

Annual Report: Chinchilla

Social and economic changes in Queensland's gasfield communities in 2019





Research Team

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Acknowledgements

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The Chinchilla CSG Development Story

The 'Chinchilla CSG Development Story' was developed in consultation with key members of the Chinchilla and district community. These included representatives of community and service organisations, local and state government, as well as real estate agents, managers of hotels and other businesses.

The individuals participating in this consultation were asked to discuss and comment on statistical data on indicators of social and economic impact. These discussions provided a local point of view and insight into the Chinchilla CSG Development Story, to be used in combination with publicly available data. The following indicators were discussed:

- 1. Population
- 2. Unemployment
- 3. Income

- 4. Housing
- 5. Top offences recorded by police

Those interviewed said Chinchilla was historically a "quiet little town". They recalled a boom in 2005-2006 with construction of the nearby Kogan Creek power station. CSG construction and development was noticed locally in 2007/08. Between 2008 and 2012, data shows that population increased by 19%, which was attributed to CSG development. This growth was considered to have caused a "shock". The influx of CSG workers, mostly male, is reported to have affected feelings of wellbeing and to have caused a shift in town identity. Interviewees noted that women initially felt unsafe. An increase in the community's cultural diversity has been welcomed, but a simultaneous loss of connectivity has been mourned. In 2015/16—following the end of construction boom in 2015—there has been a "second shock" as 60% of non-resident worker (NRW) rapidly departed, however in 2016/17 NRW numbers increased again by 9%. The total population continued increasing in 2017/18 and there is a general view that the population will increase slowly in future years.

House prices and rents in Chinchilla have traditionally been lower than the median for the State or Brisbane, but changes in demand attributed to the CSG sector inflated, and then deflated prices. An initial rent spike in 2004 saw median rent for a 3-bedroom house almost double from \$150 per week to \$270, then return to trend. Median rents peaked at \$400/week in 2013 and 2014, (with reports of rents much higher) which was higher than the Queensland median. Several interviewees stated their belief that the increase in housing costs during the construction period was the largest impact felt from CSG development, as it was seen to cause families to move away, to trigger housing developments that were perceived as unplanned and make it difficult to attract and retain employees. In 2015, median rent dropped significantly, and rather than returning to trend, continued to drop in 2016 to well below the Queensland median. The median sale price of houses in Chinchilla was lower, but keeping pace with Queensland median house prices, although when the Queensland median began to decline from 2010, Chinchilla prices continued to increase. From 2013, Chinchilla house prices have continued on a steady decline which is the opposite trend of increases in the Queensland median. In 2014, interviewees expressed concern that there were "a lot of empty houses" as non-resident workers moved away and newly built houses remained without tenants. In 2016, interviewees noted the market was "picking up" and the empty houses were being either sold or rented. However, the 2018 statistics show that median house prices and median rents have both continued to decline. The increased volume of house sales in 2017 was welcomed by the community. Concerns that the relatively cheap housing attracted a "new demographic" of families or households on very low and fixed incomes who were not seen to contribute positively to the community (first voiced in 2016) and are still evident. This "new wave" of influx, although apparently only a small proportion of the population, was reported as having a similar degree of impact on the community as the initial influx of CSG-related workers, or "even worse". There were also reports that strict banking requirements regarding loans had slowed the rate of housing recovery.

Crime rates in Chinchilla are historically lower than for the whole of Queensland, except for a spike in 2004/05, which may be related to construction of the power station. Overall crime rates increased during the early CSG construction period, but then decreased again in 2013 and remained below the Queensland rate throughout. Increases were seen in theft offences from 2009, good order offences from 2010 and traffic offences from 2011. Police strategy changed in 2012 and, with the cooperation of the CSG companies, a liquor accord was introduced to curb alcohol-related offences. Drugs offences remained low during this period with strict internal policing of CSG workers and increased police presence. From 2014 however, crime rates have increased and in 2016, crime rates in Chinchilla are well above the rate for Queensland: traffic at 250%; drug offences at 200%; and total crime at 150%. In 2018, while crime rates remain above the Queensland average, the rates for traffic and good order offences have declined from the previous year.

In 2014, interviewees reported that while many Chinchilla businesses had benefited from the "CSG boom", especially food services, hotels and motels, they believed the benefits were not distributed evenly, with others "missing out". Increased business diversity resulting from the CSG development is seen to offer wider employment opportunities, particularly for school leavers, who may not have to leave town to find work. However, the closure of some businesses since 2014 was attributed to CSG industry and related workers leaving, and increased competition from newly arrived businesses. In 2017, some interviewees remarked how the benefits did not last as long as they had expected, although others reported being aware of the short-term nature of the CSG construction period. There was general agreement that the nature and timing of the benefits to local businesses should have been communicated better by the CSG companies and governments. The unemployment rate in Chinchilla has always been lower than the Queensland rate. In 2013 it dropped to an extremely low 0.9%, which implies a severe skills shortage, but has been increasing since then. Since 2014, interviewees noted that "there's many more looking for work". Unemployment continues to rise into 2017, but dropped slightly in 2018. In 2018, interviewees noted that "businesses are closing" and it is expected that more businesses will close. It is expected that the increasing rental amount may push certain demographics out.

