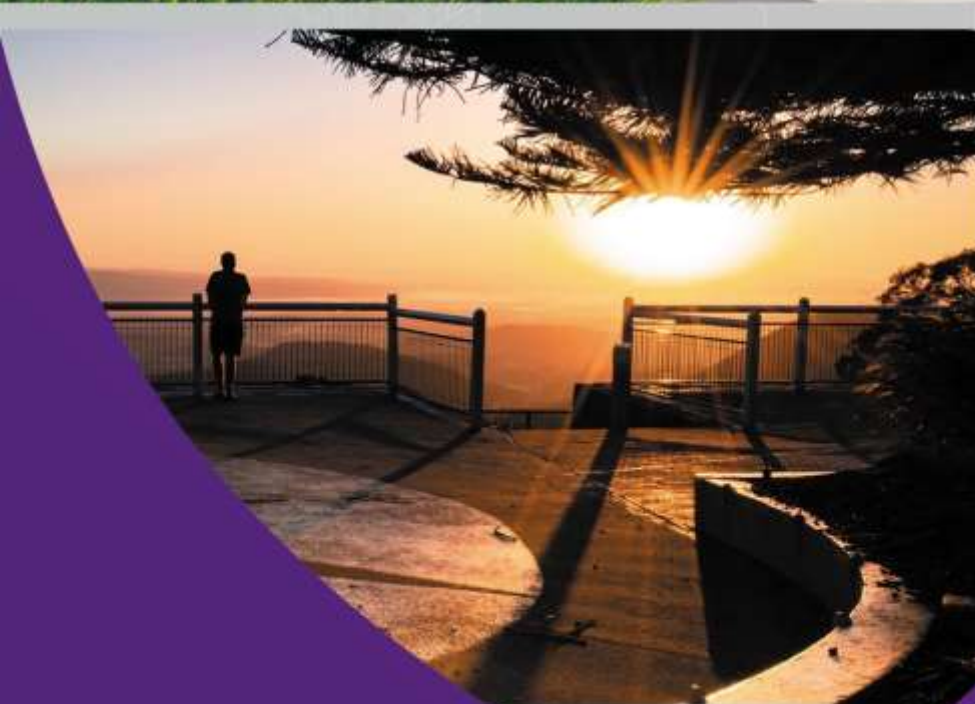


# Annual Report: Wandoan

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



## Research Team

Dr Katherine Witt and Mr Jonathan Simpson

## Acknowledgements

This research report was prepared by the Centre for Natural Gas, The University of Queensland. The research team would like to acknowledge the assistance from Queensland regional community members who participated in research interviews as part of the research process.

## Disclosure/Disclaimer

This research was funded by The University of Queensland Centre for Natural Gas including the foundation industry members—Arrow Energy, APLNG, Santos and Shell (QGC). The Centre conducts research across Water, Geoscience, Petroleum Engineering and Social Performance themes. For information about the Centre’s activities and governance, see: [www.natural-gas.centre.uq.edu.au](http://www.natural-gas.centre.uq.edu.au)

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The Australian Code for the Responsible Conduct of Research outlines expectations and responsibilities of researchers to further ensure independent and rigorous investigations. This report has not been peer reviewed.

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**Report published:** July 2020

**CLX System ID:** 149 365

**ISBN:** 978-1-74272-335-8

# The Wandoan CSG Development Story

The 'Wandoan CSG-Development story' was developed in consultation with key members of the Wandoan and district community. These included representatives of: Wandoan businesses, community organisations, and local government. 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 'Wandoan CSG-Development story', to be used in combination with the publicly available data. The following indicators were discussed:

1. Population
2. Unemployment
3. Income
4. Housing
5. Crime

Those interviewed said Wandoan was historically a 'quiet, close-knit little town'. They recalled a rise in economic activity in 2008 with commencement of the Wandoan Coal Project and drilling of some CSG wells. Wandoan's population has maintained a steady decline for more than a decade. The town population decreased while the proportion of non-resident workers (NRWs) increased with coal and CSG development. A sudden population change was described as a 'shock'. Several families left Wandoan after their farms were bought by Xstrata Coal (Wandoan had 205 families at Census in 2006, 172 in 2011, and 122 by 2016). This has reduced the numbers of school students, apprentices and trainees, and volunteers. In late 2013, the coal project was put on hold, as CSG development escalated. 2015-16 saw a sharp increase in NRWs with the construction of the QCLNG 'Charlie Project' to the west of the town; there were almost two NRWs (600) to every Wandoan resident (350). In 2017, the NRW population was down to 200 but local residents say the 'town feels empty', by 2018, there were just 45 NRWs. New energy projects have been planned for the Western Downs and NRWs doubled in 2019.

