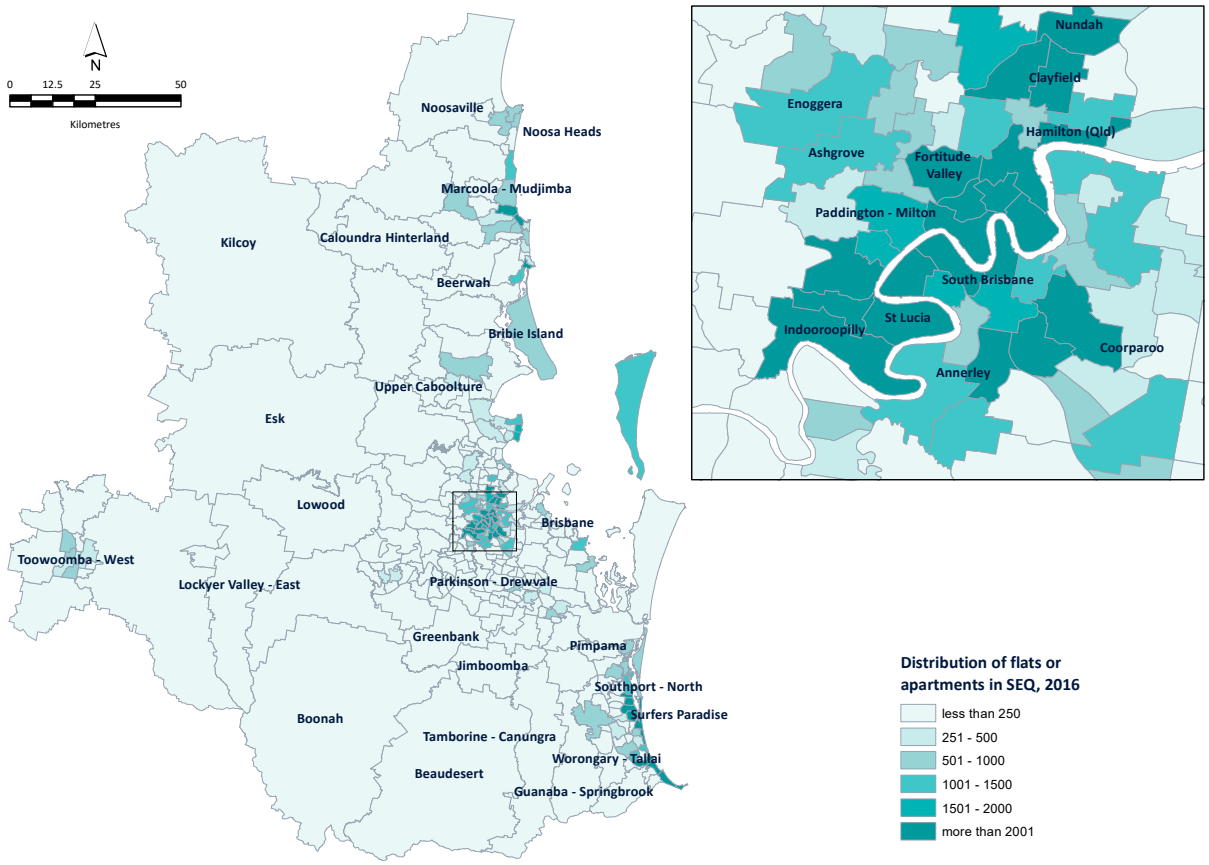
* The Inner and Middle Rings comprise the City of Brisbane LGA. See Table 1.3 and Figure 1.2 in Chapter 1 for these classifications.

^ The SEQ total differs from the 12 LGA total in the preceding chart, which includes the whole of Toowoomba LGA. This table includes only the urban parts of Toowoomba LGA.

Source: BCARR analysis of ABS Census of Population and Housing, 2016.

Figure 4.2 shows the distribution of flats or apartments across the SA2s of SEQ. Most of the SA2s have less than 250 flats or apartments. Flats or apartments have a very high concentration in Inner Brisbane along the river. Apart from that, the Gold Coast, Sunshine Coast and Noosa areas have significant numbers of flats and apartments. These are tourist destinations and have high demands for tourist accommodation, resulting in high-density developments. Overall, the SEQ region is dominated by low-density development. *ShapingSEQ* identifies opportunities for more 'missing middle' type housing development, including duplexes, terraces, townhouses, low-rise and medium-rise apartments (Queensland Government 2017, p.44).

Figure 4.2: Distribution of flats or apartments by SA2s of SEQ in 2016



Source: BCARR analysis of ABS Census of Population and Housing, 2016.

4.3 Residential building approvals

This section gives an overview of five years of residential building approvals for the SEQ region from 2016 to 2021. It therefore provides information on how the dwelling stock (described in the previous section) has changed since 2016. It should be noted, however, that not all of the dwellings approved between 2016 and 2021 will have been completed, and dwelling demolitions have not been assessed.

Table 4.2 below shows residential building approvals over the past five years in the 12 LGAs of SEQ. The 12 LGAs had a total of 166,139 residential building approvals. Within those, 98,693 were for new houses, and the rest were new other residential building approvals (e.g. flats, apartments and semi-detached dwellings). This means that 59 per cent of approvals were for separate houses, and since separate houses made up 71 per cent of the SEQ dwelling stock in 2016 (see Figure 4.1), this indicates some shift towards higher density forms of residential development since 2016.

The Brisbane LGA had the highest approvals in these five years (46,916) and accounted for 28.2 per cent of total residential building approvals within these 12 LGAs. After Brisbane LGA, the highest residential building approvals were for Gold Coast (28,078), Moreton Bay (23,321) and Sunshine Coast (20,712) LGAs.

Figure 4.3 shows the comparison of the new houses and other residential building approvals in the 12 LGAs of SEQ from 2016 to 2021. The Brisbane LGA has the highest number of new other residential building approvals (30,015) over the past five years, followed by Gold Coast (15,793).

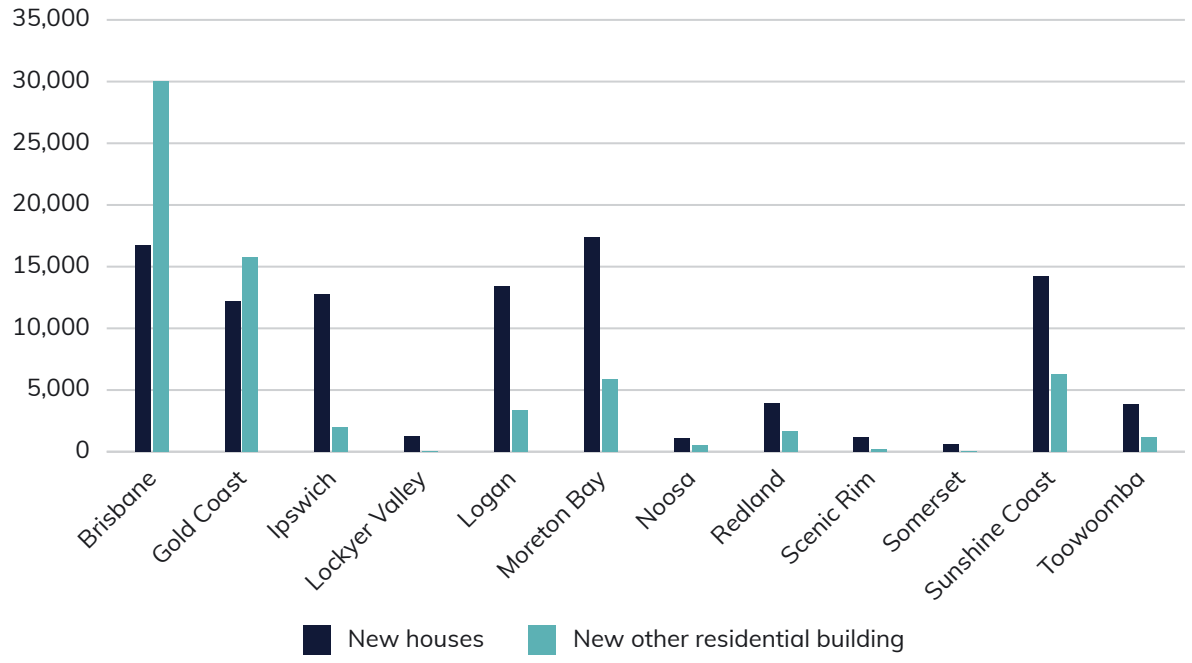
This reflects high-density development in those areas. The highest number of new house approvals in this period were in Moreton Bay (17,414), Brisbane (16,759) and Sunshine Coast (14,238) LGAs.

Table 4.2: Total residential building approvals of the LGAs in SEQ from 2016 to 2021

LGAs	New house approvals, 2016–2021	New other residential building approvals, 2016–2021	Total dwelling approvals, 2016–2021	Percentage of total building approvals in the 12 LGAs, 2016–2021
Brisbane	16,759	30,015	46,916	28.2
Gold Coast	12,166	15,793	28,078	16.9
Ipswich	12,794	1,956	14,757	8.9
Lockyer Valley	1,230	52	1,290	0.8
Logan	13,412	3,399	16,853	10.1
Moreton Bay	17,414	5,852	23,321	14.0
Noosa	1,092	493	1,610	1.0
Redland	3,964	1,630	5,609	3.4
Scenic Rim	1,136	177	1,326	0.8
Somerset	606	8	621	0.4
Sunshine Coast	14,238	6,315	20,712	12.5
Toowoomba	3,882	1,139	5,046	3.0
12 LGAs total	**98,693**	**66,829**	**166,139**	**100.0**

Note: Only the urban part of Toowoomba LGA is part of SEQ.
Source: BCARR analysis of ABS Cat. 8731.0 Building Approvals, Australia, 2016 to 2021.

Figure 4.3: Total new house and new other residential building approvals of LGAs in SEQ from 2016 to 2021



Note: Only the urban part of Toowoomba LGA is part of SEQ.
Source: BCARR analysis of ABS Cat. 8731.0 Building Approvals, Australia, 2016 to 2021.

Table 4.3 shows the total residential building approvals in the SEQ sub-regions from 2016 to 2021. Greater Brisbane had 107,423 building approvals in this period, which is 64.9 per cent of the SEQ approvals. Within Greater Brisbane, the majority of the residential building approvals happened in Outer Brisbane (61,175), followed by Middle Brisbane (32,043) and Inner Brisbane (14,205).

Table 4.3: Total residential building approvals in SEQ sub-regions from 2016 to 2021

BCARR rings/sub-regions	New houses, 2016 to 2021	New other residential building, 2016 to 2021	Total residential building approvals, 2016 to 2021	Per cent of residential building approvals within SEQ, 2016 to 2021
INNER Brisbane*	1,637	12,498	14,205	8.6
MIDDLE Brisbane – TOTAL*	15,121	16,850	32,043	19.3
Middle East	1,272	865	2,146	1.3
Middle North	3,289	4,626	7,929	4.8
Middle South	7,182	7,182	14,389	8.7
Middle West	3,378	4,177	7,579	4.6
OUTER Brisbane – TOTAL	47,552	13,504	61,175	36.9
Ipswich	12,792	1,956	14,755	8.9
Redland	3,964	1,630	5,609	3.4
Logan	13,379	3,399	16,820	10.2
Moreton Bay	17,417	6,519	23,991	14.5
TOTAL – GREATER BRISBANE	64,310	42,852	107,423	64.9
Rest of SEQ	33,881	23,949	58,181	35.1
Gold Coast	12,172	15,793	28,084	17.0
Sunshine Coast	14,117	6,309	20,578	12.4
Noosa	1,217	495	1,744	1.1
Toowoomba (urban part)	3,403	1,115	4,538	2.7
Scenic Rim	1,136	177	1,326	0.8
Lockyer Valley	1,230	52	1,290	0.8
Somerset	606	8	621	0.4
TOTAL – SOUTH EAST QUEENSLAND^	**98,191**	**66,801**	**165,604**	**100.0**

Notes:

* The Inner and Middle Rings comprise the City of Brisbane LGA. See Table 1.3 and Figure 1.2 in Chapter 1 for these classifications.

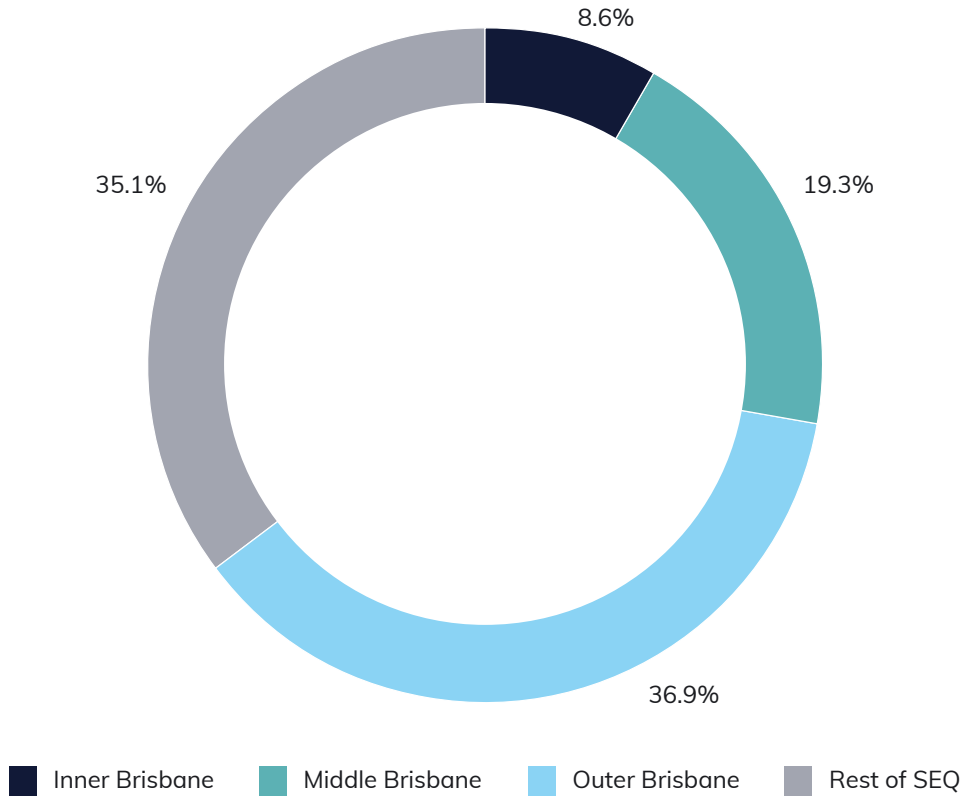
^ The SEQ total differs from the 12 LGA total in the preceding table, which includes the whole of Toowoomba LGA. This table includes only the urban parts of Toowoomba LGA.

Source: BCARR analysis of ABS Cat. 8731.0 Building Approvals, Australia, 2016 to 2021.

Building approvals in the Rest of SEQ mainly occurred in the Gold Coast (28,084) and Sunshine Coast (20,578) sub-regions. Figure 4.4 shows the proportion of building approvals in the BCARR rings of SEQ from 2016 to 2021. Outer Brisbane has the highest share of building approvals (36.9 per cent), followed by the Rest of SEQ (35.1 per cent). These percentages are consistent with the population growth discussed in Chapter 3 (see Table 3.6). Most population growth occurred in the Outer Brisbane region, followed by the Rest of SEQ and Middle Brisbane.

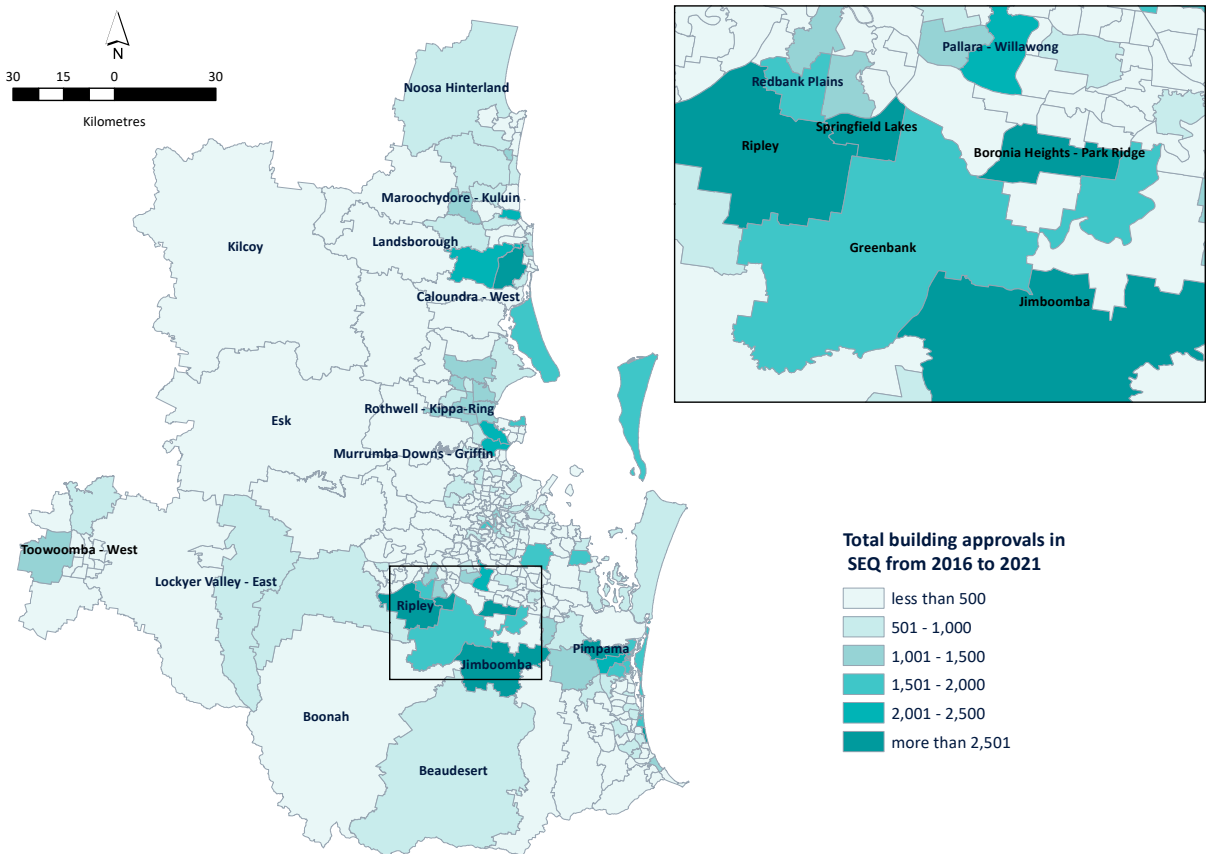
Figure 4.5 shows residential building approvals across the SA2s of SEQ over the last five years. Building approvals were high in SA2s located in the Gold Coast, Sunshine Coast, Logan and Ipswich areas. The Pimpama SA2, situated on the Gold Coast, has the highest residential building approvals in the past five years. This SA2 alone has 4,691 building approvals, followed by Caloundra – West (3,976) and Ripley (3,354).

Figure 4.4: Proportion of residential building approvals in SEQ BCARR rings from 2016 to 2021



Source: BCARR analysis of ABS Cat. 8731.0 Building Approvals, Australia, 2016 to 2021.

Figure 4.5: Five year total building approvals of SA2s in SEQ from 2016 to 2021



Source: BCARR analysis of ABS Cat. 8731.0 Building Approvals, Australia, 2016 to 2021.

Table 4.4 shows the five SA2s with the highest number of new house approvals, new other residential building approvals and total residential building approvals from 2016 to 2021. The largest number of new house approvals were in the Caloundra – West (3,524), Pimpama (3,425) and Ripley (3,131) SA2s. Among these five, two of them are adjoining SA2s located in Ipswich (see inset to Figure 4.5).

The highest number of new other residential building approvals were in Mermaid Beach – Broadbeach (2,667), West End (1,935) and South Brisbane (1,935) SA2s. These SA2s are located in the Inner Brisbane ring and the Gold Coast sub-region, reflecting the high-density development in these areas.