For personal incomes, wage and salary earnings show a marked increase in both the amount of earnings and the number of wage earners since 2007/08. Average taxable incomes rose steeply in 2012/13 and 2013/4 but then dropped back again in 2014/15. Average personal income declined sharply by 26% in 2014/15, now below Queensland average again.

This booklet provides detail on aspects of the Chinchilla CSG Development Story based on the range of priority indicators that we tracked. We would like to thank members of the Chinchilla community for their cooperation and the gift of their time. We hope that we have done justice to their contributions to this investigation.

The UQ 'Cumulative Impacts' Research Team, July 2020.

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Introduction

The University of Queensland commenced research into the social and economic impacts of coal seam gas (CSG) development in 2013. This research focused on the combined impacts of the multiple CSG developments in the Western Downs region of Queensland as an initial case study and has now expanded to include other local government areas—Maranoa, Toowoomba, and Isaac. The research team uses publicly available statistical information regarding a number of key indicators that were selected in consultation with community members at the commencement of research. These statistics are combined with additional data gained through interviews with key community members, which provide insight into the factors that are influencing changes in the community. This information is gathered each year, and findings are reported for each town, sub-regions, and the region as a whole. More information about the methodology is contained in the appendix to this report. In this document we present the findings on the town of Chinchilla.

The following acronyms are used throughout this report:

CSG Coal seam gas

LGA Local Government Area

NRW Non-resident worker

NPP Non-primary production

PP Primary production

SA2 Statistical Area Level 2

SA3 Statistical Area Level 3

SLA Statistical Local Area

UCL Urban Centre & Locality

WDRC Western Downs Regional Council

General community insights

2019 summary

Due to the COVID-19 pandemic in 2020 the communites were not contacted. The data has been updated but has not been 'ground-truthed'. The effects of COVID will not be seen until next year, or 2022 for the income data.

Community spirit:

- There is a general feeling that "the dust is settling" following the CSG "shocks" in Chinchilla.
- Community spirit is improving; many people's focus has shifted from "what we've lost" to "what we've gained". It is unclear whether this is due to actual circumstances improving, or if it is gradual acceptance of Chinchilla's CSG experience.

Changed capability:

- Chinchilla has "raised to the next level" in terms of consumer choices offered locally. While many new businesses that set up in Chinchilla departed once CSG construction ended, some stayed and adapted their offerings to service local rural industries.
- It is perceived that energy infrastructure improvements, such as the large solar projects inDarling Downs and Bli Bli, likely would not have proceeded without CSG development paving the way with distribution and transmission infrastructure.
- National Broadband Network (NBN) is starting to be rolled out in Chinchilla (not thought to be linked to CSG activity), which is expected to open up new business opportunities.
- Although business capabilities are generally perceived to have improved, community services are seen to have remained stagnant. This has been attributed largely to government policy, which was reported to focus on service development in Toowoomba as a centralised service point for regional Southeast Queensland.

Lessons learned:

- Local businesses need to coordinate to cooperatively meet the service demands of the CSG industry without individually overinvesting and being vulnerable to the "bust". Some people interviewed suggested that government has a role to play in guiding businesses in this direction.
- Although community investment from CSG companies is welcomed, it is critical for spending
 programs to be designed with a long-term vision in mind. Although CSG-sponsored recreational and
 cultural events during the "boom" provided a temporary positive boost to Chinchilla, the withdrawal
 of this funding brought these to a halt and sent "shocks" through the community.
- Interviewees highlighted a significant need for investment in initiatives that monitor and address long term impacts of CSG "shocks", such as suicide prevention and drug rehab programs. Community members feel this would also acknowledge the contribution industry has had on these issues, and demonstrate commitment to resolving them.

1. Population

2019 summary

Chinchilla's resident population continues to increase, as does the number of non-resident workers (NRWs) living in town, after a sharp drop in 2015/16. Community insights confirm this increased activity has been noticed locally, particularly since the Condabri Camp closure in November 2017. The recent trend of low income families relocating to Chinchilla is perceived to have continued in 2018, though this may change soon.

Context

- Overall population growth of approx. 44% from 2008-2017, compared to 14% in Western Downs
- Condabri Camp (400-bed) closed November 2017, transitioning its workforce into local communities
- Australian Government's *Relocation Assistance* program remains active, providing financial incentive to long-term unemployed job seekers to move to regional towns with low unemployment rates

Trends reflected in the data

Historical trend: Population was historically between 3,500 and 4,000 with a growth rate around 1-2% per year. Since 2006, data shows population increasing steadily, at about twice the rate (~4%) of Western Downs as a whole (~2%).

During CSG construction period (2011 – 2014):

Chinchilla's resident population grew rapidly in 2010 (5.6%) and 2011 (7%), with growth slowing back to ~4% from 2012. In 2011, the NRW population began to increase significantly (40%); by 2013, there was one NRW for every four residents. The number of NRWs remained stable from 2013 to 2015.

Since CSG construction period (2015 – 2019):

Population growth appears to be returning to the historical baseline. Between 2014 and 2016, annual growth rate was ~4%; however, growth slowed significantly in 2016/17, with an average for 2016 - 2018 at 2.1%. The town saw a 60% decline in NRWs in 2015/16, but growth of ~30% to Chinchilla's NRW population between 2017/18 and 2018/19, with approximately 1 NRW for every 10 residents.