The Wandoan community is seeking alternatives that provide long term manageable growth for their town that has been traditionally reliant on agriculture and forestry. Those interviewed reported feeling uncertain about the town's future.

An increase in new businesses and business income from 2011 was welcome but thought to be short-term only. In 2017 interviewees reported seeing business closures. Interviewees reported seeing few signs of increased wealth in the community.

Increased demand for workforce housing during CSG construction substantially boosted rent for a 3-bedroom house, taking it over the state median in 2012, 2013 and 2014. Rents rose 58% during 2013, before returning to pre-CSG levels in 2015. The sale price of houses also peaked in 2013 but has since dropped significantly to very low prices. Interviewees expressed concern about the number of empty houses and purpose-built duplexes for workforce accommodation. In 2018, the affordable houses were beginning to sell with new families moving to town.

Wandoan has a historically low crime rate. Good Order, Theft and Drugs offences increased from 2012 to 2015. There was a heightened number of Drug and Other offences in 2018, there were also increased police operations targeting drugs at the time, in 2019 these dropped back to well below the Queensland rates.

This booklet provides detail on aspects of the 'Wandoan CSG development story' based on the range of priority indicators that we tracked. We would like to thank members of the Wandoan community for their cooperation and the gift of their time. We hope that we have done justice to their contributions in 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 Appendix D to this report. In this document we present the findings on the town of Wandoan.

The following acronyms are used throughout this report:

|      |                                |
|------|--------------------------------|
| CSG  | Coal seam gas                  |
| FTE  | Full-time equivalent           |
| LGA  | Local Government Area          |
| NRW  | Non-resident worker            |
| QLD  | Queensland                     |
| 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 communities 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:

- Disappointment that expected benefits in terms of employment, incomes, business opportunities from the proposed Xstrata/Glencore coal mine, did not eventuate. Expected benefits from CSG also disappointing to some.
- Sense of uncertainty about the town's future as long-held local businesses close.
- Resilience and optimism as low house prices attract new families.

### Changed capability:

- Some believed that the town's capabilities had weakened over time, with families leaving and businesses now closing.
- Some thought that

### Lessons learned:

- NRWs should be encouraged to stay close to town and spend locally. e.g., at the Wandoan accommodation park.
- Company and government funding for community projects involving local business and labour are recommended; e.g., funding sporting teams, sports facility upgrades and health services.
- With Glencore's \$6 billion Wandoan thermal coal project possibly moving forward, there is a need to coordinate between various resource developers and council to avoid another 'boom'/'bust' cycle.
- CSG industry to provide more opportunities to local businesses and workers. This would be enhanced by accommodating more CSG workers in town; but, only to a number that is sustainable long term, otherwise potential for housing over-supply post-construction (see below).
- More CSG workers to be located in the accommodation park preferably, leaving lower priced houses and rentals for locals.
- Need for diversification to increase community's ability to 'absorb' resource industries' boom/bust cycles.
- Continued police presence on roads and around hotels where other offences occur with increased CSG workers. Some other local roads used by CSG traffic could benefit from CSG funds.

# 1. Population

## 2019 summary

Overall, population is expected to remain steady, with a small influx of NRWs with an uptick in CSG activity and solar farm projects.

## Context

- Senex's Project Atlas<sup>1</sup>, as well as several renewable energy projects<sup>2</sup> involving solar energy and battery technologies began development during late 2019.

## Trends reflected in the data

**Historical trend:** Wandoan is a small town of less than 450 people. The resident population has been in decline since 2000/01, decreasing by 25% by 2009/10. This downwards trend is in contrast to the broader Western Downs local government area (LGA), which saw a population increase of 10% over the same period.

**During CSG construction period (2011 – 2014):** The downwards trend in resident population reversed in 2012/13, after reaching a historic low of 329 in 2011/12. This has since plateaued at around 340. Wandoan has seen a steady increase of non-resident workers (NRWs) since 2009/10, with an initial peak in 2013/14 of more than one NRW to two residents.

**Since CSG construction period (2015 – 2019):** The resident population of Wandoan has hovered around 340 since 2009/10. In 2015/16, increased CSG activity in the area brought an influx of NRWs. This reached an unprecedented high with almost twice as many NRWs as Wandoan residents (605 NRWs in total). The number of NRWs had decreased to levels before CSG development was noticed locally, with 45 NRWs in 2018, however, 2019 saw that more than triple to 160.

## Community insights and perceptions

During construction the town was initially full with NRWs in town. When camps were built out of town, local businesses suffered and houses were left empty.