The highest total building approvals were in Pimpama (4,691), Caloundra – West (3,976) and Ripley (3,344) SA2s.

Table 4.4: SA2s with most new house, new other residential building and total residential building approvals from 2016 to 2021

SA2s	BCARR rings/sub-region	New houses, 2016 to 2021
Caloundra – West	Sunshine Coast	3,524
Pimpama	Gold Coast	3,425
Ripley	Ipswich	3,131
Springfield Lakes	Ipswich	2,646
Jimboomba	Logan	2,485

SA2s	BCARR rings/sub-region	New other residential buildings, 2016 to 2021
Mermaid Beach – Broadbeach	Gold Coast	2,667
West End	Inner	1,935
South Brisbane	Inner	1,935
Surfers Paradise	Gold Coast	1,566
Maroochydore – Kuluin	Sunshine Coast	1,501

SA2s	BCARR rings/sub-region	Total residential building approvals, 2016 to 2021
Pimpama	Gold Coast	4,691
Caloundra – West	Sunshine Coast	3,976
Ripley	Ipswich	3,344
Boronia Heights – Park Ridge	Logan	2,943
Springfield Lakes	Ipswich	2,900

Source: BCARR analysis of ABS Cat. 8731.0 Building Approvals, Australia, 2016 to 2021.

In *ShapingSEQ*, a key distinction is made between consolidation (sometimes referred to as infill development) and expansion (often referred to as greenfields development). Consolidation is growth that occurs on land within the existing urban area boundary, and expansion is growth that occurs outside that boundary (Queensland Government 2017) (See Table 1.4). Figure 4.6 illustrates the existing urban area boundary from *ShapingSEQ*. All of the top 5 SA2s in terms of total residential building approvals are located outside the existing urban area boundary, and could therefore be described as greenfields or expansion development.[8]

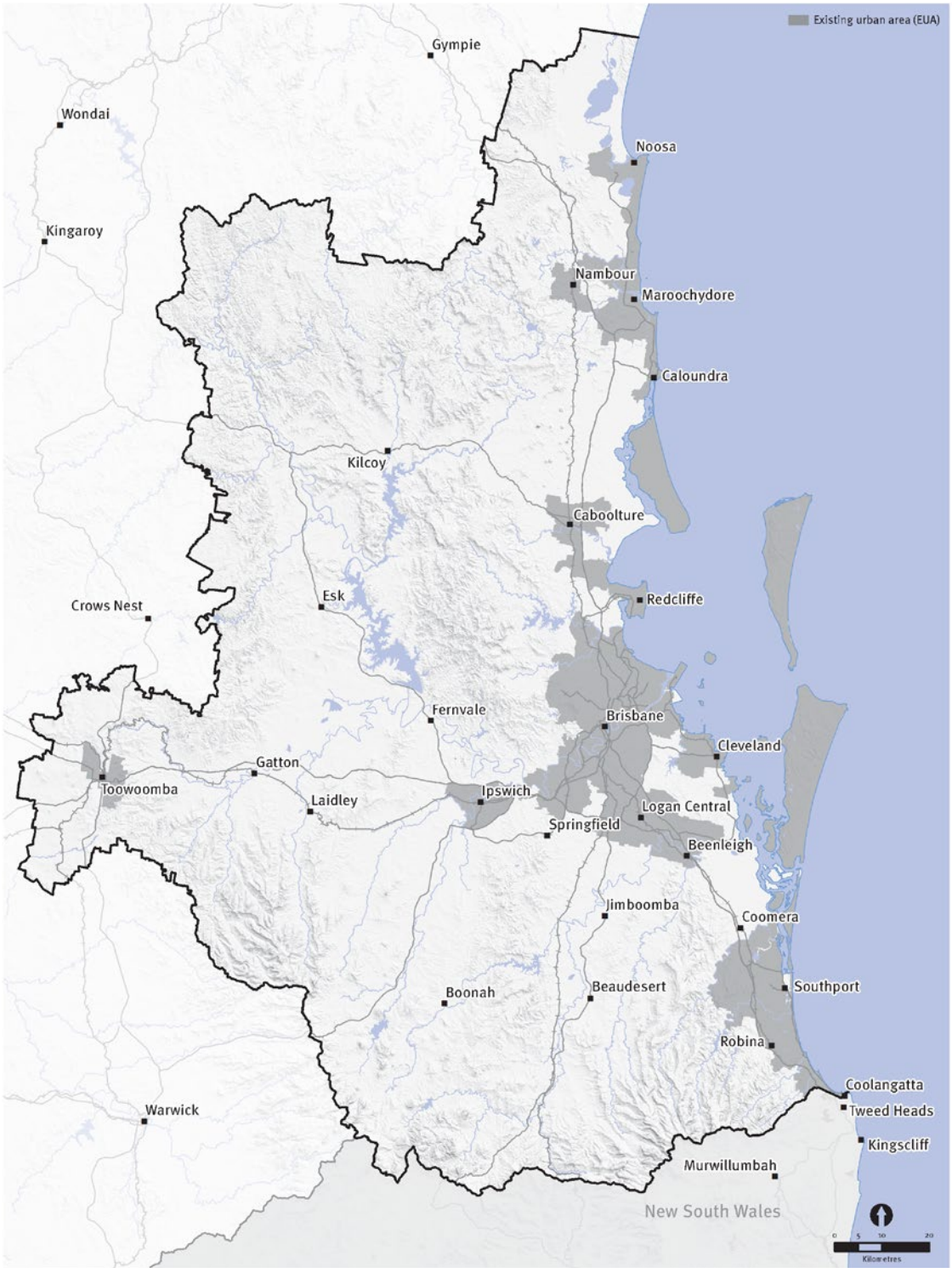
Using the existing urban area boundary shape file supplied by the Queensland Government and ABS SA2-scale building approvals data, BCARR has estimated the proportional split of recent dwelling approvals between consolidation and expansion development. Using this approach, it is estimated that 59 per cent of residential building approvals in SEQ between 2016 and 2021 were attributable to consolidation (i.e. were inside the existing urban area boundary), and 41 per cent was attributable to expansion (i.e. growth that occurs outside the boundary). This is very much in line with *ShapingSEQ*, in which the Queensland Government anticipates that 60 per cent of future

8 Note that SA2s such as Caloundra West can be relatively large, and contain a mix of well-established areas that were developed many years ago, areas that are recently developed, areas that are currently under development and areas that are yet to be developed. Similarly, SA2s classified as within the existing urban area boundary, such as Caboolture South and Morayfield East, can contain a mix of well-established areas that were developed many years ago and much newer housing estates. While these new housing estates are classified as consolidation, they may not always be visually distinguishable from expansion development occurring outside the boundary, except by their typically more modest scale.

dwellings growth between 2016 and 2041 will be due to consolidation, rather than expansion (Queensland Government, 2017).

It should not be assumed that this 'consolidation' development is necessarily high or medium density development. From 2016 to 2021, 42 per cent of the dwelling approvals in the existing urban area were for separate houses. This compares to 85 per cent for expansion areas (and 59 per cent for SEQ overall).

Figure 4.6: Existing urban area boundary, SEQ



Source: *ShapingSEQ* (Queensland Government 2017, p.172).

4.4 Connection between dwellings and population growth

Residential building approvals provide a more timely guide than the official population data as to which small areas are experiencing the most growth. Comparing Table 4.4 (which shows SA2s with the most dwelling approvals between 2016 and 2021) with Table 3.7 (which shows SA2s with the largest population increase between 2016 and 2020) reveals many commonalities. Pimpama, Caloundra West, Ripley and Springfield Lakes are prominent in both tables. However, there are also some differences, since residential building approvals only flow through to population growth at the small area scale with a considerable lag.

Changes in household size over time can also influence the relationship between dwelling approvals and population increases. It is common in new developments for average household sizes to increase strongly as children are added to young families. Table 4.5 shows household size for the 12 LGAs in 2011 and 2016. There were no significant changes in the average household size of these LGAs between 2011 and 2016. However, there was some notable variation in average household sizes across LGAs, with Noosa having a slightly smaller average household size than other LGAs in 2016 (at 2.4 persons per household), and Logan having a slightly larger average household size (2.9 persons).

Table 4.5: Average household size of the LGAs in SEQ from 2011 to 2016

LGA	Average household size, 2011	Average household size, 2016	Change, 2011 to 2016
Brisbane	2.6	2.6	0.0
Gold Coast	2.5	2.6	0.1
Ipswich	2.8	2.8	0.0
Lockyer Valley	2.7	2.7	0.0
Logan	2.9	2.9	0.0
Moreton Bay	2.7	2.7	0.0
Noosa	n/a	2.4	n/a
Redland	2.7	2.6	–0.1
Scenic Rim	2.6	2.6	0.0
Somerset	2.6	2.6	0.0
Sunshine Coast	2.5	2.5	0.0
Toowoomba	2.5	2.5	0.0

Note: Only the urban part of Toowoomba LGA is part of SEQ. Average household size calculated for private dwellings only, based on usual residents.

Source: BCARR analysis of ABS Census of Population and Housing 2011 and 2016.

4.5 Median lot sizes

According to *ShapingSEQ*, lot size is one of the housing density measures that will be used to measure progress in implementing the SEQ strategic plan (Queensland Government 2017, p.167). Table 4.6 shows the median lot size of the 12 LGAs of SEQ in 2016 and 2020. Median lot size is relatively high in Somerset and Scenic Rim LGAs, reflecting the peri-urban nature of much of the development occurring in these areas. As of 2020, median lot sizes were lowest in Moreton Bay (404m^2) and Brisbane (408m^2), with Ipswich, Logan, Redland and Gold Coast also having median lot sizes of less than 430m^2.

The overall trend is a 30m^2 reduction of median lot sizes across SEQ between 2016 and 2020. The Toowoomba, Sunshine Coast, Redland and Logan LGAs have the highest reduction of median lot sizes from 2016 to 2020. However, there is some evidence of a shift towards larger lot sizes in the three most outlying LGAs of SEQ (Scenic Rim, Somerset, Lockyer Valley), potentially reflecting the impact of rural residential development in these areas.

Table 4.6: Median lot size of LGAs in SEQ, 2016 and 2020

LGAs	Median lot size (m²), 2016	Median lot size (m²), 2020	Change in lot size (m²), 2016 –2020
Brisbane	449	408	–41
Gold Coast	429	429	0
Ipswich	448	420	–28
Lockyer Valley	600	625	25
Logan	481	424	–57
Moreton Bay	431	404	–27
Noosa	686	695	9
Redland	480	426	–55
Scenic Rim	922	1,000	78
Somerset	783	1,600	817
Sunshine Coast	480	400	–80
Toowoomba (urban part)	709	541	–168
SEQ	450	420	–30

Source: BCARR analysis of DNRME Digital Cadastral Database (DCDB); Local government authority planning schemes, Queensland Treasury, 2020c.

4.6 Future stock of land and dwellings

Table 4.7 shows suitable future land stock for development in the SEQ region. As of 2020, the highest stock of future developable land was in the Logan LGA (9,654 ha), followed by Ipswich (6,263 ha) and Lockyer Valley (2,536 ha). The highest expected yield of dwellings is projected for the Logan (118,864) and Ipswich (104,926) LGAs.

Table 4.7: Stock of residential greenfield and brownfield land (greater than 2,500 m²) that is currently suitable for residential development in the LGAs of SEQ

LGAs	Stock (hectares), as of June 2020	Expected yield (dwellings), as of June 2020
Brisbane	1,294	39,311
Gold Coast	1,844	60,305
Ipswich	6,263	104,926
Lockyer Valley	2,536	15,650
Logan	9,654	118,864
Moreton Bay	2,160	14,990
Noosa	91	564
Redland	338	5,289
Scenic Rim	1,721	8,005
Somerset	1,033	6,820
Sunshine Coast	1,932	31,414
Toowoomba *	2,541	15,154
South East Queensland	**31,407**	**421,292**

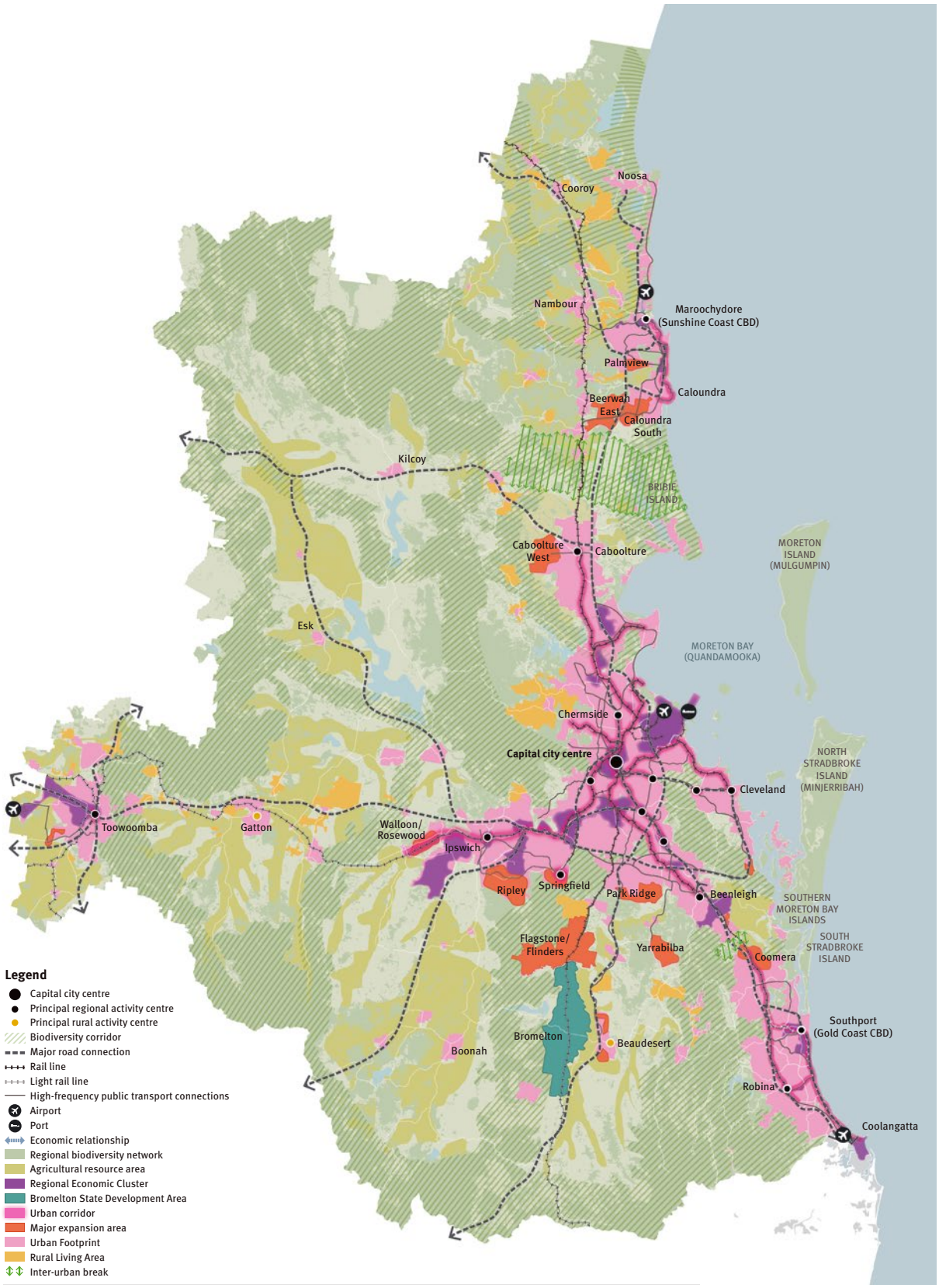
Notes:

* Toowoomba (urban part) includes the geographic area of Toowoomba LGA, which is located within South East Queensland as bounded by the Toowoomba Statistical Area Level 4 (SA4).

Source: QGSO Broadhectare Study, Queensland Treasury, 2020d.

Figure 4.7 shows the major expansion areas (in orange) that *ShapingSEQ* identifies for future greenfield development over the next 25 years. There is a concentration of these major expansion areas to the south of Brisbane, particularly within the Ipswich and Logan LGAs (including the Ripley Valley, Yarrabilba, Springfield Lakes and Greater Flagstone expansion areas). That is in line with the population projections presented in Chapter 3, in which the Ipswich LGA particularly stands out as having the largest projected population increase through to 2041.

Figure 4.7: Major expansion areas through to 2041, SEQ



Source: *ShapingSEQ* (Queensland Government 2017, p.35).

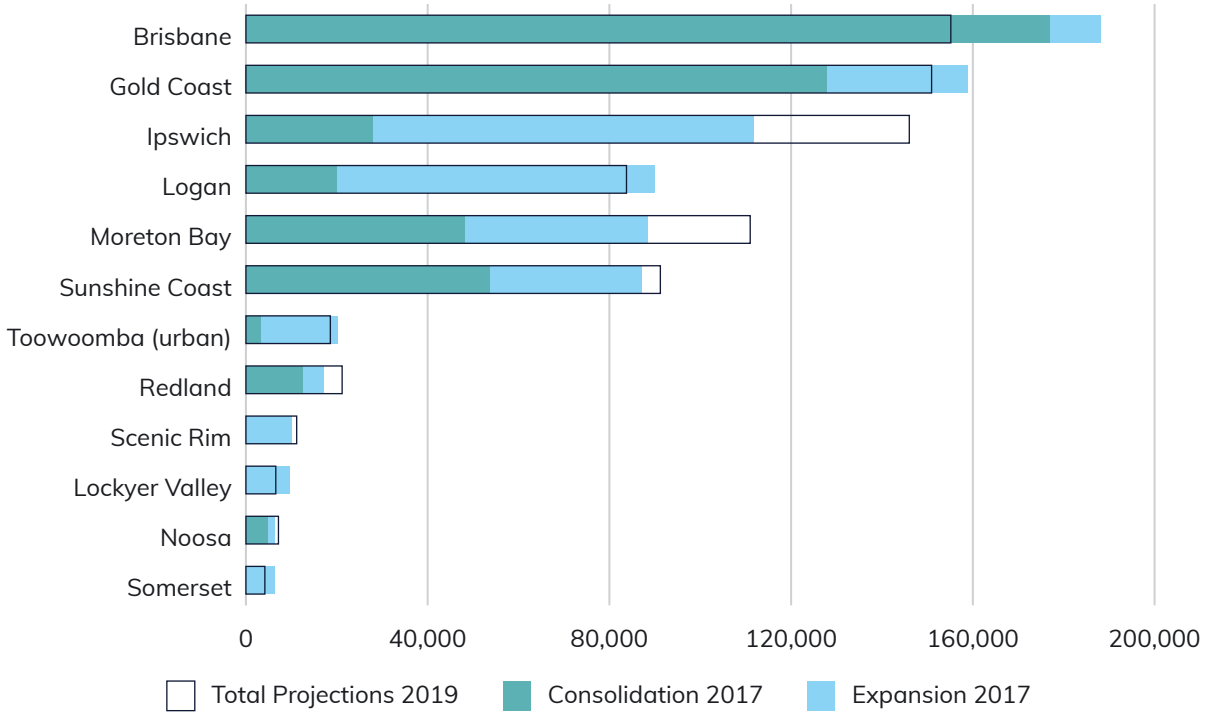
ShapingSEQ identified future dwellings growth to 2041 for LGAs, and the expected split between consolidation and expansion development. Of the roughly 800,000 new dwellings to be added between 2016 and 2041, 60 per cent will be added through consolidation, rather than expansion (Queensland Government, 2017). As of 2016, 78 per cent of SEQ's dwellings were located within the existing urban area boundary (ibid).

The Queensland Government's most recent dwelling projections (Queensland Treasury 2019) show a total of 806,900 dwellings to be added across the 12 LGAs by 2041, which is slightly higher than the *ShapingSEQ* projections. This most recent set of projections does not include a split between consolidation and expansion areas.