Community insights and perceptions

During CSG construction period (2011 – 2014):

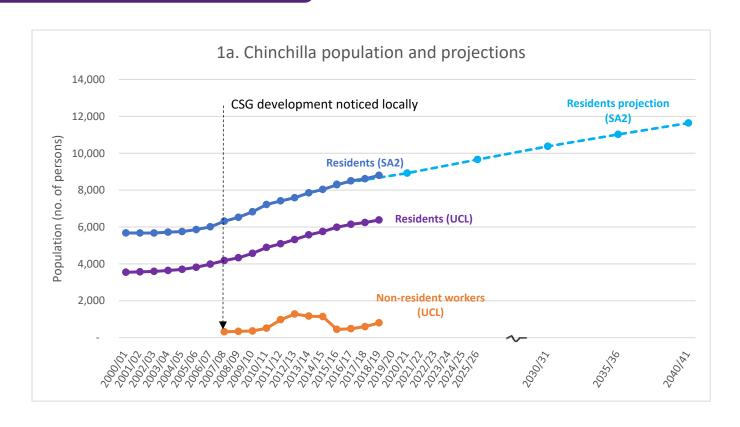
The influx of CSG workers caused a "shock" to the town. The streets were busy, and many businesses expanded. Population turnover was noticed as people moved away and others moved in.

Since CSG construction period (2015 - now): A

"second shock" of rapid NRW departures has occurred since the CSG construction phase has ended. New people have moved in to town to take up affordable housing; an influx of low income families has been observed and has added strain to community services.

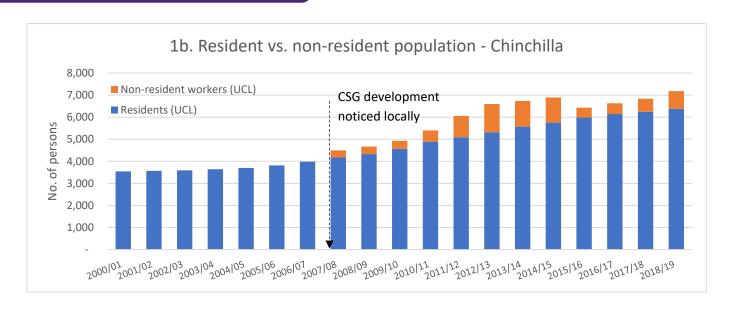
Future expectations: Some expect population to rise slowly and steadily in the future. Chamber of Commerce expects significant growth; WDRC expects 1.7% annual growth for Chinchilla, to 10,000 by 2031. Some residents believe this projected growth is overstated. In November 2017, Origin's Condabri Camp closed, transitioning its workforce into local communities such as Chinchilla. The impact of this will be seen in 2018 report, but may decrease the influx of low income families as rental values begin to increase.

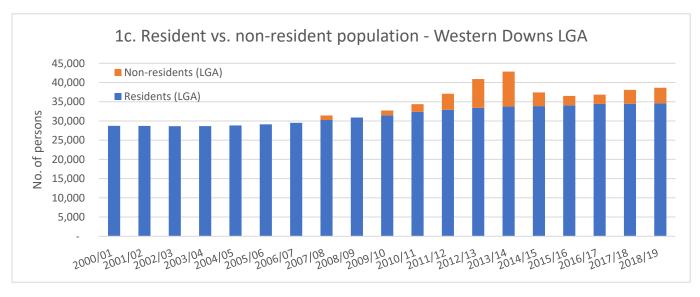
1. Population



- UCL non-resident workers population estimate from QGSO 'Surat Basin Population Report' (ASGC 2016); 2019 version available here: https://www.qgso.qld.gov.au/statistics/theme/population/non-resident-population-queensland-resource-regions/surat-basin
- UCL resident population estimate from the QGSO table 'Estimated resident population (a) by urban centre and locality (b), Queensland, 2006 to 2016pr' (ASGS 2016), http://www.qgso.qld.gov.au/products/tables/erp-ucl-qld/index.php
- SA2 population estimate from the QGSO table 'Estimated resident population by statistical area level 2 (SA2), Queensland, 2006 to 2016pr' (ASGS 2016), http://www.qgso.qld.gov.au/subjects/demography/population-estimates/tables/erp-sa2-qld/index.php
- Population projection (2018 edition) from QGSO table 'Projected population (medium series), by statistical area level 2 (SA2), SA3 and SA4, Queensland, 2011 to 2041' (ASGC 2001), http://www.qgso.qld.gov.au/subjects/demography/population-projections/tables/proj-pop-medium-series-sa2-sa3-sa4-qld/index.php

1. Population





- Population and non-resident worker population estimates for UCL and Western Downs LGA from the QGSO 'Surat Basin
 Population Report' (ASGC 2016); 2019 version available here: https://www.qgso.qld.gov.au/statistics/theme/population/non-resident-population-queensland-resource-regions/surat-basin
- Data missing for 2008/09 non-resident worker population

2. Employment

2019 summary

Unemployment steadied in 2019; at 4.5%, the unemployment rate in Chinchilla was approaching the Queensland benchmark of 6.1% but is now pulling away. The effects of the upwards trend are believed to be turning around with new projects on the horizon and the increasing cost of living untenable for the unemployed.