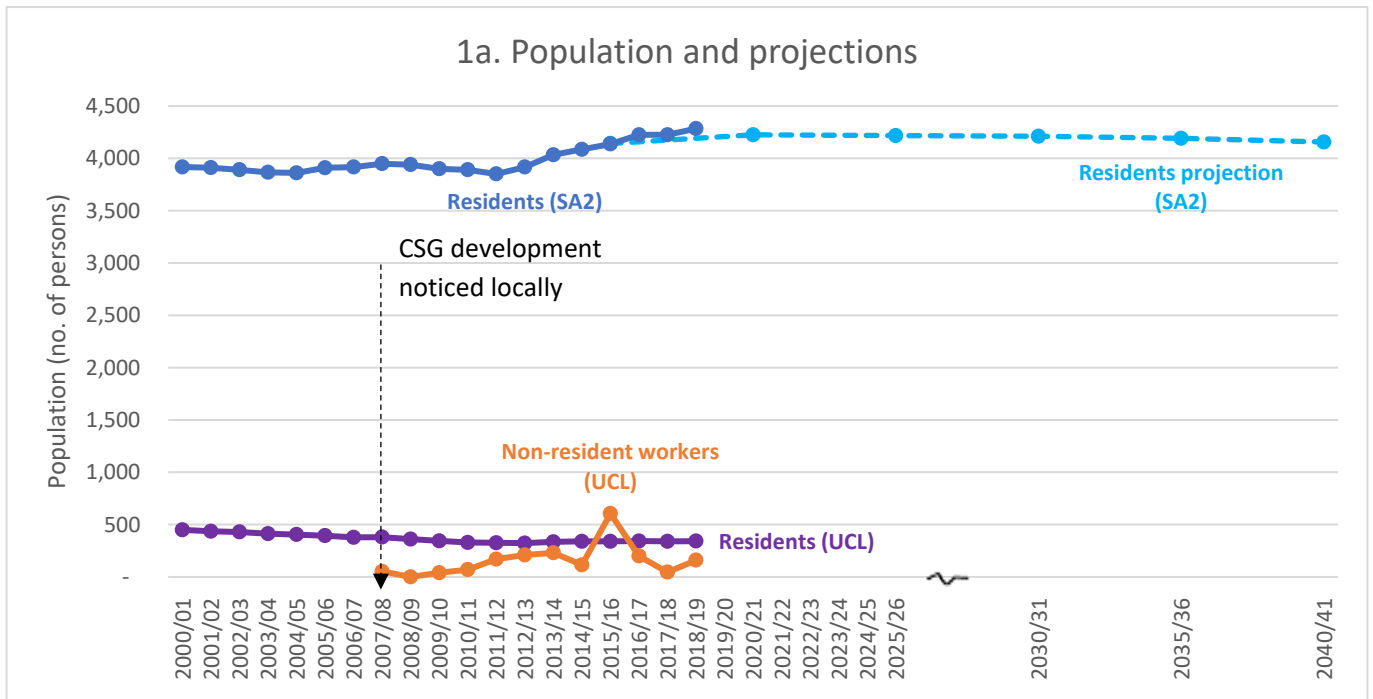
**Since CSG construction period (2015 – now):** Wandoan residents were pleased to see more CSG activity but hope to see long term benefits for their community. The community has noticed some new faces in the township and expect a small increase in local population.

**Future expectations:** Population may increase if houses sell, but could remain low or decrease further if benefits from nearby resource development do not materialise in town; e.g., NRWs living in camps outside the town continues. Large increase of CSG NRWs and, as of May 2017, Glencore's \$6 billion Wandoan thermal coal project may also move forward, further influx of NRWs likely. Industry is needed to drive growth in Wandoan – CSG industry and/or government funding for tourism, community events and services is sought to develop future options. There are concerns about local businesses closing, groundwater, weeds, traffic on roads and neglected empty housing.

<sup>1</sup><https://www.senexenergy.com.au/operations/surat-basin-gas/project-atlas/>

<sup>2</sup><https://www.qgso.qld.gov.au/issues/3191/surat-basin-non-resident-population-projections-2020-2026.pdf>