Figure 4.8 shows how the projected dwelling growth, and the consolidation/expansion split, are expected to be distributed across LGAs. Between 2016 and 2041, the latest projections show the Brisbane LGA is expected to add the most dwellings (155,200), followed by Gold Coast (150,900). The new dwellings in these two LGAs will be mainly added through urban consolidation. However, the majority of the 146,000 dwellings expected to be added in Ipswich and the 83,800 dwellings to be added in Logan are likely to occur through greenfields development beyond the existing urban area boundary.

The projected dwellings growth for Brisbane was revised significantly downwards (by 33,000 dwellings) between the 2017 and 2019 projections, while dwellings growth was revised significantly upwards for Ipswich (by 34,300 dwellings) and Moreton Bay (by 22,700 dwellings).

Figure 4.8: Expected dwellings growth by SEQ LGAs from 2016 to 2041 and from 2019–2041



Note: 2019 dwelling projections are for LGAs, therefore the data cover the whole Toowoomba LGA.

Source: BCARR analysis of dwelling projections from *ShapingSEQ* (Queensland Government 2017), Queensland Government Dwelling projections, 2019 edition, Queensland Treasury.

Box 4.1 presents a case study of the Caboolture West growth area in the Moreton Bay LGA, a major expansion area which is expected to eventually provide homes for around 70,000 people.

Box 4.1: Caboolture West case study

Caboolture West in the Moreton Bay Regional Council has been identified as a future growth area within SEQ (Queensland Government 2021b). It is located in the north of Brisbane and is bounded by the D'Aguilar Highway to the north, Caboolture River Road to the south and Low Hills to the west of Old North Road (see Figure 4.9). Currently, the area is predominately open rural grazing land and small parcels of agricultural cropping land. The area is close to the Caboolture-Morayfield Principal Activity Centre, has been found to be suitable for urban development and identified as a new major long-term growth area for SEQ (Queensland Government 2017).

In March 2021, the Queensland Government announced the initial stage of Caboolture West, known as Neighbourhood Development Plan 1 (NDP1), to:

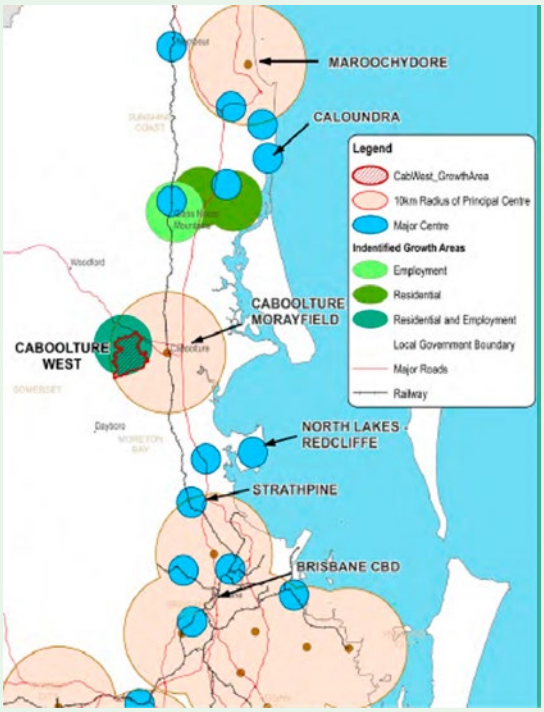
- unlock growth
- address housing choice and affordability
- identify the infrastructure necessary to support more liveable communities.

In 2021 an amendment to the Moreton Bay Regional Planning Scheme, 2014, was approved to facilitate the development assessment of around 3,000 residential lots in NDP1 (Moreton Bay Regional Council, 2021).

Key features of the Caboolture West Local Plan 2050 include:

- Local plan area approximately 6,663 ha
- Urban Population: 68,700 residents
- Urban Dwellings: 26,900
- Urban Employment: 17,000 jobs
- Local Plan area: 3,480 ha
- Local Plan urban area 1,787 ha comprising:
  - Town centre 106 ha
  - Enterprise and employment 160 ha
  - Urban living 1,521 ha
  - 6 local centres
  - 13 neighbourhood hubs
  - TAFE and Private hospital
  - 3 high schools
  - 9 primary schools
  - Rapid transit connection to Caboolture Central
- Green network 1,070 ha comprising Local Plan rural living area 622 ha.

Figure 4.9: Map of Caboolture West



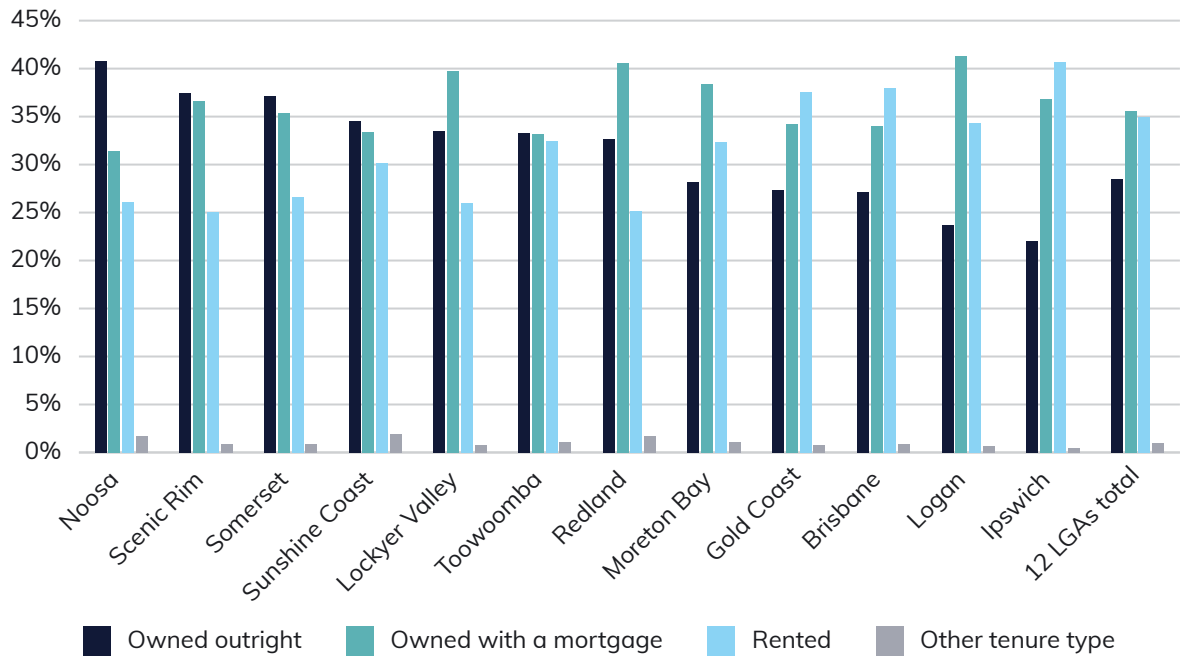
Source: Moreton Bay Regional Council 2013.

4.7 Housing affordability

Housing affordability is considered part of liveability for this study. Four different indicators are used to assess housing affordability: the dwelling price to income ratio, mortgage stress, rental stress and the rental affordability index.

Before looking at these indicators, Figure 4.10 shows tenure types across the 12 LGAs of the SEQ region. Across the 12 LGAs, 28.5 per cent of people owned their housing outright, 35.6 per cent owned their home with a mortgage and 34.9 per cent rented their home, as of the 2016 Census. The highest proportion owning their home outright was in Noosa (40.8 per cent), Scenic Rim (37.5 per cent) and Somerset (37.2 per cent) LGAs. On the other hand, the highest proportion of dwellings owned with a mortgage was in Logan (41.3 per cent), Redland (40.5 per cent) and Lockyer Valley (39.8 per cent) LGAs. The highest proportion renting their home was in Ipswich (40.7 per cent), Brisbane (38.0 per cent) and Gold Coast (37.5 per cent) LGAs.

Figure 4.10: Tenure types of the 12 LGAs in SEQ in 2016



Source: ABS Census of Population and Housing 2016.

Home ownership affordability

Two indicators are used to provide an overview of home ownership affordability in the SEQ region: the dwelling price to income ratio and mortgage stress. The dwelling price to income ratio provides a guide to the cost of buying a typical dwelling relative to a typical household's annual income in that location. Mortgage stress measures the proportion of households whose mortgage repayments are 30 per cent or more of their household income.

Dwelling price to income ratio

Table 4.8 shows the dwelling price to income ratio in the LGAs of SEQ in 2018–2019 and (where available) 2019–2020. The dwelling price to income ratio was highest in Noosa (10.0), followed by Gold Coast (7.9) and Sunshine Coast (7.7). This means that purchasing a typical dwelling in Noosa would cost 10.0 times the annual income of a typical household. Noosa, Gold Coast and the Sunshine Coast were less affordable than the other LGAs of SEQ. The Brisbane LGA had a dwelling price to income ratio of 6.3 in 2018–2019, which decreased in 2019–2020 (to 6.1). The Ipswich LGA had a dwelling price to income ratio of 4.6 in 2018–2019, which was similar to that of Lockyer Valley (5.0) and Toowoomba (5.0), making them more affordable than other parts of the SEQ region.

Table 4.8: Dwelling price to income ratio of LGAs in SEQ in 2018–2019 and 2019–2020

LGAs	Dwelling price to income ratio 2018–2019	Dwelling price to income ratio 2019–2020
Brisbane	6.3	6.1
Gold Coast	7.9	7.0
Ipswich	4.6	--
Lockyer Valley	5.0	--
Logan	5.2	--
Moreton Bay	5.6	--
Noosa	10.0	--
Redland	6.1	--
Scenic Rim	6.8	--
Somerset	5.2	--
Sunshine Coast	7.7	7.9
Toowoomba	5.0	5.0

Note:

-- data not available.

Sources: BCARR analysis of CoreLogic, Median dwelling price 2018–2019 data and Median household income – The Australian National University household income model (custom data) 2019.

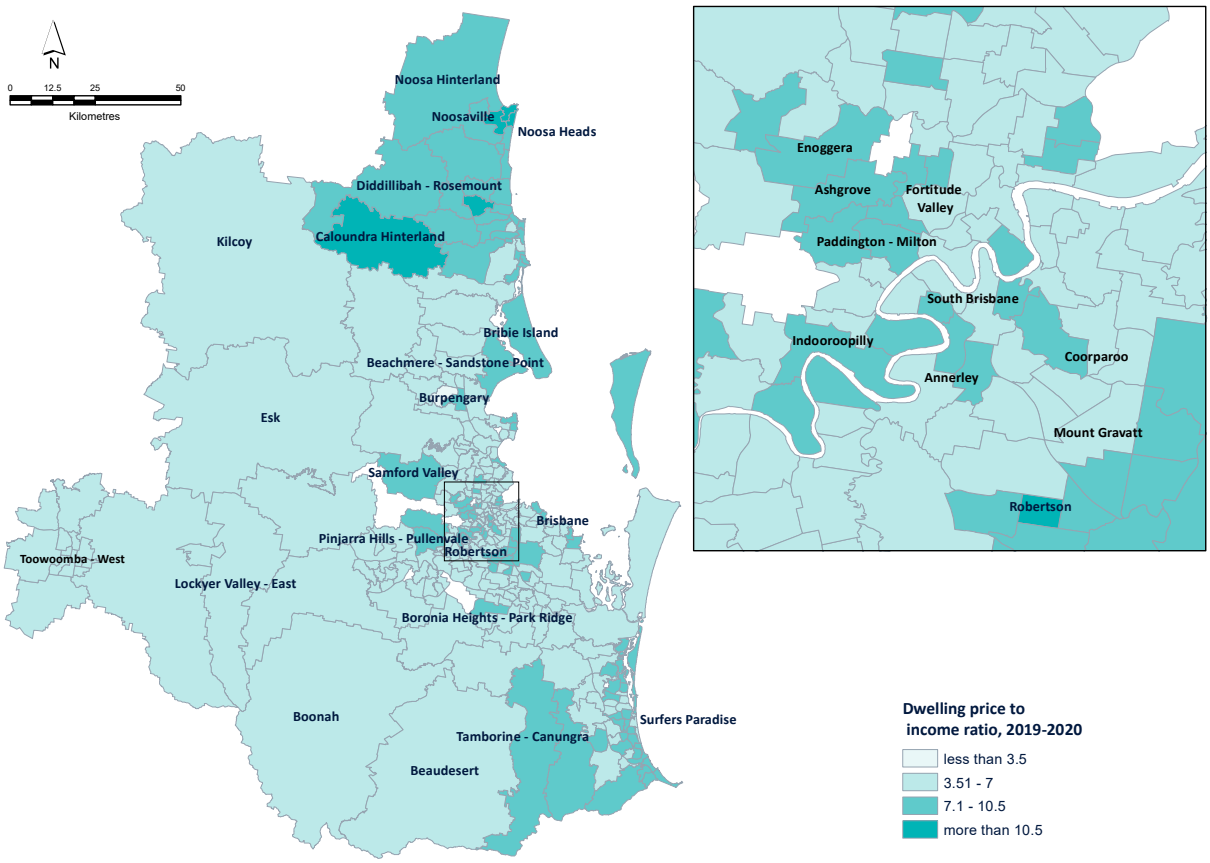
In the National Cities Performance Framework (NCPF) (BITRE 2021a), this indicator was used to compare housing affordability across Australia's 21 largest cities.[9] For the year ended June 2020, the Sunshine Coast was the 3rd least affordable city (dwelling price to income ratio of 8.0), behind Sydney (8.5) and Wollongong (8.3). The city of Gold Coast-Tweed was in 7th place (with a ratio of 7.0) and Brisbane was 10th (5.9). However, Toowoomba was the 3rd most affordable of the included cities, with a dwelling price to income ratio of 4.7.

To illustrate the spatial distribution of the dwelling price to income ratio, Figure 4.11 shows the dwelling price to income ratio of each SA2 in 2019–2020. SA2s located in the Noosa, Sunshine Coast, Middle South and Gold Coast sub-regions had higher dwelling price to income ratios, i.e. those areas were least affordable. On the other hand, SA2s located in Ipswich, Toowoomba and Moreton Bay had lower dwelling price to income ratios and were more affordable.

Most of the SA2s in SEQ had a dwelling price to income ratio between 3.5 and 7.0. Table 4.9 shows the top five SA2s with the highest and lowest dwelling price to income ratio in 2019–20. Robertson (12.5), Sunshine Beach (11.7) and Caloundra Hinterland (11.7) had the highest dwelling price to income ratio. On the other hand, Morayfield (3.5), Cambooya – Wyreema (3.9) and Churchill – Yamanto (4.0) had the lowest dwelling price to income ratio.

9 Note that the NCPF used different geographic boundaries to this study. Capital city boundaries were based on ABS Greater Capital City Statistical Areas, while for smaller cities, ABS Significant Urban Area boundaries were used.

Figure 4.11: Dwelling price to income ratio of SA2s in SEQ 2019–2020



Note: Ratio data is missing for SA2s displayed in white colour, typically due to zero or limited property sales in period or a small number of resident households.

Sources: BCARR analysis of CoreLogic, Median Dwelling price 2019–2020 data and Median household income – The Australian National University household income model (custom data) 2019 –2020.

Table 4.9: Top 5 SA2s with highest and lowest dwelling price to income ratio in SEQ 2019–2020

SA2s	BCARR rings/ sub-region	Dwelling price to income ratio (highest)	SA2s	BCARR rings/ sub-region	Dwelling price to income ratio (lowest)
Robertson	Middle South	12.5	**Morayfield**	Moreton Bay	3.5
Sunshine Beach	Noosa	11.7	**Cambooya – Wyreema**	Toowoomba	3.9
Caloundra Hinterland	Sunshine Coast	11.7	**Churchill – Yamanto**	Ipswich	4.0
Noosa Heads	Noosa	11.5	**Ripley**	Ipswich	4.1
Noosaville	Noosa	11.3	**Springfield**	Ipswich	4.2

Sources: BCARR analysis of CoreLogic, Median Dwelling price 2019–2020 data and Median household income – The Australian National University household income model (custom data) 2019 –2020.

Mortgage stress

The mortgage stress indicator is from the ABS Census of Population and Housing 2016 and measures the percentage of households with mortgage repayments which are 30 per cent or more of household income.[10] Table 4.10 shows the percentage of households that were in mortgage stress in the 12 LGAs of SEQ in 2016. The highest proportions in mortgage stress were in the Logan and Scenic Rim LGAs, both at 8.2 per cent. As discussed above, the Logan LGA had a very high percentage of dwellings owned with a mortgage, which has flowed through into a high degree of mortgage stress. The Toowoomba, Brisbane and Ipswich LGAs had the lowest proportion of households in mortgage stress in 2016.

Table 4.10: Proportion of households in mortgage stress in the 12 LGAs of SEQ in 2016

LGAs	Mortgage stress, 2016
Brisbane	5.8
Gold Coast	7.9
Ipswich	5.9
Lockyer Valley	7.9
Logan	8.2
Moreton Bay	6.8
Noosa	8.0
Redland	7.3
Scenic Rim	8.2
Somerset	7.5
Sunshine Coast	7.2
Toowoomba	5.1

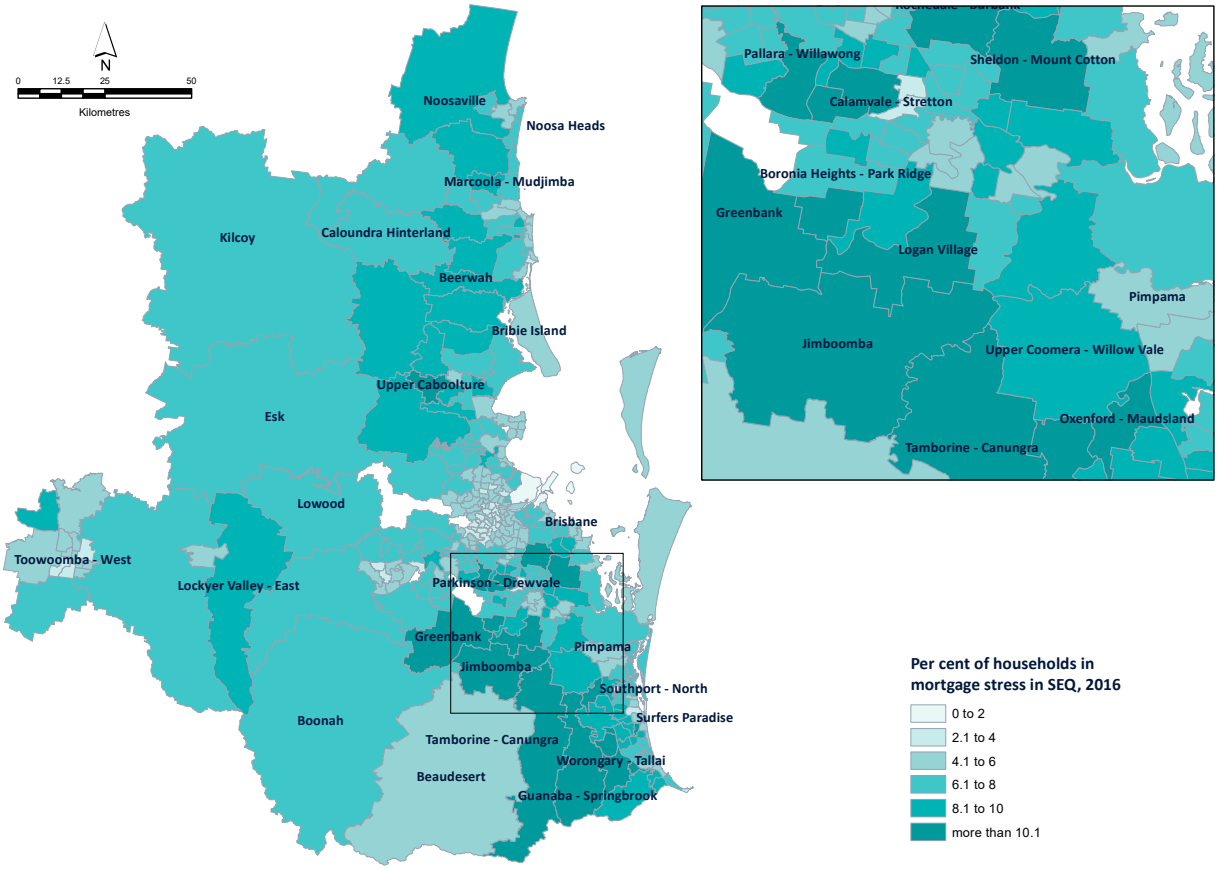
Source: ABS, Census QuickStats, Census of Population and Housing 2016

Overall, mortgage stress is not particularly high in SEQ, with the NCPF showed that in 2016 Gold Coast-Tweed was the SEQ city that had the highest incidence of mortgage stress at 7.7 per cent, well below the incidence in Western Sydney (10.2 per cent) and Perth (9.3 per cent) (BITRE 2021a). Toowoomba had the second lowest mortgage stress of all the NCPF cities at 5.0 per cent (ibid).