Context

- Origin Energy is restructuring in 2018, cutting 650 jobs across Queensland (75 in Western Downs)
- Australian Government's *Relocation Assistance* program remains active, providing financial incentive to long-term unemployed job seekers to move to regional towns with low unemployment rates

Trends reflected in the data

Historical trend: Unemployment in Chinchilla has historically stayed below the Queensland average, and followed a similar trend until 2008/09.

During CSG construction period (2011 – 2014):

While Queensland unemployment increased from 2009 (likely impacted by the Global Financial Crisis), Chinchilla saw a decline in unemployment coinciding with the arrival of CSG. After a small increase in 2010 and 2011, unemployment continued to decrease to reach an extreme low of 0.9% in 2013.

Since CSG construction period (2015 – 2019):

Unemployment has been increasing since 2013, peaking 3.7% in 2017 but dropping back to 4.5% in 2019. This is below the Queensland rate of 6.1%.

Community insights and perceptions

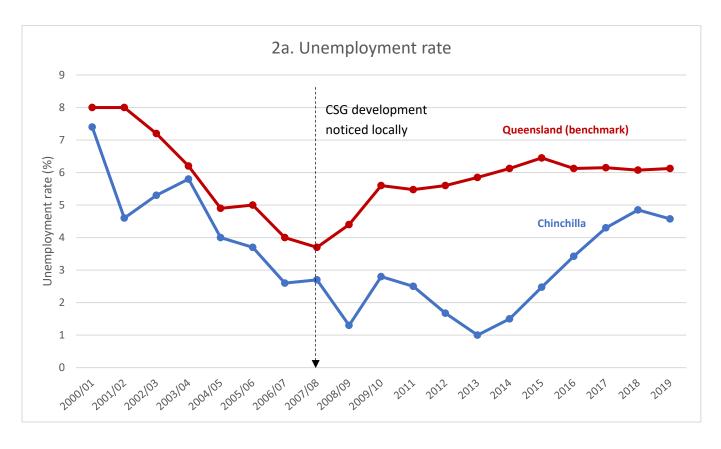
During CSG construction period (2011 – 2014):

Strong local employment was attributed to CSG construction and other large company activities (e.g. flood reconstruction). School leavers did not have to leave town to find work. Skills shortages were felt across all sectors. Employers reported having to offer higher wages and incentives to attract and retain employees.

Since CSG construction period (2015 – now): Since 2014 "there's many more looking for work"; government jobseeker services are "kept very busy". Despite this, some businesses are still finding it difficult to source and retain quality staff (2018). CSG workforce perceived to be bloated during boom; natural thinning now occurring, combined with new phase of operation. Many locals suggest increasing unemployment may also be driven by low rents and the *Relocation Assistance* scheme.

Future expectations: Unemployment is expected to increase in the near future. Contributing factors include Origin restructure (>60 Chinchilla locals thought to have lost their jobs), local transport company going bust in early 2018 and banks withdrawing personal banking services locally.

2. Employment



- 2001-2008 based on SLA statistical boundary; Source: QGSO Regional Database Archived dataset 'Labour Force Small Area (Qtr Ended 31 Dec 2002 to Qtr Ended 31 Dec 2008) [DEEWR, Small Area Labour Markets Australia] (ASGC 2001)', http://www.qgso.qld.gov.au/products/tables/qld-regional-database/index.php
- 2009-2010 data from DEEWR file 'Unemployment salm_data_files_2008-2013'
- 2010-2019 based on SA2 statistical boundary; Source: QGSO Regional Database dataset 'Labour Force Small Area (Qtr Ended 31 Dec 2010 to Qtr Ended 31 Dec 2019) [Department of Jobs and Small Business] (ASGS 2016)', http://www.qgso.qld.gov.au/products/tables/qld-regional-database/index.php

3. Income & business

2019 summary

Personal income—average and total—in Chinchilla continued to decline in 2016/17 (most recent available data), although average income remains above the Queensland benchmark. Interviewees report significant slow down in local businesses.

Context

Individual income lags a year behind other data due to ATO data reporting cycles.

Trends reflected in the data

Historical trend: Chinchilla has always been dependent on agriculture, and incomes can reflect the seasons. Personal income historically sat below the state average, but grew at a similar rate.

During CSG construction period (2011 – 2014):

Personal incomes began to increase more noticeably from 2007/08, overtaking the state benchmark in 2011/12 and peaking in 2013/14. The significant growth in wages and number of earners from 2009/10 to 2012/13 were consistent with a skills shortage. The count and turnover of NPP businesses increased during this period, with nearly 200 more businesses by 2014/15. The count and turnover of PP busness decresed sligthly during this period.

Since CSG construction period (2015 – 2019):

Average taxable personal income has declined by 4% since 2013/14, and is now just below the state average. Total wage and salary earnings initially declined nearly 17% between 2014 and 2016. However, between 2016 and 2018 there was an 8.5% increase in earnings. The total number of NPP businesses has fluctuated, but seen an increase in the number of those turning over 2 million or more per year by 20 businesses.