# 1. Population



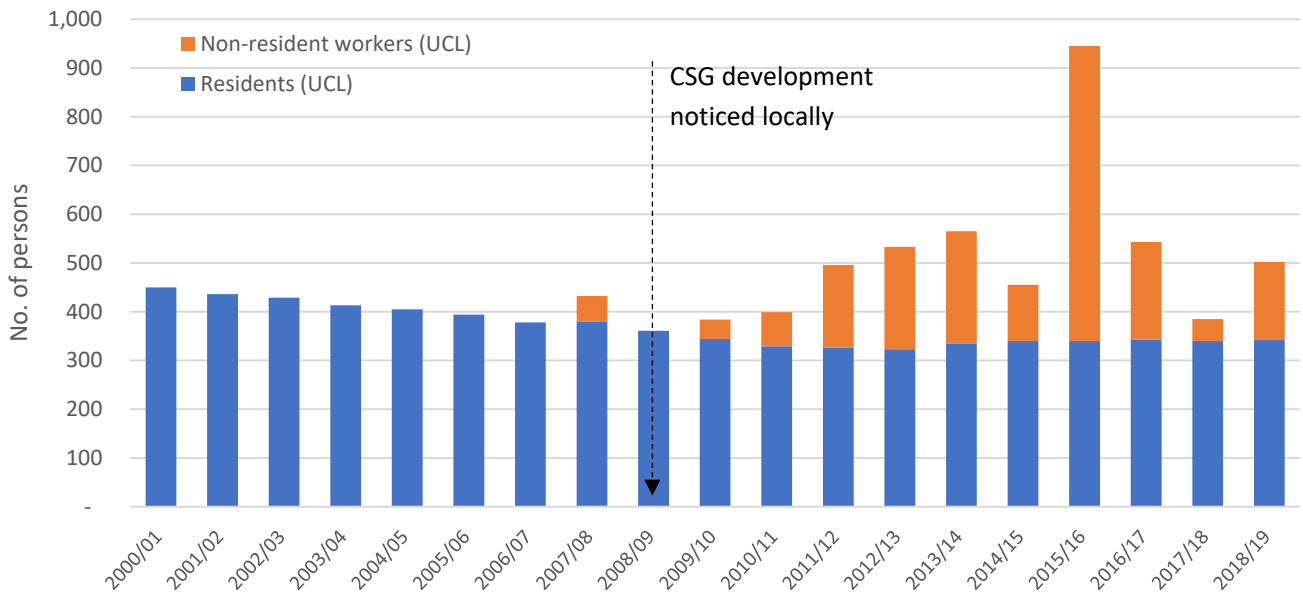
## Data notes

- 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>
- NRW estimates do not include the many NRWs in camps outside town.

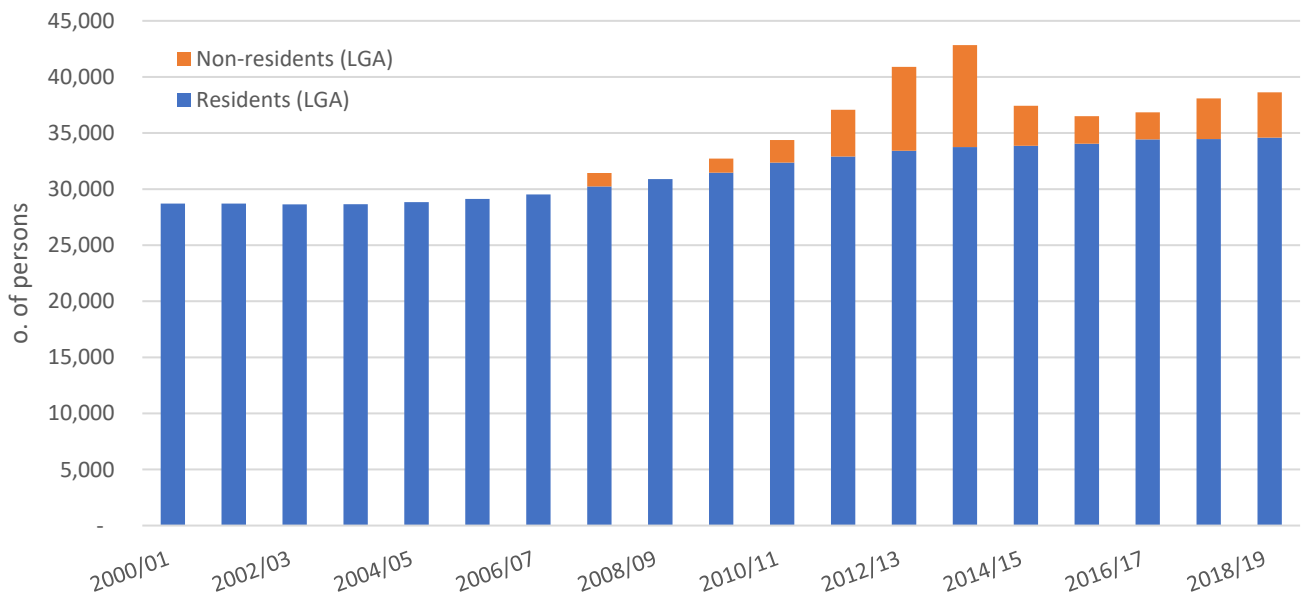


# 1. Population

## 1b. Resident vs. non-resident population- Wandoan



## 1c. Resident vs. non-resident population - Western Downs LGA



### Data notes

- 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

The unemployment rate remains low in Miles-Wandoan but has been steadily increasing since the CSG construction period (in 2013).