To illustrate the spatial distribution of mortgage stress, Figure 4.12 shows the mortgage stress of each SA2 of SEQ in 2016. The map shows that households in mortgage stress are quite highly represented in a number of SA2s in the Logan, Middle South and Gold Coast sub-regions. Table 4.11 shows that the SA2s with the highest mortgage stress were Jimboomba (12.4), Greenbank (12.4), Parkinson – Drewvale (11.8), Reedy Creek Andrews (11.5) and Upper Caboolture (11.4). A relatively large proportion of households in those SA2s were paying mortgage payments greater than or equal to 30 per cent of household income.

10 The assessment is based on an imputed income measure and is expressed as a proportion of the total number of households in an area (including those households which were renting, and excluding the small proportion of visitor only and other non-classifiable households). The nature of the income imputation means that the reported proportion may significantly overstate the true proportion (ABS 2016b).

Figure 4.12: Proportion of households in mortgage stress by SA2s of SEQ in 2016



Source: BCARR analysis of ABS Census of Population and Housing, 2016, data obtained on request.

Table 4.11: Top five SA2s of SEQ with mortgage stress in 2016

SA2s	BCARR rings- sub-regions	Mortgage stress (per cent)
Jimboomba	Logan	12.4
Greenbank	Logan	12.4
Parkinson – Drewvale	Middle South	11.8
Reedy Creek – Andrews	Gold Coast	11.5
Upper Caboolture	Moreton Bay	11.4

Source: BCARR analysis of ABS Census of Population and Housing, 2016, data obtained on request

Rental affordability

Two indicators are used to provide an overview of rental affordability in the SEQ region: the rental affordability index (RAI) and rental stress. The RAI is released biannually by SGS Economics and Planning and tracks rental affordability relative to income for all households. Rental stress measures the proportion of households whose rental payments are 30 per cent or more of their household income.

Rental stress

The rental stress indicator is from the ABS Census of Population and Housing 2016 and measures the percentage of households with rental payments which are 30 per cent or more of household income.[11] According to the NCPF, SEQ cities had a relatively high incidence of rental stress. In 2016, Gold Coast-Tweed had the highest incidence of rental stress of all NCPF cities at 16.5 per cent, while Sunshine Coast was in 4th place (13.8 per cent) and Brisbane in 6th place (12.9 per cent) (BITRE 2021a).[12]

This is confirmed by Table 4.12 which shows the proportion of households that were in rental stress in the 12 LGAs of SEQ in 2016. The Gold Coast LGA has the highest rental stress, with 16.8 per cent of households spending more than 30 per cent of their income on rent. The Ipswich (14.0 per cent), Logan (13.4 per cent) and Sunshine Coast (13.3 per cent) LGAs also had relatively high rental stress. Scenic Rim had the lowest proportion of households with rental stress in 2016 (9.9 per cent).

A comparison of Table 4.12 with the mortgage stress indicator in Table 4.10 makes it clear that rental stress is a more widespread issue in SEQ than mortgage stress, affecting a larger proportion of the SEQ population.

Table 4.12: Proportion of households in rental stress in the 12 LGAs of SEQ in 2016

LGAs	Rental stress, 2016
Brisbane	13.1
Gold Coast	16.8
Ipswich	14.0
Lockyer Valley	10.1
Logan	13.4
Moreton Bay	12.8
Noosa	12.8
Redland	10.1
Scenic Rim	9.9
Somerset	10.2
Sunshine Coast	13.3
Toowoomba	11.1

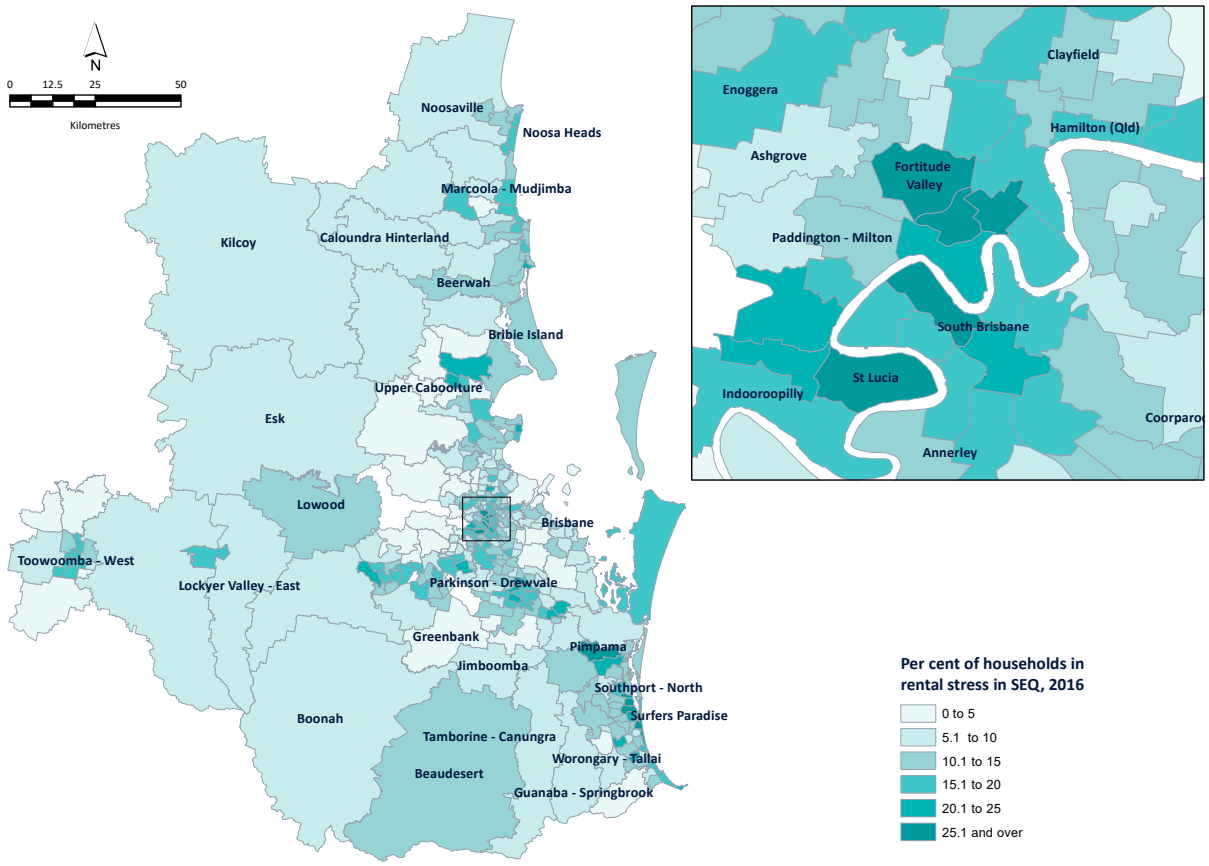
Source: ABS Quick Stats, Census of Population and Housing 2016.

To illustrate the spatial distribution of rental stress, Figure 4.13 below shows the rental stress of each SA2 in SEQ in 2016. Households were paying more rent in the Inner sub-region. Some coastal SA2s also have a relatively high incidence of rental stress. Southport – North (32.8), Kelvin Grove – Herston (31.1), St Lucia (31.1), Fortitude Valley (28.4) and Surfers Paradise (27.0) were the top five SA2s where more than a quarter of the households were in rental stress (see Table 4.13).

11 The assessment is based on an imputed income measure and is expressed as a proportion of the total number of households in an area (including those households which were not renting, and excluding the small proportion of visitor-only and other non-classifiable households). The nature of the income imputation means that the reported proportion may significantly overstate the true proportion (ABS 2016b).

12 Note that the NCPF uses different geographic boundaries to this study. Capital city boundaries are based on ABS Greater Capital City Statistical Areas, while for smaller cities, ABS Significant Urban Area boundaries are used.

Figure 4.13: Proportion of households in rental stress in SEQ in 2016



Source: BCARR analysis of ABS Census of Population and Housing, 2016, data obtained on request

Table 4.13: Top five SA2s with rental stress in SEQ in 2016

SA2s	BCARR rings/sub-regions	Rental stress (per cent)
Southport – North	Gold Coast	32.8
Kelvin Grove – Herston	Inner	31.1
St Lucia	Middle West	31.1
Fortitude Valley	Inner	28.4
Surfers Paradise	Gold Coast	27.0

Source: BCARR analysis of ABS Census of Population and Housing, 2016, data obtained on request

Rental affordability index (RAI)

This study uses the RAI from SGS Economics and Planning, which is an indicator of rental affordability relative to household incomes, applied to geographic areas across Australia. Like the rental stress indicator presented in the previous section, a 30 per cent of income threshold is used. RAI scores of 100 or less indicate that households spent 30 per cent or more of their income on rent, and scores of 80 or less indicate severely unaffordable rents (with households paying 38 per cent or more of their income on rent).

Figure 4.14 below shows the RAI of SEQ and surrounding areas, and Figure 4.15 shows the RAI scores of the Greater Brisbane area over time. Based on the average rental household gross income of $91,000 per annum, the Greater Brisbane RAI score was 121 as of June 2021 (SGS, 2021).

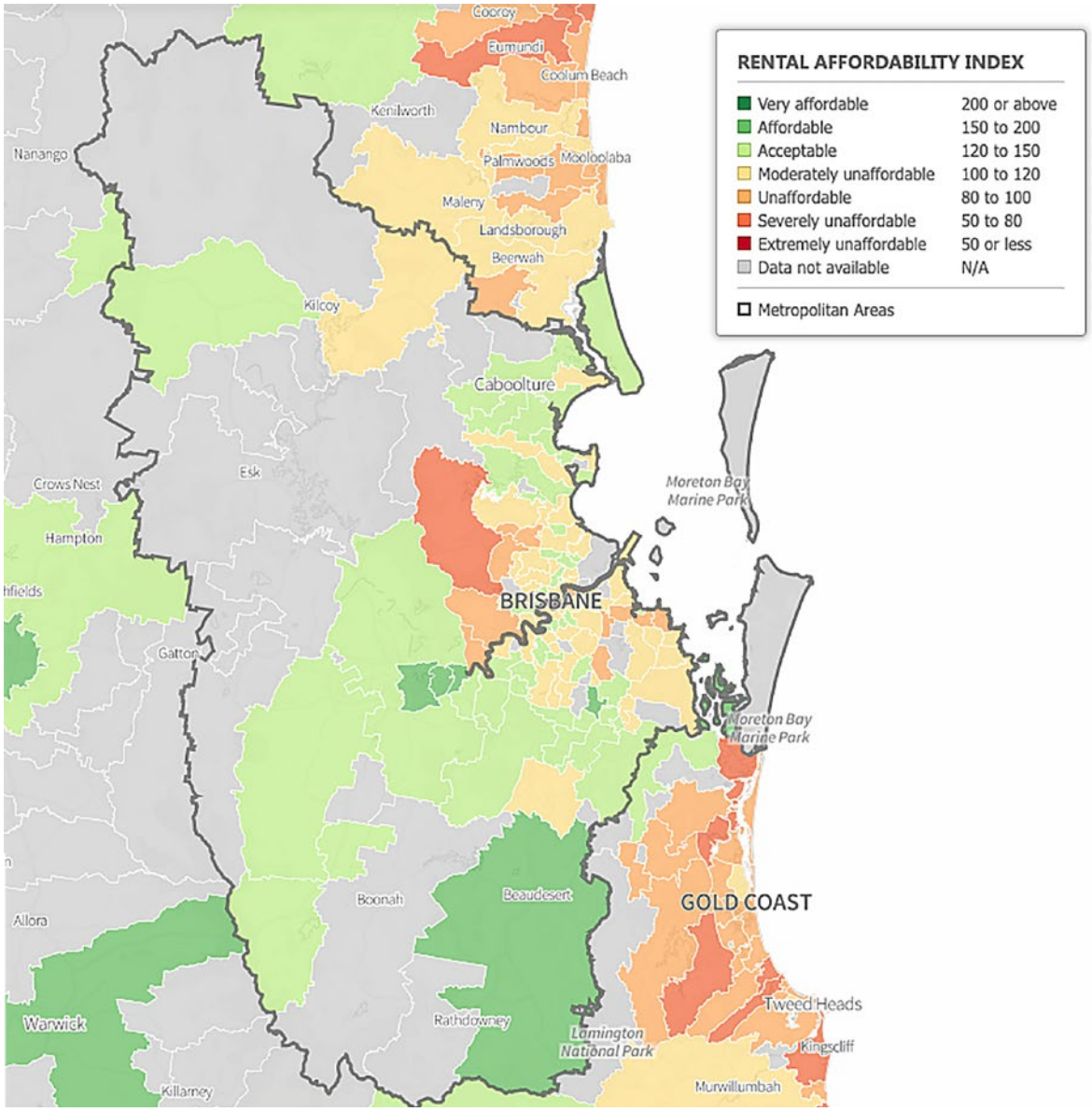
This is considered an acceptable level of affordability, with an average of 25 per cent of income being spent on rent by Brisbane's renting households in 2021. As of June 2021, Brisbane's level of rental affordability was similar to that of Sydney and Perth, and while not as affordable as Melbourne, it was much more affordable than Hobart or Adelaide (based on the RAI).

Between 2016 and 2020, there was a trend of gradual improvements in rental affordability in Greater Brisbane (with the RAI score improving from 117 in 2016 to 130 in 2020). However, Greater Brisbane's RAI has declined over the past 12 months (from an index score of 130 to 121). This represents a return to the rental affordability levels seen previously in 2017 and 2018.

Figure 4.14 shows that areas to the north-west of Brisbane (around Samford Valley) continue to be among the most unaffordable in the region. Areas to the north and south-east of the Brisbane CBD are moderately unaffordable. Beaudesert and Boonah SA2s in the Scenic Rim LGA are amongst the areas listed as affordable.

Over the 12 months to June 2021, some SA2s have experienced a notable decline in affordability, including Rochedale, Acacia Ridge to Drewvale, Alexandra Hills, Wellington Point, and Stafford to Fortitude Valley (see Figure 4.14).

Figure 4.14: SGS rental affordability index in SEQ as of June 2021

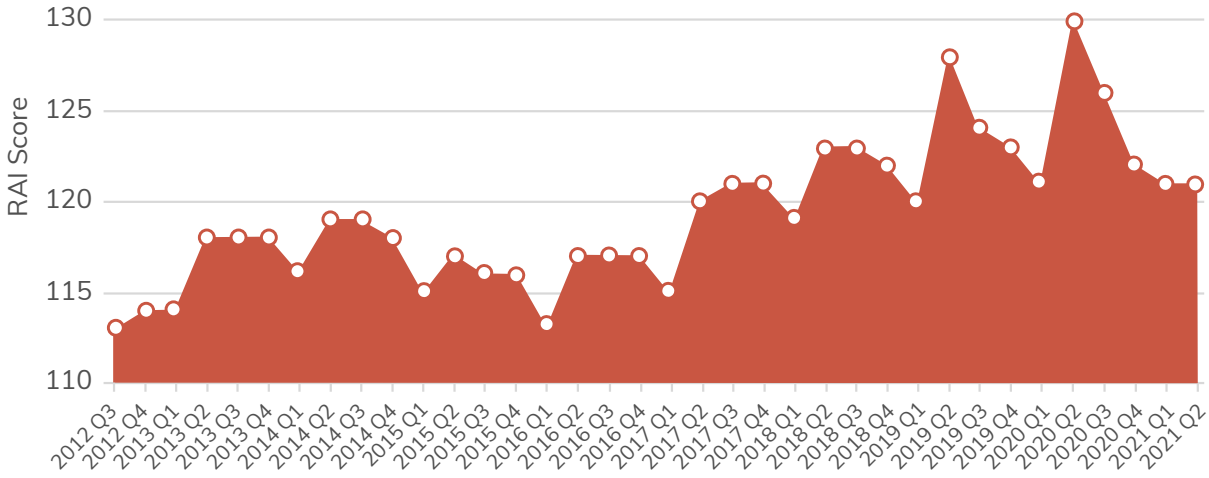


Source: SGS Economics and Planning 2020.

Based on the average rental household gross income of $82,000 per annum, regional Queensland (which includes the Rest of SEQ) had an RAI score of 110, which means moderately unaffordable. Rental affordability in the Rest of Queensland decreased recently, shifting from what was an acceptable level a year ago (see Figure 4.16). The RAI score for regional Queensland exceeded 120 for most of the period from 2016 to mid–2020, but has declined significantly over the last year. The average rental household seeking to rent a dwelling now needs to spend 27 per cent of its total income (SGS 2021).

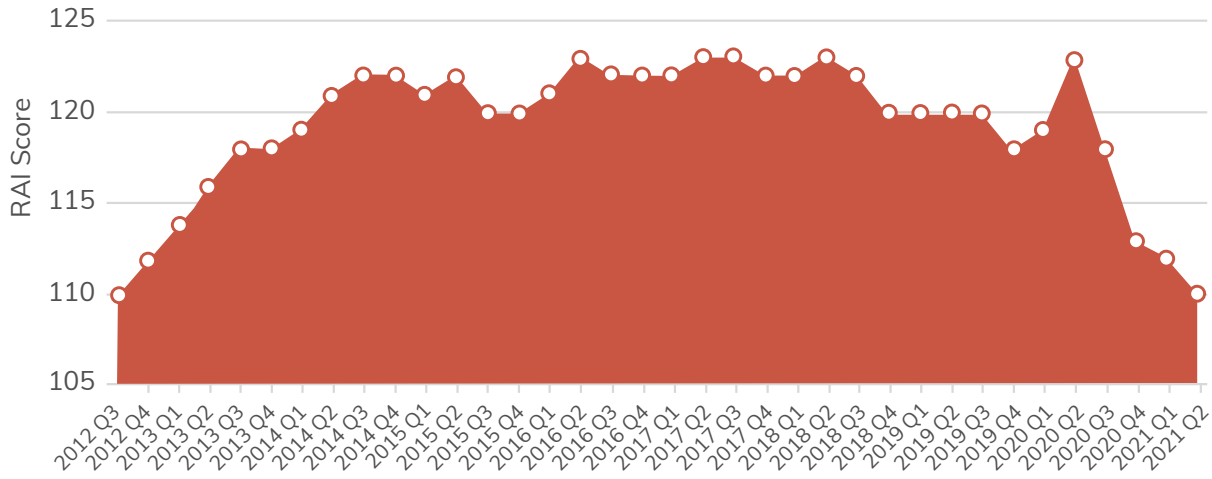
Affordability has significantly decreased in the Gold Coast area over the last 12 months, with Gold Coast SA2s now having a RAI ranging between moderately unaffordable and severely unaffordable. Areas such as Helensvale, Broadbeach and Robina are some of the severely unaffordable areas on the Gold Coast. On the Sunshine Coast, areas from Maroochydore to Noosa have shifted recently from acceptable/moderately unaffordable to unaffordable and severely unaffordable. All these areas are significant tourist destinations, which might impact the rental affordability of these areas. There is a trend of using rental property through Airbnb these days, which is more profitable than the regular rental income (Buckle et al. 2020). Therefore, popular tourist destinations are becoming less affordable for local residents who wish to rent.