Community insights and perceptions

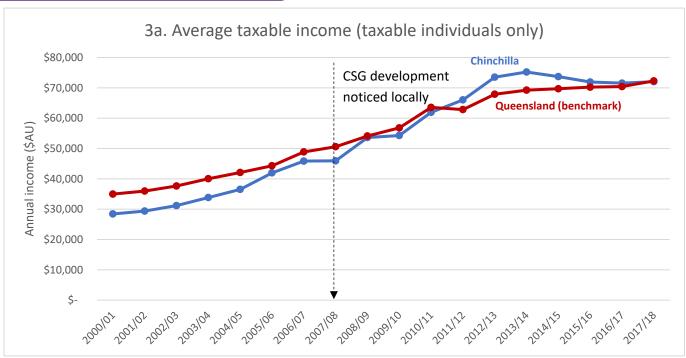
During CSG construction period (2011 – 2014):

Increased spending in town; local business "enjoyed the benefits of CSG". However businesses experienced skills shortages and anecdotes of "labour poaching" were common. Local employers had to offer higher wages to attract or retain workers. Interviewees mentioned "winners" and "losers" in relation to CSG.

Since CSG construction period (2015 – now): Since 2014, business "slow down" is reported, with some businesses affected more directly than others (e.g. motels, hospitality). Locals observed businesses closing; however, that seems to be stabilising. The overall increase in number of businesses may be related to an increase in people starting businesses from home (anecdotes of CSG workers using severance pay for this purpose). The income we see is very much an average, as the community percieves there are some very high and very low incomes, as opposed to most people making about the average taxable income.

Future expectations: Interviewees expect average personal incomes to decrease as wages return to the long term trend. Most interviewees expect that more businesses will downsize and close. Some predict future business improvement associated with solar, infrastructure and Second Range Crossing; however, these boosts are expected to be short-term.

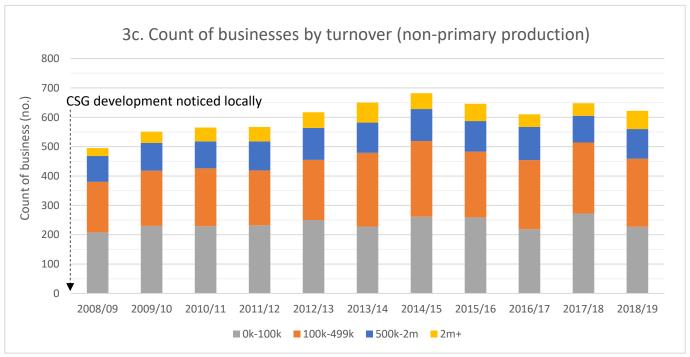
3. Income & business

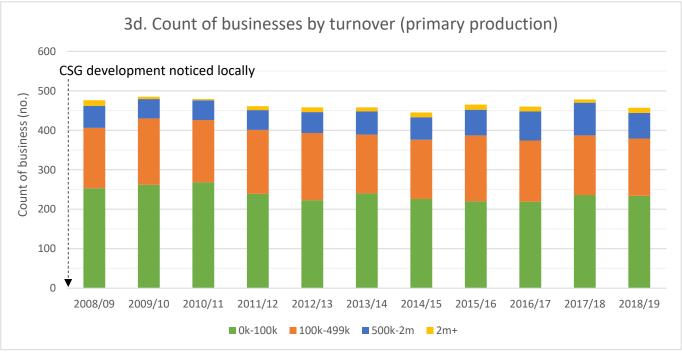




- Source: Australian Taxation Office (ATO), Research and Statistics, https://www.ato.gov.au/
- Average taxable incomes reported by ATO until 2009 excluded losses. Averages from 2010 include all taxable incomes including incomes of zero and losses.
- Data relates to Chinchilla postcode 4413
- Original data no discounting applied
- Due to ATO data publishing cycles, 2018/19 data will be included in the 2020 Chinchilla booklet

3. Income & business





- Source: Australian Bureau of Statistics, Cat. 8165, https://www.abs.gov.au/
- Data based on SA2 (Chinchilla) statistical boundary

4. Housing

2019 summary

Since peaking around 2014, demand for housing has rapidly dropped. Rent and house prices are now well below the Queensland median. Rent has increased more over the last six months which will show in next year's data; it is driven by low vacancy rates. This tends to be the start of change for house sales, which in 2017, were down to pre-CSG values; a 43% decrease since 2013. However, since then there was a decrease in number of sales by nearly 70% in 2014/15 (compared with 2012/13). The house sale value continued its decline into 2019.

Trends reflected in the data

Historical trend: After a period of stability in the early 2000s, the median price for a 3-bedroom house in Chinchilla increased by 42% in 2005/06 in response to a spike in demand (reflected in the number of sales). Prices continued to rise steadily, following a similar growth rate to the Brisbane benchmark. Median rent historically sat well below the Queensland median, and showed modest growth until 2006, when it spiked by ~82%.

During CSG construction period (2011 – 2014):

Median house prices increased by 35% between 2009/10 and 2012/13, where they peaked at \$405,000. However, this three-year growth was consistent with the preceding (pre-CSG) three-year growth of 33%. Median rents increased steadily by an average of 12% per year between 2008 – 2011, before spiking with a 25% increase in 2012 to exceed the Queensland median. Rents peaked at \$400 per week in 2013 – 2014.