### Context

- Unemployment data is based on Statistical Area Level 2 (SA2) boundaries. Wandoan is captured in the Miles-Wandoan SA2, accounting for approximately 8% of the area's total population; this means unemployment data may not be fully representative of real trends in the township.
- 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 the Miles-Wandoan SA2 has historically stayed below 4% (considered "full employment"), placing it well below the Queensland average.

**During CSG construction period (2011 – 2014):** Unemployment fell from 3.1% in 2010 (when CSG was first noticed locally), to below 1% in 2013 and 2014 during the peak of CSG construction.

**Since CSG construction period (2015 – 2019):** The unemployment rate has generally increased since the end of the construction period by about 0.3 to 0.4% per year. The exception being 2016 where it increased 0.9% in one year. It remains well below the Queensland rate of 6.1%, in line with the historic (pre-CSG) relative trend.

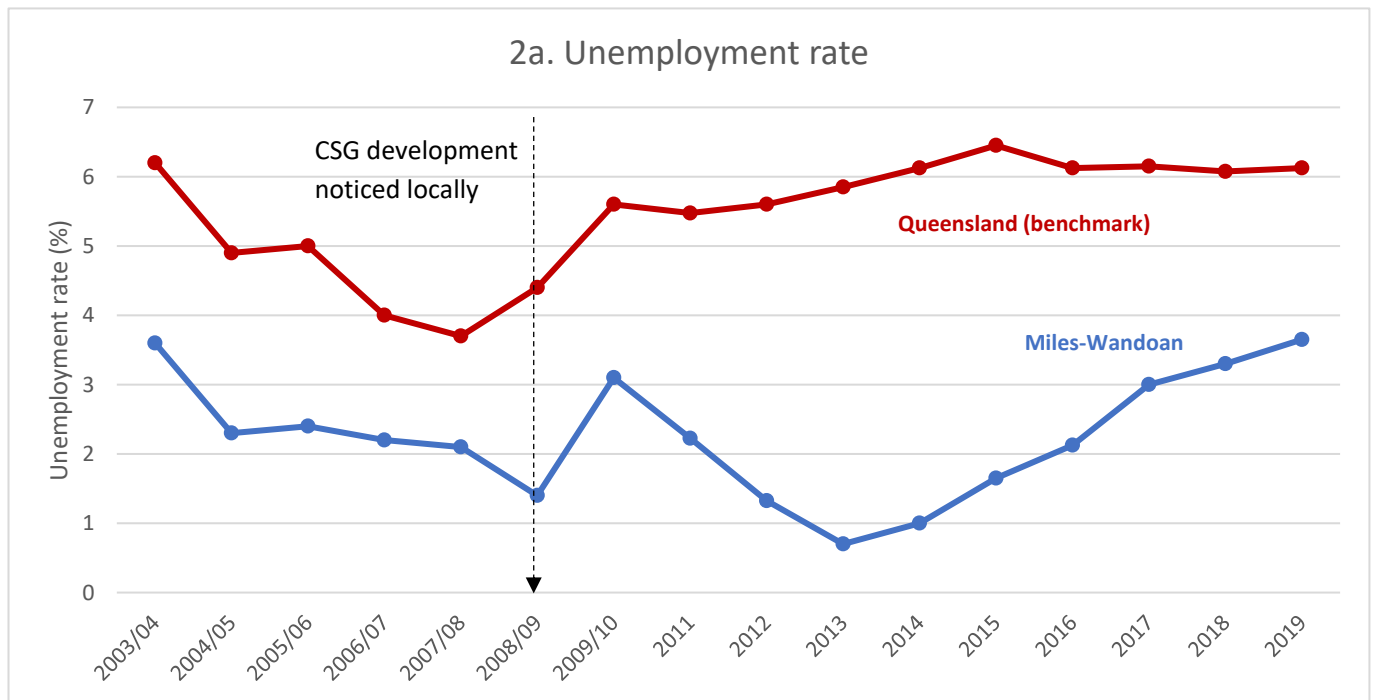
### Community insights and perceptions

**During CSG construction period (2011 – 2014):** Local people were able to gain employment during the construction phase. "Just about anyone who wanted a job could get one". It was often through 'word of mouth' and anyone who was available could be called on. Some people were working more than one casual or temporary job to capture the benefits. Earthmoving, truck driving, hotel/motel and service station jobs were mentioned.

**Since CSG construction period (2015 – now):** Miles from Wandoan are very different and will not see the same effects. The government is moving low socio-economic families to Miles and that will likely affect the areas unemployment rate. The unemployment rate won't change in Wandoan, those who want to work will find work and those who don't will not.

**Future expectations:** Increased CSG activity and potential coal projects may lead to new local employment opportunities that may boost local unemployment rates.