Figure 4.15: Rental Affordability Index of Greater Brisbane from 2012 to 2021



Source: SGS Economics and Planning, 2021.

Figure 4.16: Rental Affordability Index of Rest of QLD from 2012 to 2021



Source: SGS Economics and Planning, 2021.

Taken together, the two rental affordability measures show that:

- Rental affordability is an issue that impacts a significant proportion of SEQ households, moreso than home ownership affordability
- Within SEQ, rental affordability issues are particularly pronounced on the Gold Coast
- Rental affordability has declined significantly over the 12 months ended June 2021, with large parts of Gold Coast and the Sunshine Coast, and some areas of Brisbane, now being assessed as either unaffordable or severely unaffordable for renting households.

4.8 Conclusion

This chapter has provided an overview of housing and housing affordability in the SEQ region. Separate, low-density detached houses dominate the region's housing mix (with a 71 per cent share of SEQ's dwelling stock), except in the Brisbane, Gold Coast and Sunshine Coast LGAs. Of the 166,139 new residential building approvals in SEQ between 2016 and 2021, 59 per cent were for separate houses, which indicates some shift towards higher density forms of residential development since 2016. In the Brisbane LGA, only 36 per cent of residential building approvals were for separate houses over the last five years, and the Gold Coast LGA is following the same trend towards higher-density residential development. There was also an overall decline in median lot sizes across SEQ between 2016 and 2020.

SEQ is expected to add around 800,000 new dwellings between 2016 and 2041, with 60 per cent of these added through consolidation, rather than expansion. The Brisbane LGA is expected to add the most dwellings (155,200), almost entirely through urban consolidation. Gold Coast is expected to add 150,900 dwellings, mainly through consolidation. However, the majority of the 146,000 dwellings expected to be added in Ipswich and the 83,800 dwellings to be added in Logan are likely to occur through greenfields development beyond the existing urban area boundary. It is these two LGAs – Ipswich and Logan – that have the most available land identified for future development.

Compared with rental stress, mortgage stress is low in SEQ. The Logan and Scenic Rim LGAs have the highest proportion of households with mortgage stress. On the other hand, the Gold Coast LGA is the least affordable for renters. The available evidence suggests that rental affordability issues in the Gold Coast and some other SEQ locations have become more pronounced over the last 12 months.

CHAPTER 5

JOBS AND INDUSTRIES

Key points

- There were 1.93 million employed persons residing in SEQ, on average, during the year ended August 2021. Of these, 68 per cent (or 1.3 million) resided in Greater Brisbane, 19 per cent in the Gold Coast, 10 per cent in the Sunshine Coast and 4 per cent in Toowoomba.
- The Health care and social assistance industry employs more SEQ residents than any other industry. With around 280,000 employed persons, it contributed 14.5 per cent of total SEQ employment as of August 2021. Other important industries include Retail trade (with 198,000 employed persons), Construction (176,000), Professional, scientific and technical services (167,000) and Education and training (165,000).
- Of the total 1.5 million people with an identifiable LGA of work in SEQ at the time of the 2016 census, 714,200 (48 per cent) worked in the Brisbane LGA and 235,500 (16 per cent) worked in the Gold Coast LGA. The Moreton Bay and Sunshine Coast LGAs were the only other LGAs which contained the place of work of more than 100,000 people.
- The Brisbane LGA is the only SEQ LGA that has more employed people who work in it than live in it. In 2016, there were 125 people who reported a place of work in the Brisbane LGA for every 100 employed residents of the LGA. In contrast, the Redland and Moreton Bay LGAs had a notable shortfall of local jobs, with around 60 people reporting a place of work in the LGA for every 100 employed residents.
- Employment density was highest in the Brisbane LGA at 532 persons per km^2 in 2016, followed by Gold Coast (177 persons per km^2). The Scenic Rim and Somerset LGAs had very low employment densities.
- The SEQ sub-regions of work with the most employment in 2016 were Inner Brisbane (312,100), Gold Coast (235,500), Middle South (155,700), Middle North (112,500) and Sunshine Coast (110,200).
- The industry mix of employment in Inner Brisbane is notably different to the other rings. Inner Brisbane has particularly high representation of the Professional, scientific and technical services, Financial and insurance services, Information media and telecommunications, and Public administration and safety industries, and a lower share of Manufacturing employment.
- Overall, SEQ had 23.9 per cent of its total employment in knowledge-intensive industries in 2016. Representation was highest for jobs located in Inner Brisbane (43.4 per cent), followed by Middle Brisbane (19.8 per cent) and Rest of SEQ (19.3 per cent). Outer Brisbane had the lowest share (16.0 per cent).
- The Brisbane City SA2 was the location of work of 122,500 persons, representing 8.3 per cent of the SEQ total at the time of the 2016 census. There were six SA2s in SEQ that were the place of work of between 20,000 and 28,000 employed persons, namely South Brisbane, Fortitude Valley and Newstead-Bowen Hills (in the Inner sub-region), Southport North (in the Gold Coast sub-region), Rocklea-Acacia Ridge (in the Middle South sub-region) and Brisbane Airport (in the Middle North sub-region).
- The number of employed residents of SEQ increased by 186,800 persons between 2016 and 2021, representing an average annual growth rate of 2.1 per cent. Of this, 122,300 (or almost two-thirds) were in Greater Brisbane. Within Greater Brisbane, the greatest increases occurred in Brisbane Inner City SA4 (29,100), Ipswich SA4 (28,900) and Logan-Beaudesert SA4 (24,300).
- The Gold Coast SA4 had the largest increase in employed residents of all SA4s in SEQ, with employment rising by 44,700 employed persons between 2016 and 2021.
- The major industry source of employment growth in SEQ from 2016 to 2021 was the Health care and social assistance industry which added 43,900 employed persons, which was 23.5 per cent of total growth. Other key contributors included Education and training (22,100), Professional, scientific and technical services (19,600), Manufacturing (18,000) and Accommodation and food services (14,000).

5.1 Introduction

This chapter provides an analysis of the spatial distribution of jobs throughout the SEQ region, and summarises recent evidence on growth in SEQ's employment and industries.

The chapter starts by presenting a snapshot of the spatial distribution of employment in SEQ, initially focusing on employment by place of residence (using ABS *Labour Force Survey* data for 2021), and then turning to the location of work (using ABS Census of Population and Housing data from 2016). It presents evidence on the employment contribution of various industries, including knowledge-intensive industries, across different parts of SEQ. The spatial analysis is undertaken using a range of geographies, including the 12 LGAs, the SEQ rings and sub-regions, SA4s, SA2s and major employment precincts. The latter part of the chapter is focused on summarising the available evidence on employment growth in SEQ between 2016 and 2021, including the spatial and industry breakdowns of that growth.

5.2 Employment snapshot

Snapshot of employed residents of SEQ in 2021

The ABS *Labour Force Survey* (LFS) provides the official measure of employment for Australia. Based on LFS data, there were 1.9 million employed persons residing in SEQ during 2020–21. This reflects a labour force participation rate of 66.7 per cent.

ABS LFS data is not available for LGAs, but is published for Statistical Area Level 4s (SA4s).[13] Table 5.1 presents LFS estimates of employed persons for the SA4s within SEQ. Of the total 1.9 million employed persons residing in SEQ, 68 per cent (or 1.3 million) live in Greater Brisbane, 19 per cent in the Gold Coast, 10 per cent in the Sunshine Coast and 4 per cent in Toowoomba. Within Greater Brisbane, the Brisbane South SA4 has the largest number of employed residents, followed by the Brisbane Inner City SA4.

Table 5.1 also reveals that the Health care and social assistance industry employs more SEQ residents than any other industry. With around 280,000 employed persons, this industry is responsible for 14.5 per cent of total SEQ employment as of August 2021.

The Health care and social assistance industry is also the top employing industry in most of the individual SA4s of SEQ. It is particularly prominent in the Toowoomba, Sunshine Coast and Brisbane North SA4s, where more than 16 per cent of employed residents work in this industry. However, of the SA4s in SEQ, Gold Coast has the largest number of employed residents working in the Health care and social assistance industry (46,900).

The Professional, scientific and technical services industry is the top employing industry in the Brisbane Inner City and Brisbane West SA4s, while Retail trade is the top employing industry for residents of the Moreton Bay South SA4.

13 SA4 regions are the largest sub-State regions in the ABS's Australian Statistical Geography Standard (ASGS) main structure. They are specifically designed for the output of ABS LFS data and therefore have population limits imposed by the LFS sample. There are 107 SA4 regions covering the whole of Australia without gaps or overlaps, including 18 non-spatial special purpose codes (ABS 2016a).

Table 5.1: Employed persons by Statistical Area 4 of residence in SEQ as of August 2021

SA4 of residence	Employed persons ('000)	Share of SEQ total (per cent)	Top employing industry in SA4 of residence	Industry share of SA4 total (per cent)
Brisbane Inner City	193.5	10.0	Professional, scientific and technical services	15.4
Brisbane East	127.8	6.6	Health care and social assistance	15.8
Brisbane North	126.5	6.5	Health care and social assistance	16.2
Brisbane South	201.1	10.4	Health care and social assistance	14.5
Brisbane West	102.6	5.3	Professional, scientific and technical services	17.9
Ipswich	182.1	9.4	Health care and social assistance	15.2
Logan – Beaudesert	158.7	8.2	Health care and social assistance	13.0
Moreton Bay North	106.7	5.5	Health care and social assistance	13.0
Moreton Bay South	116.5	6.0	Retail trade	15.0
TOTAL – GREATER BRISBANE	1315.5	68.0	Health care and social assistance	14.4
Gold Coast	358.1	18.5	Health care and social assistance	13.1
Sunshine Coast	185.9	9.6	Health care and social assistance	16.7
Toowoomba	74.0	3.8	Health care and social assistance	17.4
TOTAL – SEQ	1933.6	100.0	Health care and social assistance	14.5

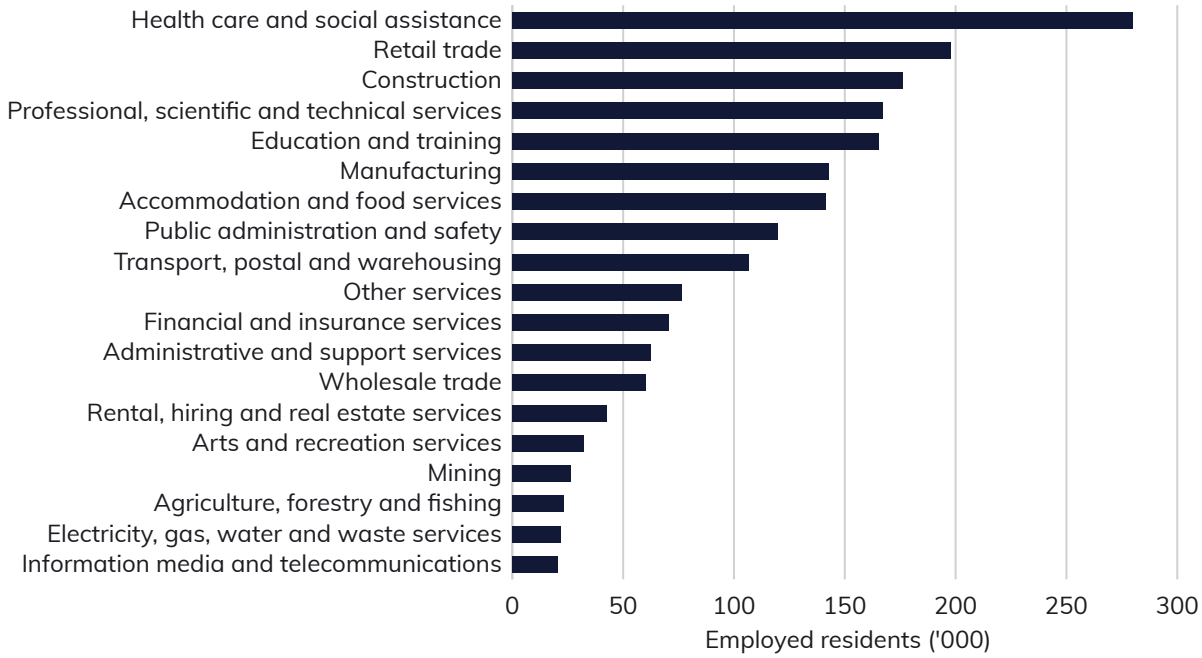
Note: Data is an annual average of the estimates for the 12 months up to August 2021. The Toowoomba SA4 captures only the urban extent of Toowoomba. Based on ANZSIC 1-digit industries.

Source: ABS *Labour Force Survey* data, Cat. 6291.0.55.001 (Table RQ1, 24 March 2022 release).

Figure 5.1 illustrates the industry structure of employment for SEQ residents as of August 2021. As previously noted, the Health care and social assistance industry is the principal industry of employment in SEQ, employing almost 280,000 residents. Other important employing industries include:

- Retail trade, with 198,000 employed persons (and 10.2 per cent of the SEQ total)
- Construction, with 176,000 employed persons (9.1 per cent)
- Professional, scientific and technical services, with 167,000 employed persons (8.7 per cent)
- Education and training, with 165,000 employed persons (8.6 per cent).

Figure 5.1: Employed persons by industry in SEQ as of August 2021



Note: Data is an annual average of the estimates for the 12 months up to August 2021. The Toowoomba SA4 captures only the urban extent of Toowoomba. Based on ANZSIC 1-digit industries. Data is on a place of residence basis.

Source: ABS *Labour Force Survey* data, Cat. 6291.0.55.001 (Table RQ1, 24 March 2022 release).

Snapshot of the location of work within SEQ in 2016

The previous section focused on employed residents of SEQ and its SA4s. However, for this study it is more important to understand the locations at which employed persons actually work, rather than where they live. The most recent data we have on employment by place of work for SEQ comes from the 2016 ABS *Census of Population and Housing*.[14]

Location of work by Local Government Areas

Table 5.2 summarises the census place of work data for the 12 LGAs of SEQ. In total, there were close to 1.5 million employed persons with an identifiable LGA of work in SEQ in 2016. This figure is significantly lower than the 1.9 million total from Table 5.1, reflecting the following factors:

- The 1.5 million figure is from 2016, and misses the growth that occurred between 2016 and 2021.
- Census non-response and item non-response to the labour force questions means that census employment estimates tend to be 11–12 per cent less than the official LFS estimates at the same point in time (ABS 2017a).
- About 5 per cent of employed persons in Queensland reported no fixed address of work. This can include occupations such as truck drivers, couriers, mobile salespeople, construction workers etc.
- Some employed residents of SEQ have a place of work outside of SEQ, such as fly-in fly-out mine sites.

14 The 2021 census place of work data was released by ABS in October 2022, after the completion of this research project.

Of the total 1.5 million people with an identifiable LGA of work in SEQ, 48 per cent worked in the Brisbane LGA and 16 per cent in the Gold Coast LGA. The Moreton Bay and Sunshine Coast LGAs were the only other LGAs which contained the place of work of more than 100,000 people. The Lockyer Valley, Somerset and Scenic Rim LGAs each contributed less than one per cent of SEQ employment.

Table 5.2: Employed persons by LGA of work in SEQ in 2016

LGA of work	Employed persons ('000)	Share of 12 LGA total (per cent)	Ratio of workers to employed residents	Employment density (persons/ km²)
Brisbane	714.2	48.1	1.25	531.9
Gold Coast	235.5	15.9	0.90	176.6
Ipswich	62.3	4.2	0.74	57.4
Lockyer Valley	11.2	0.8	0.71	4.9
Logan	89.1	6.0	0.68	93.0
Moreton Bay	113.0	7.6	0.60	55.3
Noosa	20.1	1.4	0.91	23.1
Redland	40.6	2.7	0.58	75.5
Scenic Rim	12.4	0.8	0.73	2.9
Somerset	6.1	0.4	0.66	1.1
Sunshine Coast	110.8	7.5	0.86	49.2
Toowoomba	69.4	4.7	0.97	5.4
12 LGAs total	**1484.7**	**100.0**	**0.94**	**42.1**

Note: The 12 LGAs total differs from the total for SEQ, as the rural areas of Toowoomba LGA are excluded from the definition of SEQ.

Sources: BCARR analysis of ABS Census of Population and Housing, 2016 (data extracted from TablebuilderPro) and ABS Cat. 3218.0 Regional population, Australia, 2016.

Overall, there were 94 workers with an identifiable place of work in SEQ for every 100 employed residents of SEQ. This ratio lies below 1 primarily because about 5 per cent of employed people had jobs which did not have a fixed work address, although commuting out (or into) the region may have also played a role.

The only SEQ LGA which had a ratio of workers to employed residents that exceeded 1 was the Brisbane LGA. There were 125 people who reported a place of work in the Brisbane LGA for every 100 employed residents of the LGA. In Australian cities, the central LGA – and specifically the Central Business District – tends to be a key employment hub which draws commuters in from residences in more outlying suburbs, and the Brisbane LGA result is typical of that pattern. The Toowoomba LGA's ratio of 0.97 exceeded that of the 12 LGAs total, indicating it had sufficient local jobs to employ its residents.

The Gold Coast, Sunshine Coast and Noosa LGAs all had ratios of around 0.9, indicating a relatively minor shortfall of local jobs relative to employed residents. The remaining LGAs all had a notable shortfall of local jobs compared to employed residents, so that a significant number of locals needed to commute outside the LGA for work. In particular, there were only 58 people who reported a place of work in the Redland LGA for every 100 employed residents, and only 61 workers for every 100 employed residents of the Moreton Bay LGA.

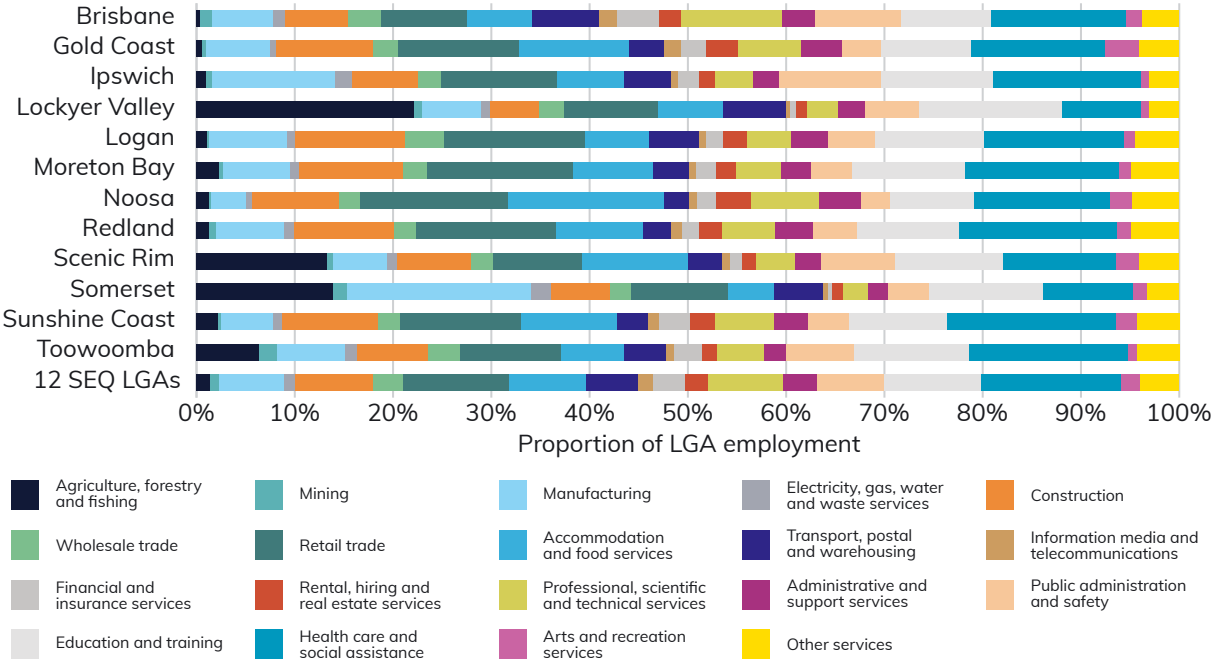
The overall employment density of the 12 LGAs was 42 employed persons per square kilometre (km^2) (Table 5.2). Employment density was highest in the Brisbane LGA at 532 persons per km^2, followed by Gold Coast (177 persons per km^2). The Scenic Rim and Somerset LGAs had particularly low employment densities, reflecting their predominantly rural nature.