Since CSG construction period (2015 – 2019):

House prices have seen a consistent decline, decreasing by 50%, between 2012/13 and 2019. Rental prices increased by 16% after a decline of 53% from 2014. Although median rent previously exceeded the Queensland benchmark, it sat at 40% below the benchmark in 2019. Building approvals have dropped back.

Community insights and perceptions

During CSG construction period (2011 – 2014): Lack of affordable housing was the "first and biggest CSG impact" noted by those interviewed. Led to perceptions of "rushed" housing developments with "poor building quality" and "lacking infrastructure". Lower and fixed income families reported to have left town. Some businesses subsidised workers' rents (may have skewed other indicators, e.g. average income).

Since CSG construction period (2015 – now):

Interviewees suggest that "over-development" and subsequent rent collapse led to further socio-economic issues (e.g. cheap rents attracting "outsiders", changing social composition of town). Property investors are reported to have lost money and rental vacancies were high initially but appear to have stabilised at a low rate (~3%) in 2017. Some residents are now "land-locked" as mortgage exceeds land value, and first-home owners are unable to benefit from low house prices due to tightened loan restrictions by banks. The low rent is believed to have been good for the young locals to have some savings.

Future expectations: Locals generally perceive that the market has plateaued and will start to "pick up". Houses are beginning to sell (albeit at very low prices) and this trend is expected to increase and drive up values.

4. Housing



- 4a source: QGSO Regional Database dataset 'Residential land and dwelling sales (Year Ended 30 Sep 2000 to Year Ended 31 Dec 2019) [DNRM] (ASGS 2016)', http://www.qgso.qld.gov.au/products/tables/qld-regional-database/index.php
- 4b source: QGSO Regional Database dataset 'Median rent (Year Ended 30 Sep 1990 to Year Ended 31 Dec 2019) [RTA] (ASGS 2016)', http://www.qgso.qld.gov.au/products/tables/qld-regional-database/index.php
- Data based on SA2 (Chinchilla) statistical boundary
- Median data is an average of the reported quarterly medians per year

4. Housing



- Source: QGSO Regional Database dataset 'Building Approvals (Jul 2001 to Dec 2019) [ABS 8731.0] (ASGS 2016)', http://www.ggso.qld.gov.au/products/tables/qld-regional-database/index.php
- Data based on SA2 statistical boundary
- Approvals shown for private buildings only; public developments are excluded

5. Safety & Wellbeing

2019 summary

While historically at or below Queensland average, crime in Chinchilla has increased significantly from 2015. It is now well above Qld rates in traffic (170%), drugs (180%) and total crime (150%). Many community members are concerned about about drugs, domestic violence and juvenile crime.

Context

- Drug offences are perceived to be on the rise in all rural QLD towns.
- Police officers in Darling Downs district have increased by 18 from 359 in 2012 to 377 in 2017*.
- Crime statistics can be subject to significant variation based on factors such as police resourcing, enforcement and prevention strategies, and community awareness and reporting.
- * https://www.police.qld.gov.au/corporatedocs/reportsPublications/statisticalReview/Documents/Personnel.pdf

Trends reflected in the data

Historical trend: Historically, Chinchilla has had low crime rates, well below the Queensland average. A spike in property offences and thefts, as well as 'offences against the person' (e.g. assaults) around 2005 coincides with power station construction.

During CSG construction period (2011 – 2014):

Traffic offences rose sharply from 2012, passing the state average; these offences nearly doubled between 2010 and 2014. Crimes against the person spiked between 2010 and 2012, but overall crime rates remained low compared to Queensland. Good order and theft offences also increased from 2010. Drugs offences remained very low during the construction period until a spike in 2014.

Since CSG construction period (2015 – 2019): In 2014, drug offences in Chinchilla were similar to the Queensland rate. Offences in Chinchilla remain high in 2019 from a prior peak in 2018. This is understood to be in the context of higher levels of policing actions in the region with several operations having taken place between 2017 and 2020.

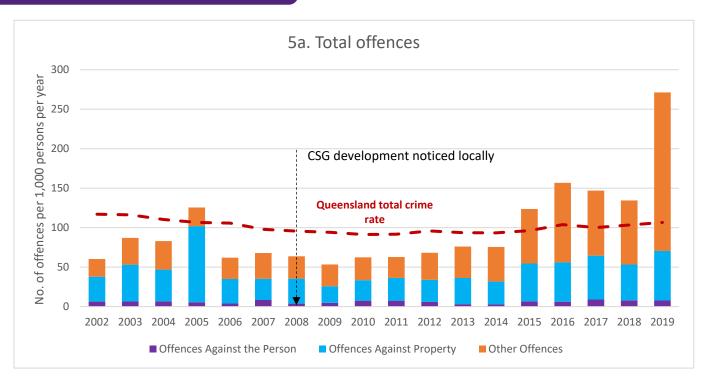
Community insights and perceptions

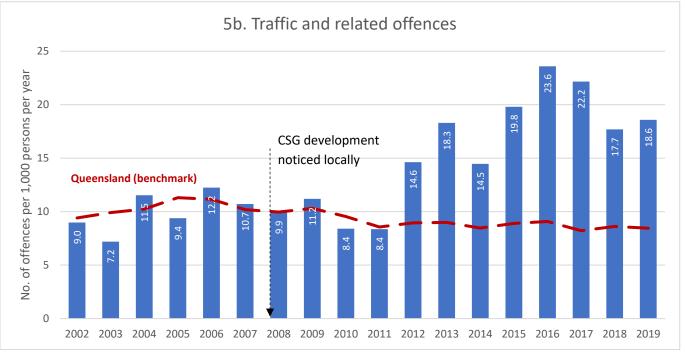
During CSG construction period (2011 – 2014): There was a temporary "rejuvenation" of towns and region during CSG boom, with positive and negative perceptions. Rapid change creates psychological impacts in community. Women initially said they felt unsafe, but this decreased. "Town identity" changes have been frequently cited. Community "connectivity" declined, but "diversity" increased.