## 2. Employment



### Data notes

- 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

Average incomes have continued to rise in 2016/17 (latest available data) and total wages improved after decreasing since 2012/13.

### Context

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

### Trends reflected in the data

**Historical trend:** Average taxable income has historically stayed below the Queensland average; following a similar upward trend, but with greater fluctuations (possibly due to seasonal variations in agriculture).

**During CSG construction period (2011 – 2014):** Between 2011 and 2014, average taxable income increased by 38% (a faster growth rate than the historic trend), although remained below the Queensland average. Income growth slowed as employment fell with the completion of the CSG construction phase. The count of NPP businesses increased by 70 and the number in the high turnover brackets increased by 102 by 2014.

**Since CSG construction period (2015 – 2019):** Average taxable income continues to rise and is at an historic high in 2017/18. Individual earnings which were decreasing since construction ended have recovered and in 2017/18 are just shy of peak-CSG earnings. The number of earners continues to hover at about 290. Counts of PP businesses are lower but with a greater number in the higher turnover brackets, especially the 100k-499k and 2m+. The number of NPP businesses did decrease by 12 into 2018/19, however, the high turnover counts stayed very close to trend.

### Community insights and perceptions

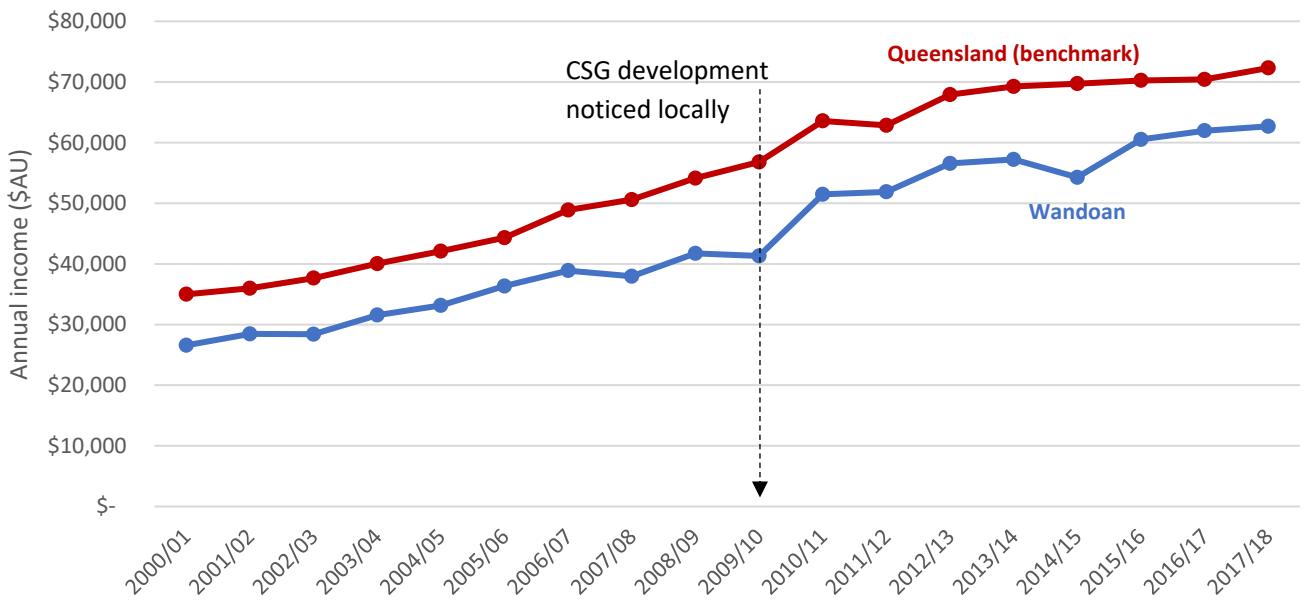
**During CSG construction period (2011 – 2014):** Wages have grown with the CSG boom but are more likely to be industry workers new to the area. Could also be people working more than one job.

**Since CSG construction period (2015 – now):** New businesses started up in anticipation of CSG contracts but folded as contracts did not emerge and the industry slowed. Many of these sole operators, or families. No visible effects of increased wealth in the community.