Figure 5.2 illustrates the distribution of employment across industries for each of the LGAs of work in 2021. The Health care and social assistance industry was the top employing industry across the 12 SEQ LGAs with 202,900 employed persons at the time of the 2016 census, representing 14.3 per cent of total employment across the 12 LGAs. Health care and social assistance was also the top employing industry in most of the individual LGAs, with its employment share ranging from a low of 8.0 per cent for the Lockyer Valley to a high of 17.2 per cent for the Sunshine Coast.

Agriculture, forestry and fishing was the top employing industry in the Lockyer Valley (where it contributed 22.1 per cent of employment) and Scenic Rim LGAs (13.3 per cent), and was also a prominent source of employment in the Somerset LGA (13.9 per cent). However, Manufacturing was the top employing industry in the Somerset LGA, with 18.7 per cent of jobs.

In the Logan LGA, Retail trade was the top employing industry, with a 14.3 per cent employment share. In the Noosa LGA, the top employing industry was Accommodation and food services, which accounted for 15.9 per cent of Noosa's total jobs.

Figure 5.2: Employed persons by industry by LGA of work in SEQ in 2016



Note: The 12 LGAs total differs from the total for SEQ, as the rural areas of Toowoomba LGA are excluded from the definition of SEQ.

Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro).

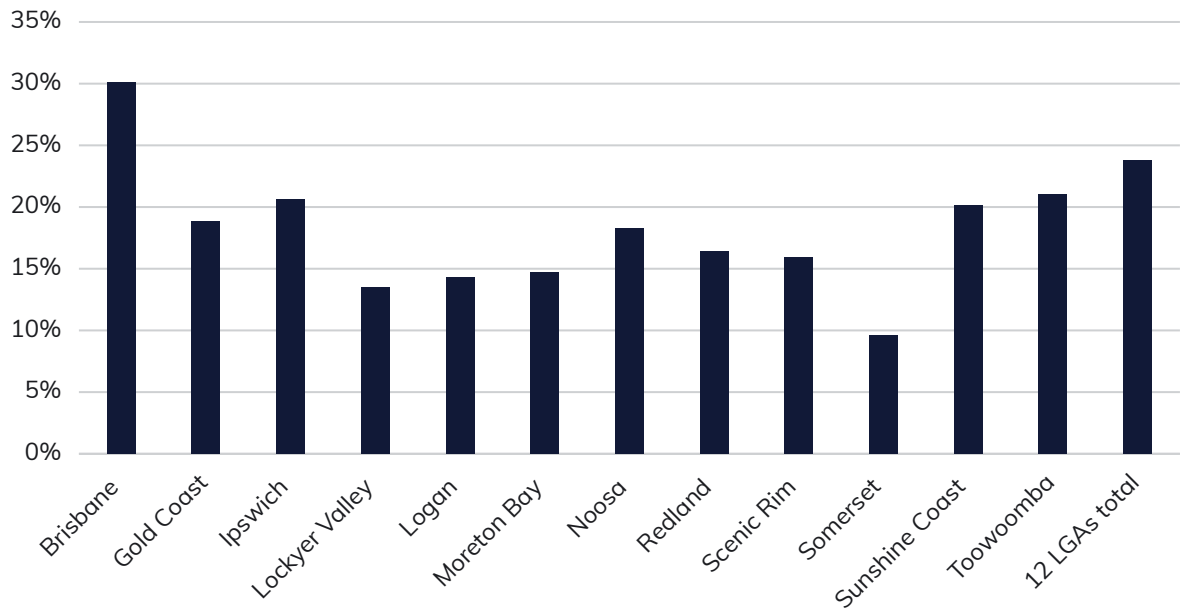
To understand the spatial distribution of knowledge-intensive industry jobs in SEQ, the report uses a group of knowledge industries comprising 126 sub-industries (Appendix A) within the following eight broad industries classified by the Australian and New Zealand Standard Industrial Classification (ANZSIC) (ABS 2006):

1. Information media and telecommunications
2. Financial and insurance services
3. Professional, scientific and technical services
4. Manufacturing
5. Public administration and safety
6. Education and training
7. Health care and social assistance
8. Arts and recreation

The knowledge-intensive industries were selected based on a review of literature on knowledge and creativity (Machlup 2014; Mellander 2009; Florida 2002; Florida 2003; Hu 2014 and Hu 2016). Some manufacturing sub-industries are considered knowledge-intensive because they are high-tech manufacturing and require a significant knowledge base to function. Similarly, some sub-industries within Public administration and safety are included, which are important in the knowledge economy (Tuli and Hu 2019).

Figure 5.3 below shows the proportion of knowledge-intensive industry jobs within the total place of work employment of each LGA in 2016. The Brisbane LGA had 30.1 per cent of its total employment in knowledge-intensive industries, which was above the 12 LGAs proportion of 23.8 per cent. Toowoomba, Ipswich and Sunshine Coast LGAs also had over 20 per cent of their total employment in knowledge-intensive industries in 2016, while Somerset LGA had the lowest representation at 9.6 per cent. The Professional, scientific and technical services industry was the main contributor to these knowledge-intensive jobs in Brisbane and to the total of the 12 LGAs (at 32.7 and 30.1 per cent respectively).

Figure 5.3: Proportion of total LGA employment in knowledge-intensive industries of SEQ in 2016



Note: Industries classified as knowledge-intensive are listed in Appendix A. The 12 LGAs total differs from the total for SEQ, as the rural areas of Toowoomba LGA are excluded from the definition of SEQ.

Source: BCARR analysis of ABS Census of Population and Housing, 2016 (place of work data extracted from Tablebuilder Pro).

Location of work by BCARR rings and sub-regions

Table 5.3 summarises the census place of work data for SEQ and its sub-regions. In 2016 just over 69 per cent of employed persons had a place of work in Greater Brisbane. The Middle ring of Brisbane was a particularly important source of jobs, responsible for 27 per cent of the SEQ total, while the Inner and Outer rings each contributed about 21 per cent of the SEQ total. At the sub-region scale, the most important contributors to the SEQ total were Inner Brisbane (312,100 jobs), Gold Coast (235,500), Middle South (155,700), Middle North (112,500) and Sunshine Coast (110,200).

Inner Brisbane was highly self-sufficient with respect to employment, with 222 jobs located in Inner Brisbane for every 100 employed residents. Jobs were heavily concentrated in and around Brisbane's CBD, with the Inner Brisbane sub-region accounting for 31 per cent of all jobs in Greater Brisbane, while 32 per cent of Greater Brisbane's jobs were located within a 5km radius of the central General Post Office (GPO).

The Middle East and Middle North sub-regions were also relatively self-sufficient, with slightly more jobs located in these sub-regions than employed residents. All of the remaining sub-regions had self-sufficiency ratios below one. The lowest ratios of workers to employed residents were for the Redland and Moreton Bay sub-regions, both of which had roughly 60 jobs available locally for every 100 employed residents.

Table 5.3 shows that employment density varies greatly across SEQ's rings and sub-regions. Inner Brisbane has very high employment density, with more than 3800 jobs per km^2. Other sub-regions with relatively high employment density include the Middle North and Middle South sub-regions. The semi-rural sub-regions of Scenic Rim, Lockyer Valley and Somerset all have very low employment densities, of less than 5 jobs per km^2.

Table 5.3: Employed persons by ring and sub-region of work in SEQ in 2016

BCARR rings/sub-regions	Employed persons ('000)	Share of SEQ total (per cent)	Ratio of workers to employed residents	Employment density (persons/km^2)
INNER Brisbane*	312.1	21.2	2.22	3805.8
MIDDLE Brisbane – TOTAL*	401.9	27.3	0.93	373.2
Middle East	40.0	2.7	1.05	344.9
Middle North	112.5	7.6	1.08	601.7
Middle South	155.7	10.6	0.93	586.7
Middle West	93.7	6.4	0.78	184.2
OUTER Brisbane – TOTAL	305.3	20.7	0.64	70.7
Ipswich	62.3	4.2	0.74	57.0
Redland	40.6	2.8	0.58	75.5
Logan	89.1	6.1	0.68	93.0
Moreton Bay	113.3	7.7	0.60	65.5
TOTAL – GREATER BRISBANE	1019.2	69.2	0.97	186.1
Rest of SEQ	453.0	30.8	0.88	26.6
Gold Coast	235.5	16.0	0.90	176.6
Sunshine Coast	110.2	7.5	0.86	50.5
Noosa	20.8	1.4	0.88	23.0
Toowoomba (urban part)	56.9	3.9	0.98	78.1
Scenic Rim	12.4	0.8	0.73	2.9
Lockyer Valley	11.2	0.8	0.71	4.9
Somerset	6.1	0.4	0.66	1.1
TOTAL – SOUTH EAST QUEENSLAND^	**1472.2**	**100.0**	**0.94**	**65.4**

Notes:

* The Inner and Middle Brisbane Rings together comprise the City of Brisbane LGA. See Table 1.3 and Figure 1.2 in Chapter 1 for these classifications.

^ The SEQ total differs from the 12 LGA total in the preceding table, which includes the whole of Toowoomba LGA. This table includes only the urban parts of Toowoomba LGA.

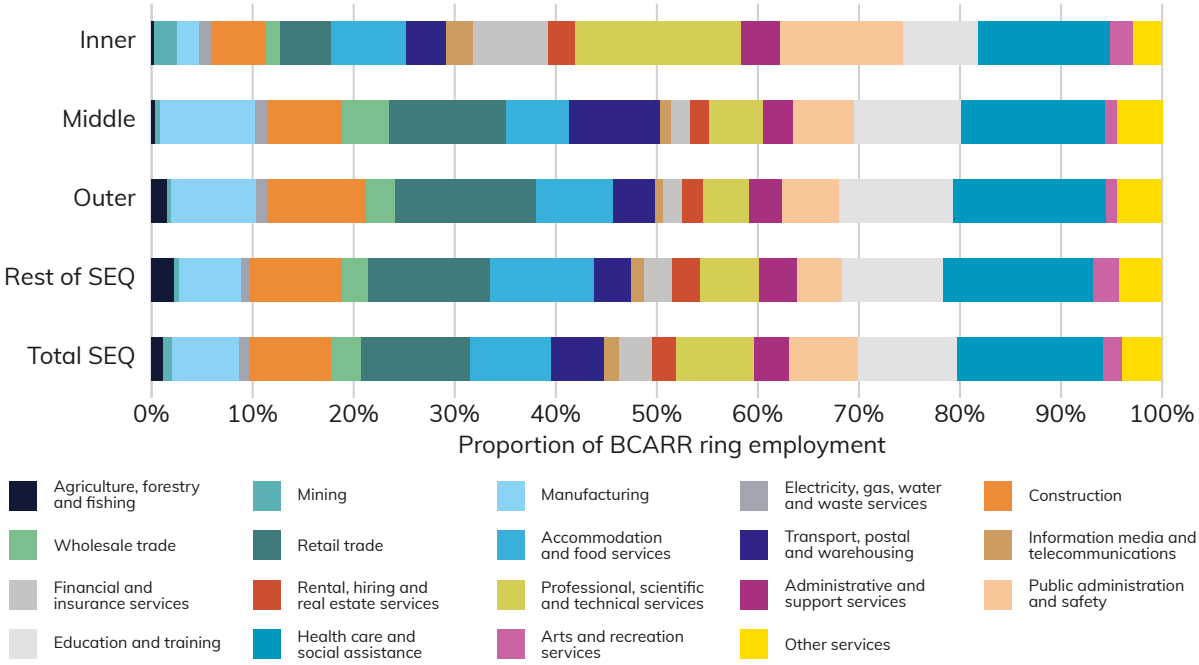
Sources: ABS Census of Population and Housing 2016 (data extracted from TablebuilderPro) and ABS Cat. 3218.0 Regional population, Australia, 2016.

Figure 5.4 illustrates the distribution of place of work employment across industries for each of the BCARR rings. The Health care and social assistance industry was the top employing industry in SEQ at the time of the 2016 census, with 202,200 employed persons, representing 14.4 per cent of total SEQ employment. Health care and social assistance was also the top employing industry in the Middle and Outer rings of Brisbane and in the Rest of SEQ. Its employment share was relatively stable across the rings, ranging from a low of 13.1 per cent for Inner Brisbane to a high of 15.2 per cent for Outer Brisbane.

The distribution of employment across industries in the Inner ring differs from the other rings.

- Professional, scientific and technical services was the top employing industry for the Inner sub-region, where it accounted for 16.4 per cent of employment. This industry accounted for less than 6.0 per cent of employment in the Middle, Outer and Rest of SEQ rings.
- The Inner ring also had higher representation of the Financial and insurance services, Information media and telecommunications, and Public administration and safety industries, compared to the other rings.
- The Inner ring had a significantly lower share of employment in Manufacturing than the other rings, as well as lower shares of employment in Construction, Retail trade and Education and training.

Figure 5.4: Employed persons by industry by BCARR ring of work in SEQ in 2016



Notes: The Inner and Middle Brisbane Rings together comprise the City of Brisbane LGA. See Table 1.3 and Figure 1.2 in Chapter 1 for these classifications.

The SEQ total differs from the 12 LGA total in the preceding chart, which includes the whole of Toowoomba LGA. This table includes only the urban parts of Toowoomba LGA.

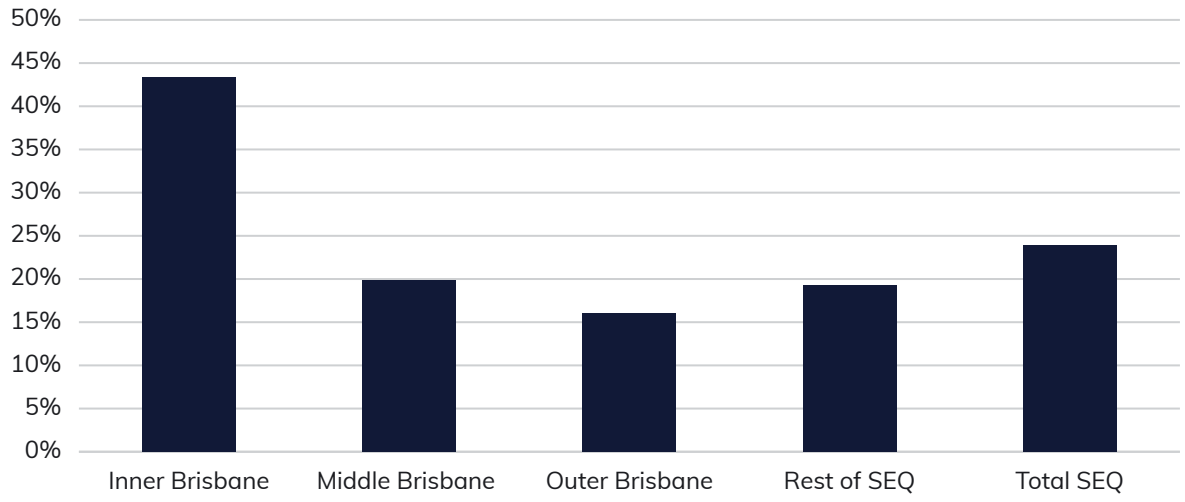
Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro).

A distinctive feature of the industry distribution of employment in Middle Brisbane is its relatively high share of employment in the Transport, postal and warehousing and Wholesale trade industries. This reflects the presence of some important transport and logistics precincts in the Middle ring. More detail on SEQ's major employment precincts will be provided later in this chapter.

A distinctive feature of the industry distribution of employment in the Rest of SEQ is the relatively high share of employment in the Accommodation and food services industry at 10.3 per cent, which compares to 6–8 per cent in the other rings. This reflects the prominence of Gold Coast, Sunshine Coast and Noosa as tourist destinations.

Figure 5.5 below shows the proportion of the total employment of each of the BCARR rings that relates to knowledge-intensive industries (as defined in Appendix A). Overall, SEQ had 23.9 per cent of its total employment in knowledge-intensive industries. Inner Brisbane had the highest proportion of its total place of work employment in the knowledge-intensive industries (43.4 per cent), followed by Middle Brisbane (19.8 per cent) and Rest of SEQ (19.3 per cent). The Outer Brisbane ring has the lowest proportion of knowledge-intensive jobs (16.0 per cent).

Figure 5.5: Proportion of total employment in knowledge-intensive industries by BCARR ring in SEQ in 2016



Note: Industries classified as knowledge-intensive are listed in Appendix A.

Source: BCARR analysis of ABS Census of Population and Housing, 2016 (place of work data extracted from Tablebuilder Pro).

Location of work by small areas

This section summarises the ABS Census of Population and Housing place of work data for 2016 at the Statistical Area Level 2 (SA2) scale, and also draws on the finer-grained destination zone (DZ) scale data. Table 5.4 lists the top employing SA2s within SEQ. Figure 5.6 maps the SA2 data.

Brisbane City SA2 was by far the largest employment location, with 122,500 jobs, representing 8.3 per cent of the SEQ total at the time of the 2016 census. There were six SA2s that had between 20,000 and 28,000 people working in them, namely South Brisbane, Fortitude Valley and Newstead-Bowen Hills (in the Inner sub-region), Southport North (in the Gold Coast sub-region), Rocklea-Acacia Ridge (in the Middle South sub-region) and Brisbane Airport (in the Middle North sub-region).

Employment density was very high for the Brisbane City SA2 at more than 50,000 jobs per km^2, while the South Brisbane and Fortitude Valley SA2s in the Inner sub-region also had relatively high densities. The only other SA2 in SEQ with a density of more than 10,000 jobs per km^2 is the Spring Hill SA2, which is also in the Inner sub-region. The Brisbane Airport, Ormeau-Yatala and Rocklea-Acacia Ridge SA2s all have very low employment densities of 1000 jobs per km^2 or less, despite each containing around 20,000 jobs. This is typical of employment precincts that contain industrial areas focused on manufacturing, transport and logistics.

The Public administration and safety industry is the top employing industry in the Brisbane City SA2. The Health care and social assistance industry is the top employing industry in 4 of the top 10 SA2s, reflecting its status as the main industry of employment in SEQ (see Table 5.4). Each of these 4 SA2s contain a major hospital. The Fortitude Valley SA2 has a specialisation in Professional, scientific and technical services, while the transport specialisation of the inner city Newstead-Bowen Hills SA2 reflects the presence of Virgin Australia's headquarters in Bowen Hills as of 2016.