Since CSG construction period (2015 – now): There is a perception that new population do not contribute to the community and are transient. Peaks in drug and good order offences are due in part to proactive police targetting. Property offences are reported to be linked to local juveniles. Traffic related offences are thought to be associated with new town demographics rather than CSG industry whose vehicles are monitored remotely. Drugs are perceived to be an increasing issue for rural towns and society in general.

Future expectations: Community members believe there is significant need for investment in programs that address long term impacts of boom/bust (e.g. suicide prevention, drug rehab).

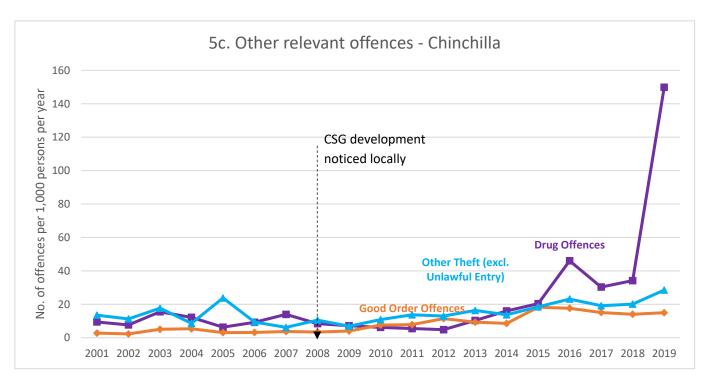
5. Safety & Wellbeing

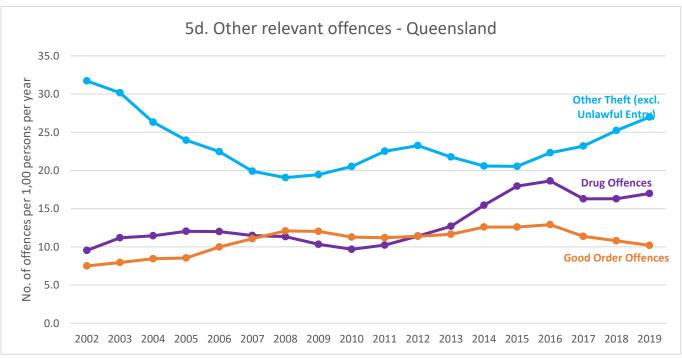




- Source: Queensland Police Service (QPS), https://www.police.qld.gov.au/maps-and-statistics
- Crime rate data (per 100,000 people) obtained by QPS Division (Chinchilla) and Queensland State; data was adjusted to be presented as number of offences per 1,000 people per year

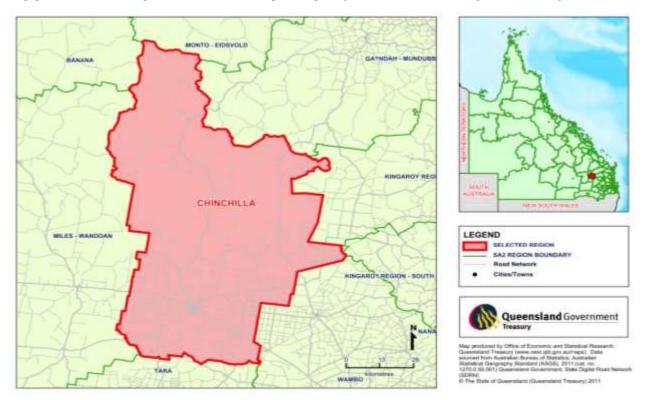
5. Safety & Wellbeing





- Source: Queensland Police Service (QPS), https://www.police.qld.gov.au/maps-and-statistics
- Crime rate data (per 100,000 people) obtained by QPS Division (Chinchilla) and Queensland State; data was adjusted to be presented as number of offences per 1,000 people per year

Appendix A: Spatial boundary maps (SA2, UCL and postcode)



Chinchilla statistical area 2 (SA2) boundary (2011, ASGS Code 307011172)



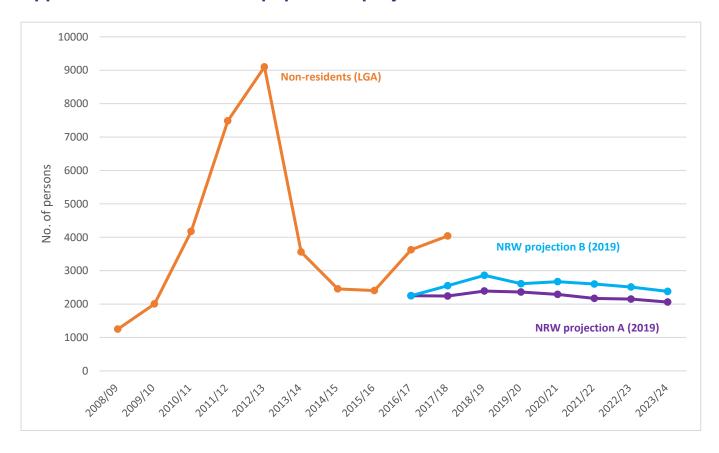
Chinchilla urban centre and locality (UCL) boundary