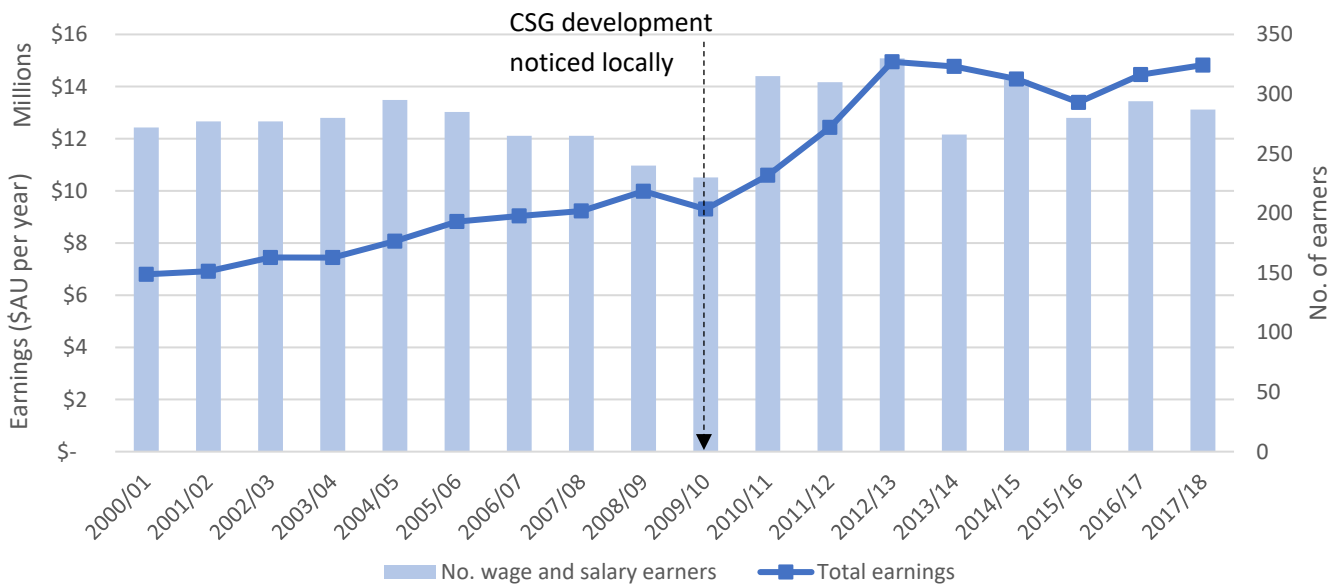
**Future expectations:** Personal incomes are expected to fall as those on high wages from CSG work either leave or contracts end. Business incomes are also expected to fall, although it is hoped they will increase again with a 'new wave' of development.

### 3. Income & business

3a. Average taxable income (taxable individuals only)



