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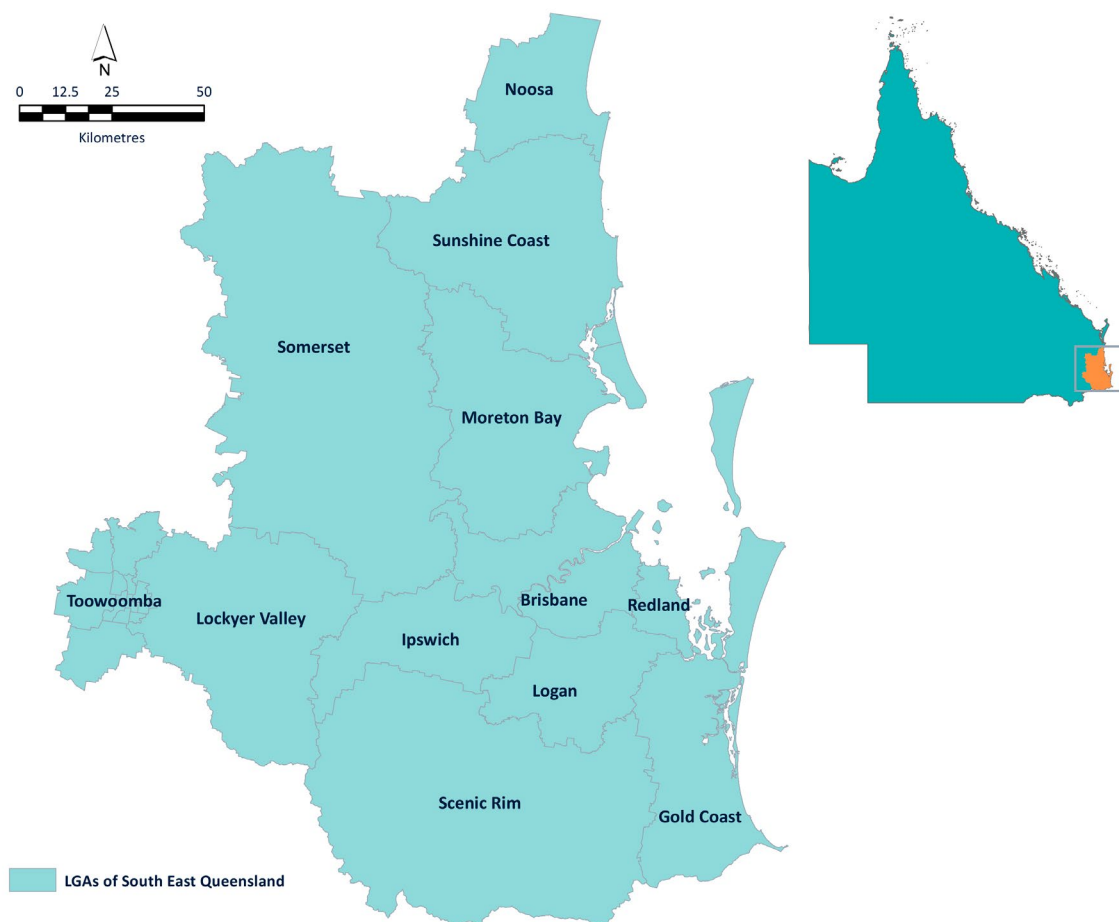
Note: Only the Urban area of the Toowoomba LGA is shown on the map, as only the Urban area is part of SEQ.
Source: BCARR.

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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.

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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.

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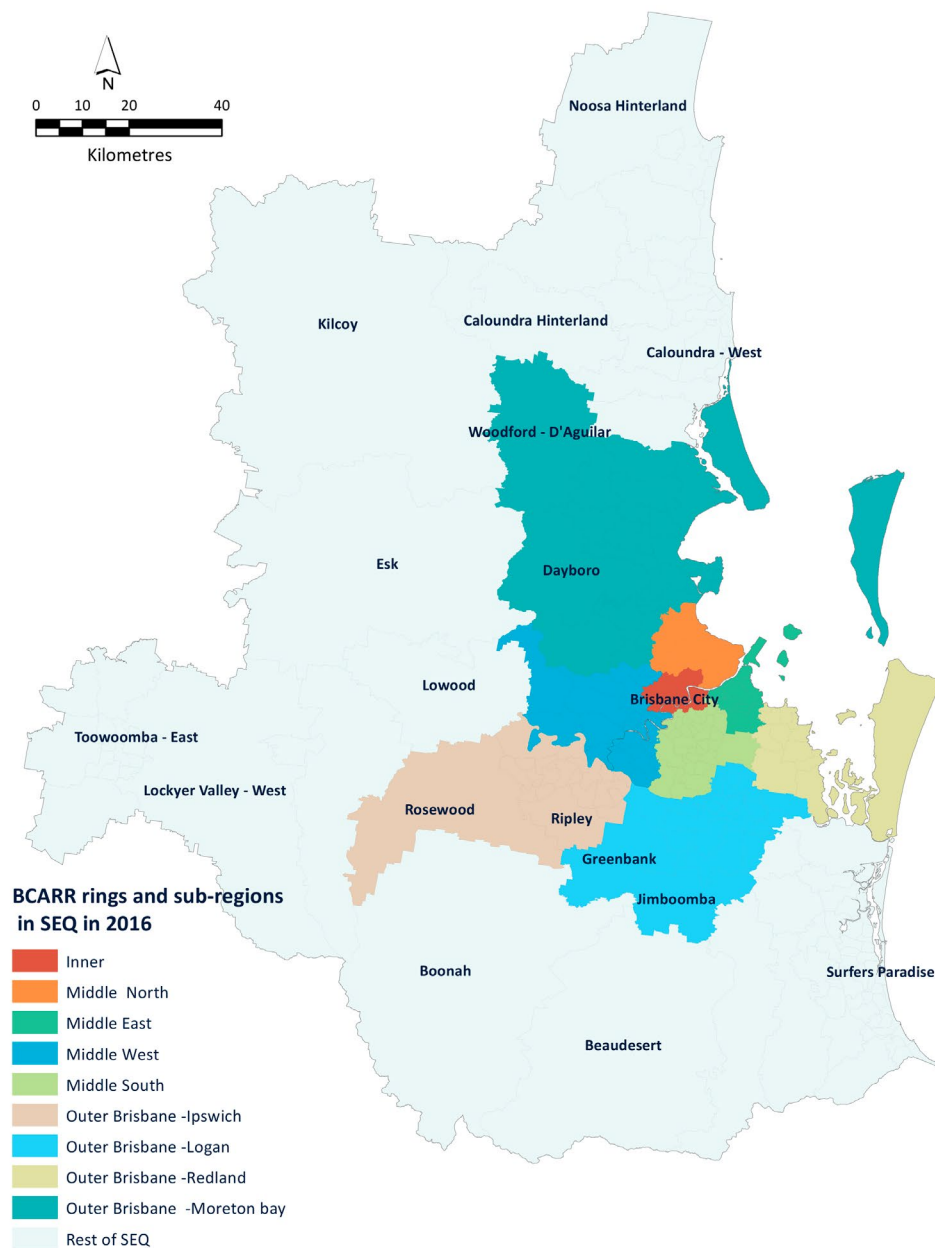
Notes: All BCARR sub-regions are a close SA2-based approximation of LGA boundaries, except for Toowoomba (urban part), which is a SA2 based approximation of the urban part of the LGA, and the Inner and Middle sub-regions of Brisbane (which together aggregate to form the City of Brisbane LGA).

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

Source: BCARR.

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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:

- *ShapingSEQ*, 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.