Source: Australian Bureau of Statistics (2011)



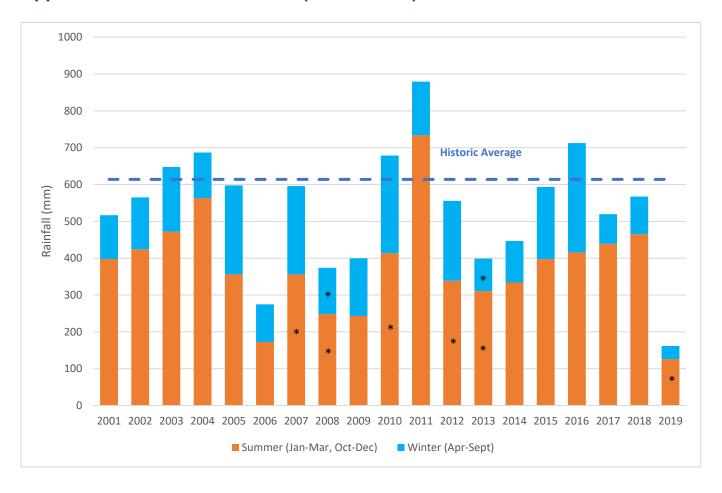
Chinchilla postcode boundary 4413

Appendix B: Non-resident population projections - Western Downs



- Non-resident population, Queensland resource regions: Surat Basin: https://www.qgso.qld.gov.au/statistics/theme/population/non-resident-population-queensland-resource-regions/surat-basin
- Non-resident workers projections (2018) by LGA from QGSO report 'Surat Basin non-resident population projections: 2019 to 2025', https://www.qgso.qld.gov.au/statistics/theme/population/non-resident-population-queensland-resource-regions/surat-basin
- Series A projection is based on the number of non–resident workers on-shift who were engaged in existing resource operations and associated infrastructure activities in the area at June 2018. The projection takes into account future changes to those operational workforces as advised by resource company sources, as well as the estimated construction and operational workforces of Category A projects (i.e. those that are approved and have reached a financial close).
- Series B projection includes the Series A projection plus projected growth in the non-resident population arising from Category B projects (those that are approved but have yet to reach a financial close).

Appendix C: Chinchilla rainfall (2001 - 2019)



- Source: Bureau of Meteorology Climate Data online, http://www.bom.gov.au/climate/data/
- Rainfall observations reported for Chinchilla Water Treatment Plant Rainfall Station
- Where missing data is indicated (*), gaps exist in daily rainfall observations

Appendix D: Project Information

The University of Queensland is conducting research into the social and economic impacts of coal seam gas (CSG) development. The project has focused on the combined impacts of the multiple CSG developments in the Western Downs region of Queensland as an initial case study. That focus has now expanded to include other local government areas – Maranoa, Toowoomba, and Isaac.

Research project history

- **Engagement:** People from the community, government and industry worked with researchers to identify the most important 'indicators' to monitor. This consultation process helped to develop a shared understanding of social and economic development in the community and created a framework for reporting and discussion.
- *Indicator monitoring:* The team identified ways to calculate and report the impact of multiple CSG projects against the agreed set of indicators.

The research team

Dr Kathy Witt, Centre for Natural Gas, The University of Queensland has led this research since May 2017 and joined the original project team in 2014.

A large team of researchers has contributed to this project since 2013, including:

- Assoc. Prof. Will Rifkin, University of Newcastle (previously led this project while working at The University of Queensland from April 2012 – April 2017)
- Dr Jo-Anne Everingham, Senior Research Scientist, Centre for Social Responsibility in Mining, The University of Queensland (CSRM).
- Research Assistants: Jonathan Simpson, (2019-2020) Simone Elias, (2018) Sarah Choudhury, (2017) and Bec Colvin, (2016).
- Ms Sheryllee Johnson, Research Technician, CCSG (2013-2016).
- Professor David Brereton, Associate Director, Sustainable Minerals Institute (2012-2016).
- Dr Vikki Uhlmann, Research Manager, CSRM (2013 -2014).
- Ms Kylie May, Research Analyst, CSRM (2013 2014).

Reporting timeframes: The data collection for the project has been occurring annually since 2013. Project outcomes, recommendations, and reports have been released periodically. The timeframe for some datasets, such as those from the Australian Taxation Office, lags behind the main data used in this report—this is due to unique data collection and reporting requirements of this agency.

Ethics approvals: This study has been cleared by the human research ethics committee of The University of Queensland in accordance with the National Health and Medical Research Council's guidelines (Research Ethics clearance approval no. 2013000587).

Questions: Contact the lead researcher, Dr Katherine Witt

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If you would like to speak to an officer of the University not involved in the study, you may contact the Ethics Officer on 07 3365 3924.