Table 5.4: Top ten employing SA2s of work in 2016

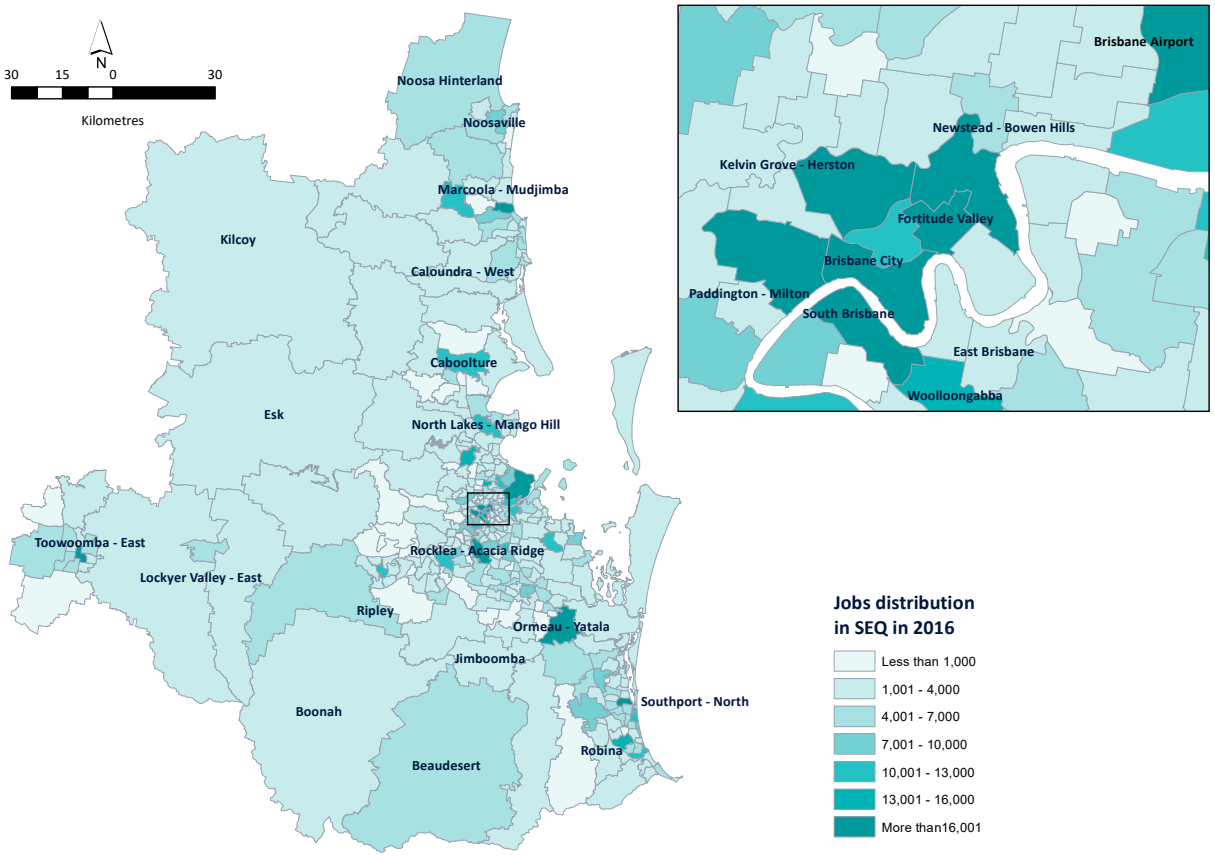
SA2 of work	Sub-region	Employed persons ('000)	Density (jobs/ km^2)	Top employing industry (and its employment share)
Brisbane City	Inner	122.5	51,800	Public administration and safety (23%)
South Brisbane	Inner	27.5	13,600	Health care and social assistance (34%)
Southport – North	Gold Coast	24.2	3,200	Health care and social assistance (34%)
Rocklea – Acacia Ridge	Middle South	23.3	1,000	Manufacturing (20%)
Fortitude Valley	Inner	22.1	17,300	Professional, scientific and technical services (24%)
Brisbane Airport	Middle North	21.4	500	Transport, postal and warehousing (45%)
Newstead – Bowen Hills	Inner	20.3	6,700	Transport, postal and warehousing (18%)
Ormeau – Yatala	Gold Coast	18.4	300	Manufacturing (26%)
Toowoomba Central	Toowoomba	18.2	1,900	Health care and social assistance (23%)
Kelvin Grove – Herston	Inner	16.7	5,000	Health care and social assistance (53%)

Notes: Estimates of job density are rounded to the nearest hundred, so as not to overstate the underlying precision of estimates.

Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro).

Figure 5.6 maps the SA2 employment data. A key feature is the cluster of high employment SA2s in and around the CBD. The high employment SA2s listed in Table 5.4 all stand out on the map, as do some other outlying SA2s with relatively high employment, including Maroochydore-Kuluin, Caboolture, North Lakes-Mango Hill and Robina.

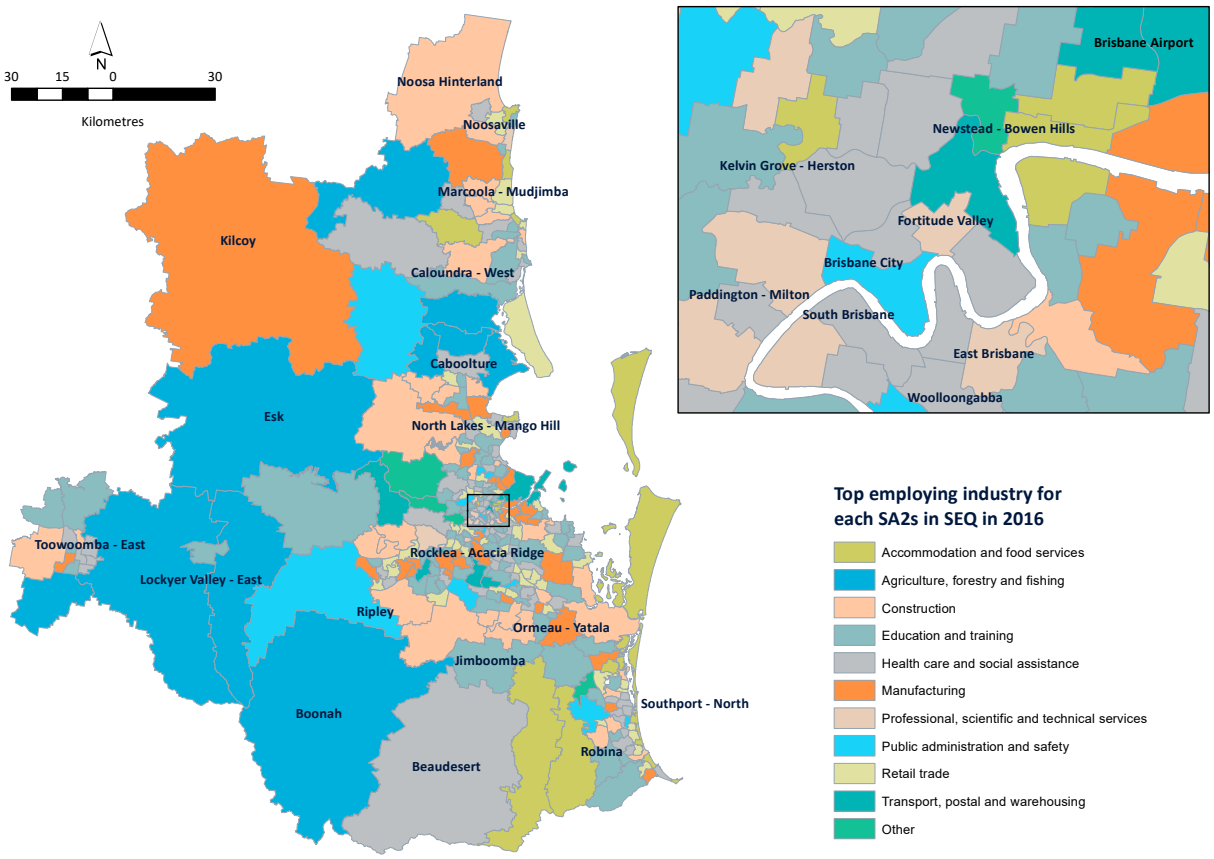
Figure 5.6: Employed persons by SA2 of work in SEQ in 2016



Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro).

Figure 5.7 illustrates the top employing industry for each of the SA2s in SEQ. Education and training is the top employing industry for 81 of SEQ's SA2s. It tends to be the top employing industry in many residentially-oriented suburban and peri-urban SA2s, where there are few sizeable workplaces apart from the local schools. However, it is also the top employer in SA2s containing university campuses, such as St Lucia and Salisbury-Nathan. Health care and social assistance is the top employing industry for 72 SA2s, reflecting it being the main employing industry in SEQ. Employment in the Health care and social assistance industry is concentrated in SA2s containing significant hospitals (e.g. South Brisbane, Southport North, Kelvin Grove-Herston), but is well represented in many SA2s across the region. Retail trade is the top employing industry in 49 SA2s, while Construction and Manufacturing are both the top employing industries in 33 SA2s. It is also evident from Figure 5.7 that Agriculture, forestry and fishing is the top employing industry in a number of SEQ's more rural SA2s.

Figure 5.7: Top employing industry by SA2 of work in SEQ in 2016



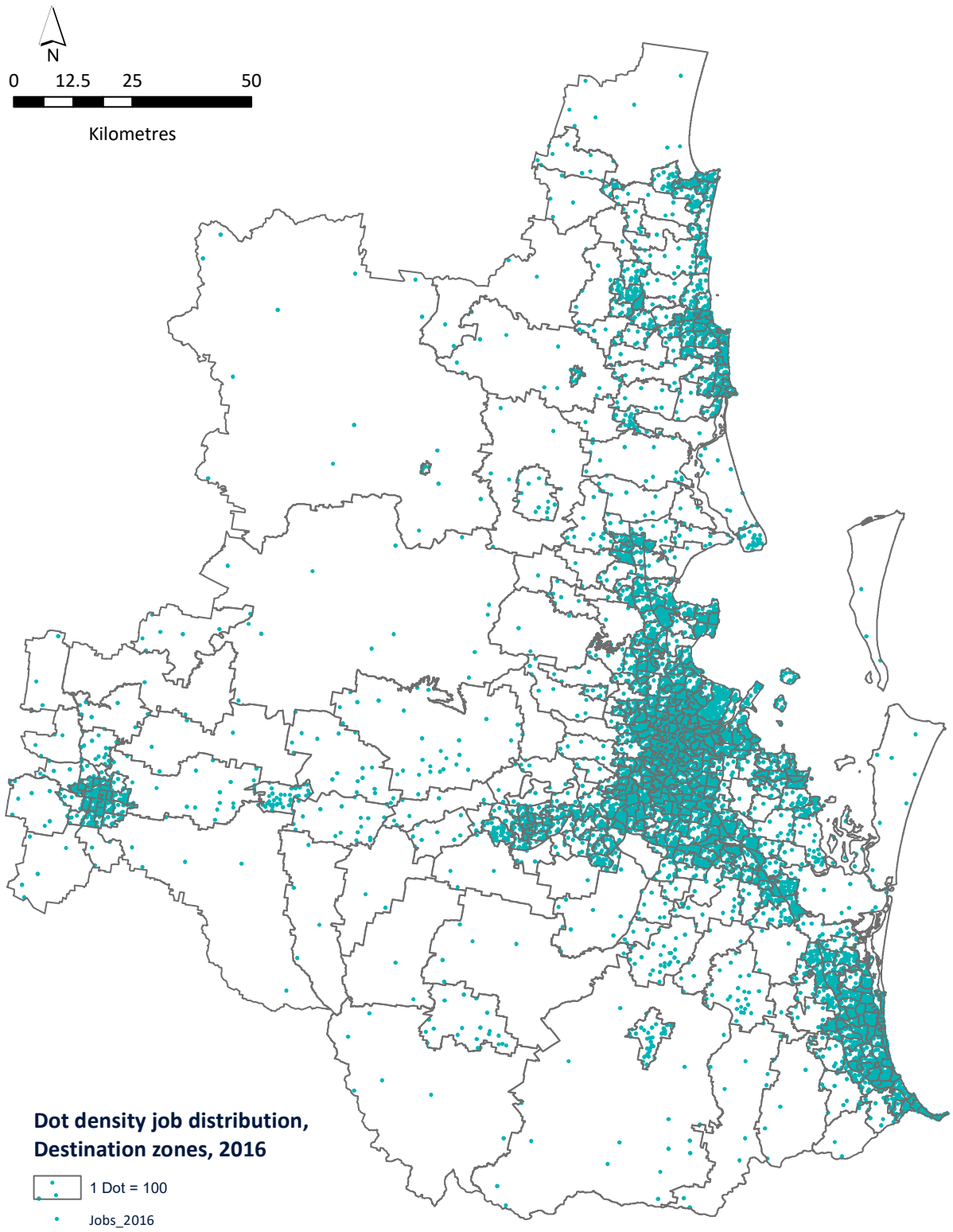
Note: Other includes industries which appear fewer than 3 times as the top employing industry, and SA2s which have more than one industry with equal top employment.

Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro).

Figure 5.8 maps the distribution of employment (by place of work) in SEQ, based on the more detailed destination zone (DZ) data. The map is reasonably similar to the population dot density map (Figure 3.2) and also resembles the existing urban area footprint (Figure 4.6). Employment is heavily concentrated in the Inner and Middle suburbs of Brisbane, with several additional employment corridors stretching out beyond the Brisbane LGA to the north, south-east and west.[15] Other major employment clusters can be seen in Toowoomba and the Gold Coast, with a further employment cluster evident around Maroochydore on the Sunshine Coast.

15 These 3 corridors correspond to the Economic Foundation paper's North Corridor, South Corridor and the Ipswich component of the East-West Corridor, respectively (Queensland Government, 2018a).

Figure 5.8: Dot density distribution of employment by place of work in SEQ in 2016



Source: ABS Census of Population and Housing 2016 (place of work data extracted from TablebuilderPro at destination zone scale).

Because SA2s are defined principally based on population characteristics, they do not provide a particularly suitable statistical boundary for identifying the most significant employment precincts in Australia's major cities. Employment precincts can be much more accurately defined using DZ boundaries, and this will be the focus of the next part of this section.

Employment precincts potentially include CBDs, suburban activity centres, industrial areas, and specialised precincts, such as hospitals, universities, office parks, airports and ports. Employment precincts share a common economic function and land use pattern. They can be smaller than SA2s (e,g. the Yatala-Stapylton employment precinct is a subset of the Ormeau-Yatala SA2) or they can cover multiple SA2s (e.g. the Brisbane Capital City precinct). The motivation for defining employment precincts in this study is to ensure the analysis is relevant to the Queensland Government's employment-related strategic planning goals. Box 5.1 describes BCARR's approach to identifying and defining the boundaries of the major employment precincts in SEQ.

Box 5.1 How are major employment precincts identified and defined?

Employment precincts are defined as a set of contiguous destination zones (DZs) that meet the aggregate jobs threshold of 10,000 jobs, where the precinct as a whole shares a common land use structure and function.

BCARR identified a set of potential employment precincts from the *SEQ Regional Plan 2017*. Geographic boundaries for each of these precincts were established based on state government provided boundaries where available, or otherwise defined by BCARR based on prior studies (BITRE 2013a,b), analysis of information contained in state planning documents, and spatial patterns of land use and employment. Brisbane Capital City and South Brisbane are neighbouring precincts that were identified as separate centres in the metropolitan strategic plan, and so BCARR followed that approach and defined them as separate precincts. The activity centre network, knowledge and technology precincts, and major enterprise and industrial areas from the SEQ Regional Plan were all assessed against the job threshold.

Based on analysis of census employment data, BCARR also identified some additional employment precincts that met the job threshold, but were not highlighted as key precincts within the SEQ Regional Plan. An example is Burleigh Heads.

There was no employment density criterion applied in defining these precincts, so the final list of precincts includes very high density precincts such as CBDs, as well as very low density precincts such as outer suburban industrial areas.

Table 5.5 identifies 24 major employment precincts containing more than 10,000 jobs in SEQ as of 2016. Taken together, these 24 precincts capture 39 per cent of SEQ jobs that could be allocated to an identifiable place of work. The 24 major employment precincts are mapped in Figure B.1 of Appendix B.

The Brisbane Capital City employment precinct[16] is by far the largest employment precinct in SEQ, containing the workplaces of 188,200 employed persons, and capturing 12.8 per cent of SEQ employment. Note that the Brisbane Capital City employment precinct (as defined by BCARR) extends beyond the Brisbane City SA2 to cover Fortitude Valley, Spring Hill and parts of the Newstead-Bowen Hills and Paddington-Milton SA2s.

16 The Brisbane Capital City employment precinct is a core part of the Capital City Knowledge Corridor, one of the five key economic corridors identified in the SEQ Economic Foundations paper (Queensland Government, 2018a).

Table 5.5: Employment precincts containing the most jobs in SEQ in 2016

Employment precinct	Sub-region	Jobs ('000)	Density (jobs/ km^2)	Top employing industry (and its employment share)
Brisbane Capital City	Inner	188.2	22,300	Professional, scientific and technical services (21%)
Acacia Ridge-Coopers Plains-Salisbury-Rocklea	Middle South	35.4	900	Manufacturing (21%)
South Brisbane KTP	Inner	27.5	13,600	Health care and social assistance (35%)
Sumner-Darra-Richlands-Wacol-Carole Park	Middle West	25.8	1,100	Manufacturing (37%)
Geebung-Virginia-Northgate-Banyo	Middle North	23.0	1,500	Manufacturing (22%)
Brisbane Airport	Middle North	22.2	600	Transport, postal and warehousing (45%)
Murrarie-Hemmant	Middle East	19.5	1,100	Manufacturing (28%)
Southport PRAC	Gold Coast	19.1	1,800	Health care and social assistance (21%)
Maroochydore PRAC	Sunshine Coast	18.7	1,000	Retail trade (18%)
Yatala-Stapylton	Gold Coast	16.5	400	Manufacturing (28%)
Toowoomba PRAC	Toowoomba	15.6	4,900	Health care and social assistance (24%)
Caboolture-Morayfield PRAC	Moreton Bay	15.4	600	Health care and social assistance (27%)
Herston-Kelvin Grove KTP	Inner	15.3	6,700	Health care and social assistance (56%)
Chermside PRAC	Middle North	14.2	4,200	Health care and social assistance (48%)
Underwood-Slacks Creek	Logan	13.5	1,100	Retail trade (18%)
Ipswich PRAC	Ipswich	12.8	2,300	Health care and social assistance (34%)
Robina PRAC	Gold Coast	12.7	1,300	Health care and social assistance (24%)
Surfers Paradise MRAC	Gold Coast	12.0	2,100	Accommodation and food services (40%)
Eagle Farm-Pinkenba	Middle North	11.9	1,600	Manufacturing (26%)
Burleigh Heads	Gold Coast	11.7	900	Retail trade (17%)
Noosa MRAC	Noosa	11.4	300	Accommodation and food services (21%)
Southport KTP	Gold Coast	10.9	2,800	Health care and social assistance (52%)
North Lakes MRAC	Moreton Bay	10.3	400	Retail trade (24%)
Broadbeach MRAC	Gold Coast	10.2	5,900	Retail trade (26%)

Notes: Estimates of jobs and job density are rounded to the nearest hundred, so as not to overstate the underlying precision of estimates. PRAC is a Principal Regional Activity Centre, MRAC is a Major Regional Activity Centre, and KTP is a knowledge and technology precinct, as identified in *ShapingSEQ*.

Source: BITRE analysis of ABS Census of Population and Housing 2016 place of work data for destination zones (extracted from Tablebuilder Pro) and key employment precincts identified in SEQ Regional Plan 2017.

Other major employment precincts in SEQ include:

- The Acacia Ridge-Coopers Plains-Salisbury-Rocklea industrial area[17] in Brisbane's Middle South, which employs 35,400 people, primarily in Manufacturing (21 per cent), Wholesale trade (15 per cent) and Transport, postal and warehousing (14 per cent).
- The South Brisbane knowledge and technology precinct[18] in Inner Brisbane, which employs 27,500 people, and has a strong specialisation in health due to the presence of Mater Hospital and the Queensland Children's Hospital.
- The Sumner-Darra-Richlands-Wacol-Carole Park industrial area[19] (which is largely in the Middle West sub-region but extends into the Ipswich sub-region) employs 25,800 people, predominantly in the Manufacturing industry (37 per cent).

The Gold Coast sub-region is very well represented in Table 5.5, with 7 separate employment clusters of 10,000 or more jobs, reflecting the lack of a single focal point of economic activity in the sub-region. Instead employment is dispersed across a number of mid-sized employment precincts.

The table contains a mix of traditional suburban activity centres (e.g. Ipswich, North Lakes), industrial areas (e.g. Yatala-Stapylton, Murrarie-Hemmant) and specialised centres (e.g. Brisbane Airport, Herston-Kelvin Grove). Employment density was highest in the inner city precincts of Brisbane Capital City, South Brisbane and Herston-Kelvin Grove. Employment density tended to be relatively low in industrial areas and in precincts located outside the Brisbane LGA (e.g. in Moreton Bay, Noosa).

Health care and social assistance is frequently the top employing industry, both for the Queensland Government's identified knowledge and technology precincts, but also for several principal and major activity centres where a hospital is located in close proximity to the town centre (e.g. Toowoomba, Chermside). Several of the principal and major activity centres have Retail trade as the major employing industry, as does the Underwood-Slacks Creek commercial area. The Manufacturing industry was the top source of employment for several industrial area precincts (e.g. Eagle Farm-Pinkenba). The Accommodation and food services industry was the major employing industry in two tourism-oriented precincts (i.e. Noosa, Surfers Paradise).

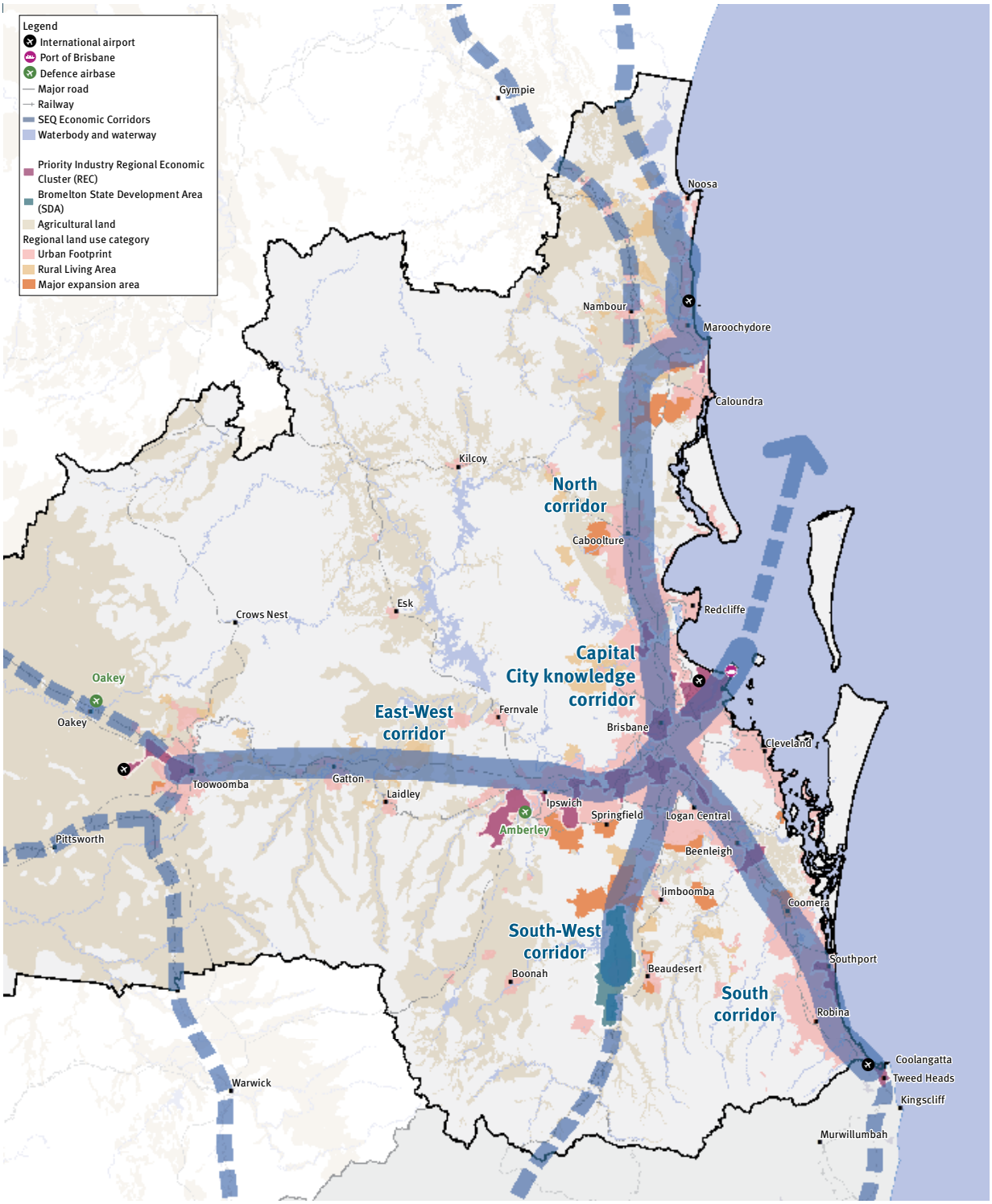
The SEQ *Economic Foundations* paper identified 5 key economic corridors (Queensland Government, 2018), which were listed previously in Figure 2.3 and are mapped in Figure 5.9 below.

17 This industrial area is an important part of the East-West Corridor, one of the five key economic corridors identified in the SEQ Economic Foundations paper (Queensland Government, 2018a).

18 A set of Knowledge and technology precincts (or KTPs) are identified by the Queensland Government in ShapingSEQ (Queensland Government, 2017). The South Brisbane KTP is part of the Capital City Knowledge Corridor, one of the five key economic corridors identified in the SEQ Economic Foundations paper.

19 This industrial area is part of the East-West Corridor, one of the five key economic corridors identified in the SEQ Economic Foundations paper (Queensland Government, 2018a).

Figure 5.9: Five key economic corridors of South East Queensland



Source: Queensland Government (2018), Figure 60.

The 5 key economic corridors and the major employment precincts from Table 5.5 that contribute to them are listed below:

- East-West Corridor: includes Brisbane Airport, Eagle Farm-Pinkenba, Murarrie-Hemmant, Acacia Ridge-Coopers Plains-Salisbury-Rocklea, Sumner-Darra-Richlands-Wacol-Carole Park, Ipswich PRAC and Toowoomba employment precincts
- Capital City Knowledge Corridor: includes Brisbane Capital City, Herston-Kelvin Grove KTP and South Brisbane KTP major employment precincts
- North Corridor: includes Chermside PRAC, North Lakes MRAC, Caboolture-Morayfield PRAC, Maroochydore PRAC and Noosa MRAC major employment precincts
- South Corridor: includes Underwood-Slacks Creek, Yatala-Stapylton, Southport PRAC, Southport KTP, Surfers Paradise MRAC, Broadbeach MRAC, Robina PRAC and Burleigh Heads major employment precincts
- South West Corridor: this is an emerging corridor and none of the contributing precincts had sufficient employment in 2016 to make the 10,000 job cutoff of Table 5.5.

The key economic corridors capture nearly all of SEQ's major employment precincts, as listed in Table 5.5.

5.3 Employment growth

Growth in employed residents from 2016 to 2021

The ABS *Labour Force Survey* (LFS) shows that the number of employed residents of SEQ increased by 186,800 persons between 2016 and 2021, representing an average annual growth rate of 2.1 per cent (see Table 5.6).

ABS LFS data is not available for LGAs, but is published for SA4s. Table 5.6 provides details of how SEQ's growth in employed persons was distributed across SA4s of residence. Of the total increase of 186,800 employed persons, 122,300 (or almost two-thirds) was in Greater Brisbane. Within Greater Brisbane, the greatest increases in employed residents occurred in Brisbane Inner City SA4 (29,100), Ipswich SA4 (28,900) and Logan-Beaudesert SA4 (24,300). The Gold Coast SA4 experienced the largest increase in employed residents of all SA4s in SEQ, with employment rising by 44,700 employed persons between 2016 and 2021, which represented 23.9 per cent of SEQ's total growth.

The growth rate of employment was highest for Ipswich between 2016 and 2021 (averaging 3.5 per cent per annum), closely followed by Logan-Beaudesert (3.4 per cent) and Brisbane Inner City (3.3 per cent). In contrast, Brisbane South, Moreton Bay North and South (combined) and Toowoomba recorded much more modest growth rates.

Table 5.6: Growth in employed residents by Statistical Area 4 of residence in SEQ from 2016 to 2021

SA4 of residence	Employed persons, 2016 ('000)	Employed persons, 2021 ('000)	Change in employed persons, 2016 to 2021 (per cent)	Average annual growth rate, 2016 to 2021 (per cent)	Share of SEQ total growth (per cent)
Brisbane Inner City	164.4	193.5	29.1	3.3	15.6
Brisbane East	119.6	127.8	8.2	1.3	4.4
Brisbane North	113.3	126.5	13.3	2.2	7.1
Brisbane South	195.2	201.1	5.9	0.6	3.1
Brisbane West	96.4	102.6	6.1	1.2	3.3
Ipswich	153.2	182.1	28.9	3.5	15.5
Logan – Beaudesert	134.5	158.7	24.3	3.4	13.0
Moreton Bay North and South (combined)	216.7	223.2	6.5	0.6	3.5
TOTAL – GREATER BRISBANE	1193.2	1315.5	122.3	2.0	65.5
Gold Coast	313.4	358.1	44.7	2.7	23.9
Sunshine Coast	169.6	185.9	16.3	1.9	8.7
Toowoomba	70.5	74.0	3.5	1.0	1.9
TOTAL – SEQ	1746.7	1933.6	186.8	2.1	100.0

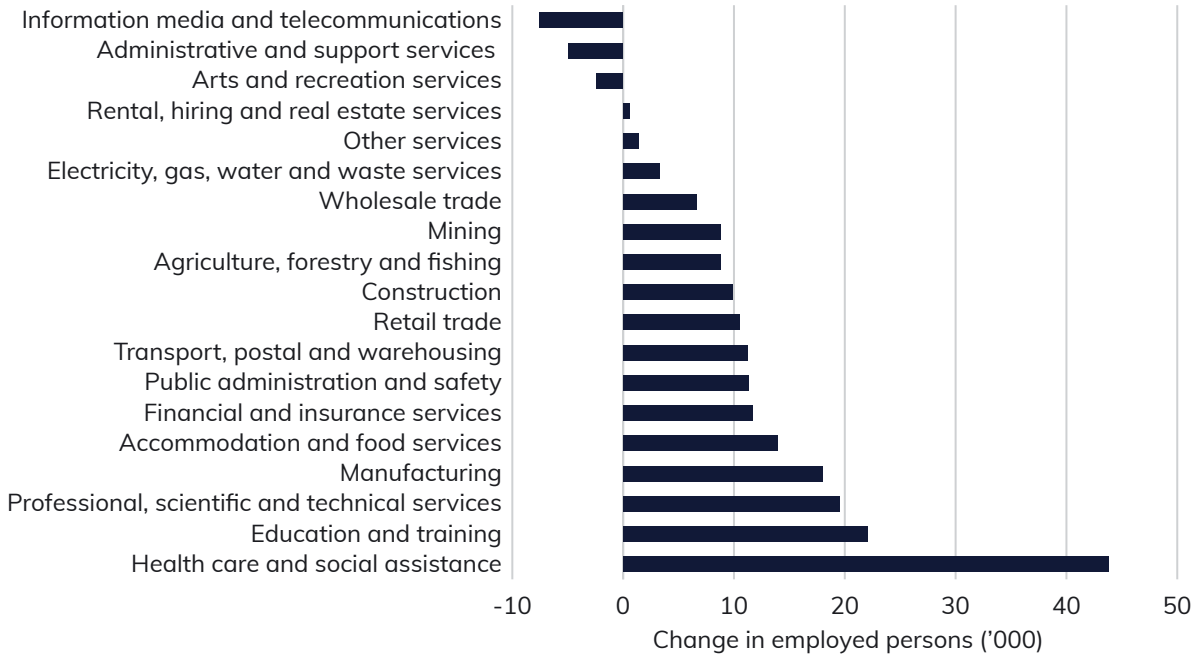
Note: Data is an annual average of the estimates for the 12 months up to August of 2016/2021. The Toowoomba SA4 captures only the urban extent of Toowoomba. Results for the Moreton Bay North and Moreton Bay South SA4s have been aggregated together, as results for the individual SA4s were volatile over time.

Source: ABS *Labour Force Survey* data, Cat. 6291.0.55.001 (Table RQ1, 24 March 2022 release).

Figure 5.10 shows the industry contributors to SEQ's employment growth between 2016 and 2021. The major source of employment growth was the Health care and social assistance industry which added 43,900 jobs, which was 23.5 per cent of total growth. Employment in SEQ's Health care and social assistance industry grew quite rapidly at 3.5 per cent per annum. The Sunshine Coast SA4 appeared to capture more of this growth than other SA4s, with an increase of around 10,000 residents employed in the Health care and social assistance industry.

Other key contributors to growth included Education and training (up 22,100 employed persons), Professional, scientific and technical services (19,600), Manufacturing (18,000) and Accommodation and food services (14,000). However, employment in the Information, media and telecommunications industry declined by 7,500 persons over the period.

Figure 5.10: Growth in employed persons by industry in SEQ from 2016 to 2021



Note: Data is an annual average of the estimates for the 12 months up to August 2021. The Toowoomba SA4 captures only the urban extent of Toowoomba. Based on ANZSIC 1-digit industries. Data is on a place of residence basis.

Source: ABS *Labour Force Survey* data, Cat. 6291.0.55.001 (Table RQ1, 24 March 2022 release).

Evidence on the spatial distribution of recent jobs growth

At the time of writing, ABS 2021 Census of Population and Housing second-release data was not available, meaning there was no clear evidence about which SEQ locations have experienced particularly strong jobs growth or decline since 2016 on a place of work basis. The 2021 census place of work data could be impacted by the pandemic (including the effect of lockdowns and government recommendations to encourage working from home).[20]

There is some evidence available on past trends on where jobs growth tends to be concentrated in SEQ, which is summarised below.

- Analysis of the 2011 and 2016 census place of work data shows that some of the key job growth locations were North Lakes – Mango Hill in Moreton Bay (up by 4,400 employed persons), Ormeau-Yatala in the Gold Coast (4,100), Newstead-Bowen Hills in Inner Brisbane (3,400), Brisbane Airport in the Middle North (2,800), South Brisbane in Inner Brisbane (3,100) and Southport on the Gold Coast (3,000). Areas that experienced significant job declines between 2011 and 2016 included Spring Hill in Inner Brisbane (2,700) and Rocklea-Acacia Ridge in the Middle South (–2,500).
- Brisbane's Inner ring was the location of 18.9 per cent of SEQ's total employment in 2006 (BITRE 2013a, p. 109). This compares to a 21.2 per cent share in 2016 (see Table 5.3), which suggests increased centralisation of jobs over the preceding decade.[21]

20 There was a short lockdown in place in SEQ in the lead up to the 2021 census, but restrictions were significantly eased a few days prior to census night.

21 There were methodological changes for the census place of work data between 2006 and 2016, so comparison of results across censuses should be treated with caution.

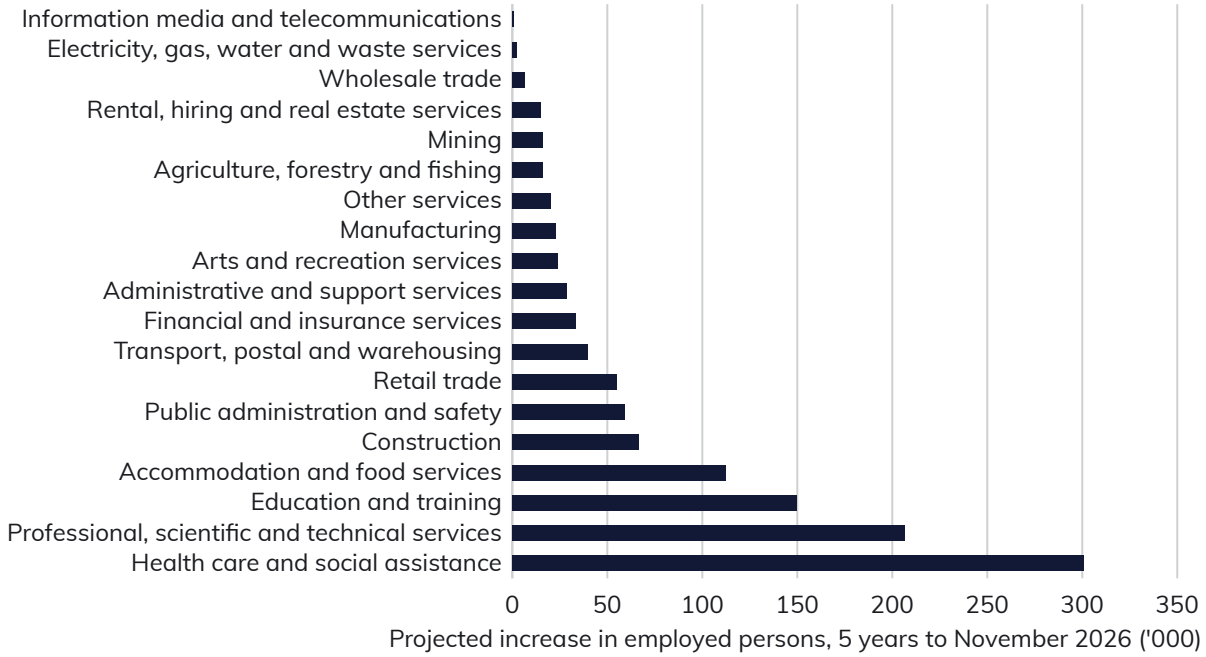
The Gold Coast and Inner Brisbane sub-regions recorded the largest increases in employed residents between 2016 and 2021 (see Table 5.6), and given they both have relatively high self-containment rates (see Chapter 7), it is likely that this will be reflected in relatively large increases in some of the main employment precincts within these two sub-regions (e.g. Brisbane Capital City, Southport, Yatala-Stapylton).

Employment projections

The National Skills Commission (2021) projects national employment growth by industry between November 2021 and November 2026. The industries with the largest projected increases in employment are Health care and social assistance (301,000), Professional, scientific and technical services (206,600) and Education and training (149,600). These align with the top three employment growth industries for SEQ between 2016 and 2021, as shown in Figure 5.9. Thus, the national growth projections point to ongoing growth in the industries that have been the main drivers of SEQ's recent employment growth.

Figure 5.11 shows that beyond these top three sources of growth, employment growth is projected to be distributed widely across most industries at the national scale.

Figure 5.11: Projected growth in employed persons by industry in Australia from November 2021 to November 2026



Source: National Skills Commission (2022a), Employment Outlook (five years to November 2026).

Similar projections have been prepared by the state government for Queensland, covering the five year period ending 2024 (Queensland Government 2020a). However, they were prepared prior to the emergence of COVID–19 and do not take into account its impacts. For the 2019 to 2024 period, employment growth in Queensland is projected to be greatest in the following industries:

- Health care and social assistance (60,651)
- Professional, scientific and technical services (29,099)
- Education and training (27,701).

These are the same three industries that ranked most highly for Australia as a whole in Figure 5.11.

5.4 Conclusion

This chapter has presented a detailed snapshot of the spatial distribution of jobs throughout SEQ as of 2016. It described how jobs are distributed across SEQ's LGA's, rings and sub-regions and identified the main SA2s of work and the major employment precincts. It also identified the top employing industries in each place and the extent to which employment is in knowledge-intensive industries.

The chapter has also summarised employment growth in SEQ between 2016 and 2021, identifying the rings and sub-regions that grew most strongly (i.e. Gold Coast, Inner Brisbane and Ipswich) and the main industry drivers of employment growth (i.e. Health care and social assistance).

While the focus remains on employment in the next chapter, there is a shift to considering the skills of the SEQ workforce, from both an occupational and educational perspective.