3b. Total individual earnings

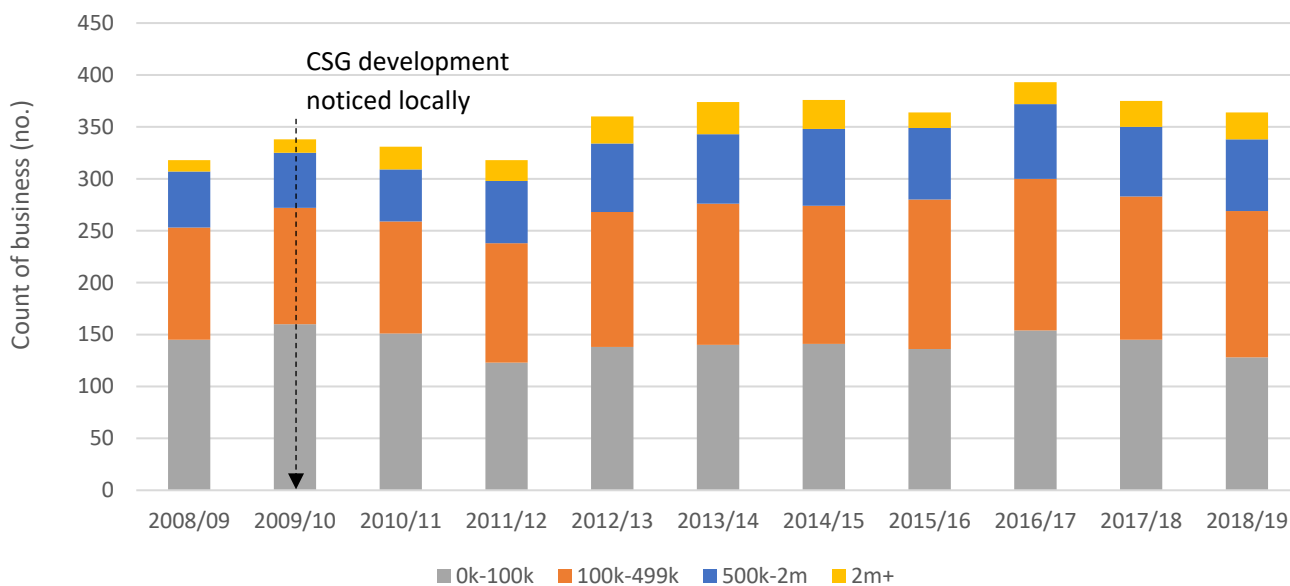


Data notes

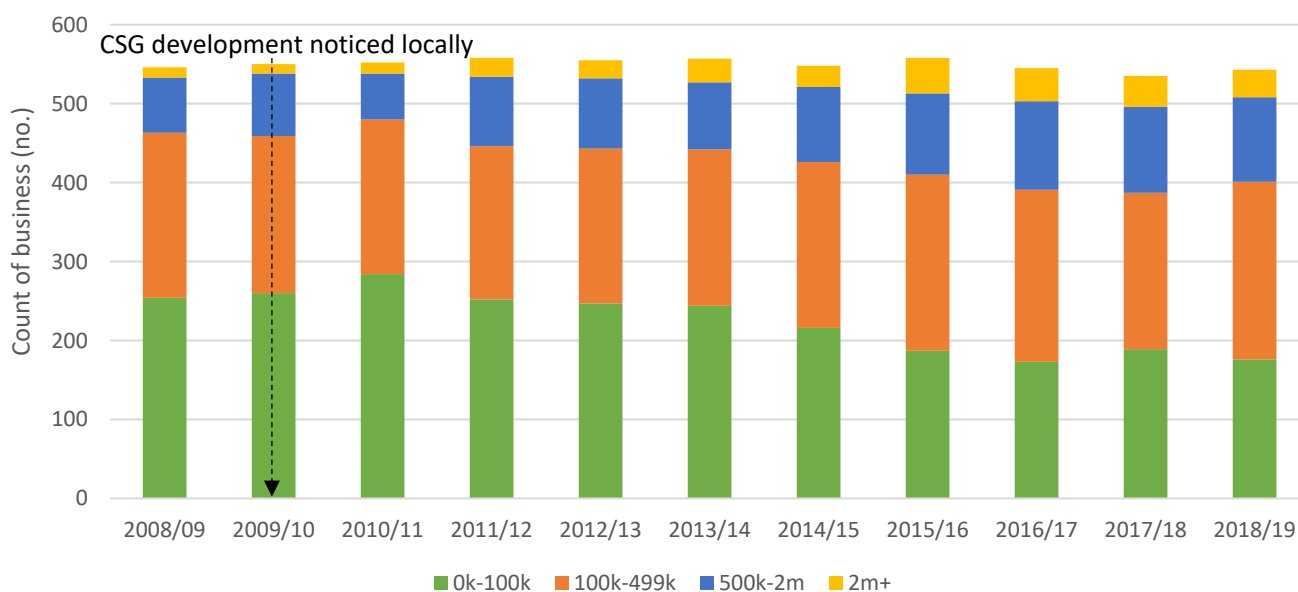
- Source: Australian Taxation Office (ATO), Research and Statistics, <https://www.ato.gov.au/>
- Average taxable incomes reported by ATO until 2009 excluded losses. Averages from 2010 include all taxable incomes including incomes of zero and losses.
- Data relates to Wandoan postcode 4419
- Original data – no discounting applied
- Due to ATO data publishing cycles, 2018/19 data will be included in the 2020 Wandoan booklet

### 3. Income & business

3c. Count of businesses by turnover (non-primary production)



3d. Count of businesses by turnover (primary production)



Data notes

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

## 4. Housing

### 2019 summary

House prices and sales have fallen significantly since 2014, and continue the trend into 2019. Rent remained steady in from 2016 to 2019. Further CSG or coal activity may lead to some recovering of sale prices and rent, but excess of new housing will soak up any demand.

### Context

- Housing data is based on Statistical Area Level 2 (SA2) boundaries. Wandoan is captured in the Miles-Wandoan SA2, accounting for approximately 8% of the area's total population; this means housing data may not be fully representative of real trends in the township.

### Trends reflected in the data

**Historical trend:** House prices and rents in the Miles-Wandoan SA2 historically sat well below QLD benchmarks, and were increasing in line with benchmark trends.

**During CSG construction period (2011 – 2014):** Median house prices in Miles-Wandoan continued a strong growth trend, increasing by 57% over this 4-year period, peaking in 2012/13. In contrast, the QLD benchmark declined by 17%. Strong demand from 2011 to 2013 prompted an historically unprecedented high number of residential building approvals – 127 in 2013 and 162 in 2014, compared to the previous record of 32 in 2007. Since 2013, however, demand fell dramatically. Median rent increased steadily until 2012 to the QLD benchmark (~\$350), then dramatically increased to \$550 the following year (2013).

**Since CSG construction period (2015 – 2019):** The sharp downwards trend in sale prices began towards the end of the construction phase in 2013/14 appears to be levelling off with the median price about one-third of the “construction” peak. Since the 2013 rent peak, rents have fallen by 83% to pre-CSG levels, and remained steady since 2016/17, though they have increased by 16% through to 2019. There was one new building approval in the greater Miles-Wandoan area in 2019.

### Community insights and perceptions

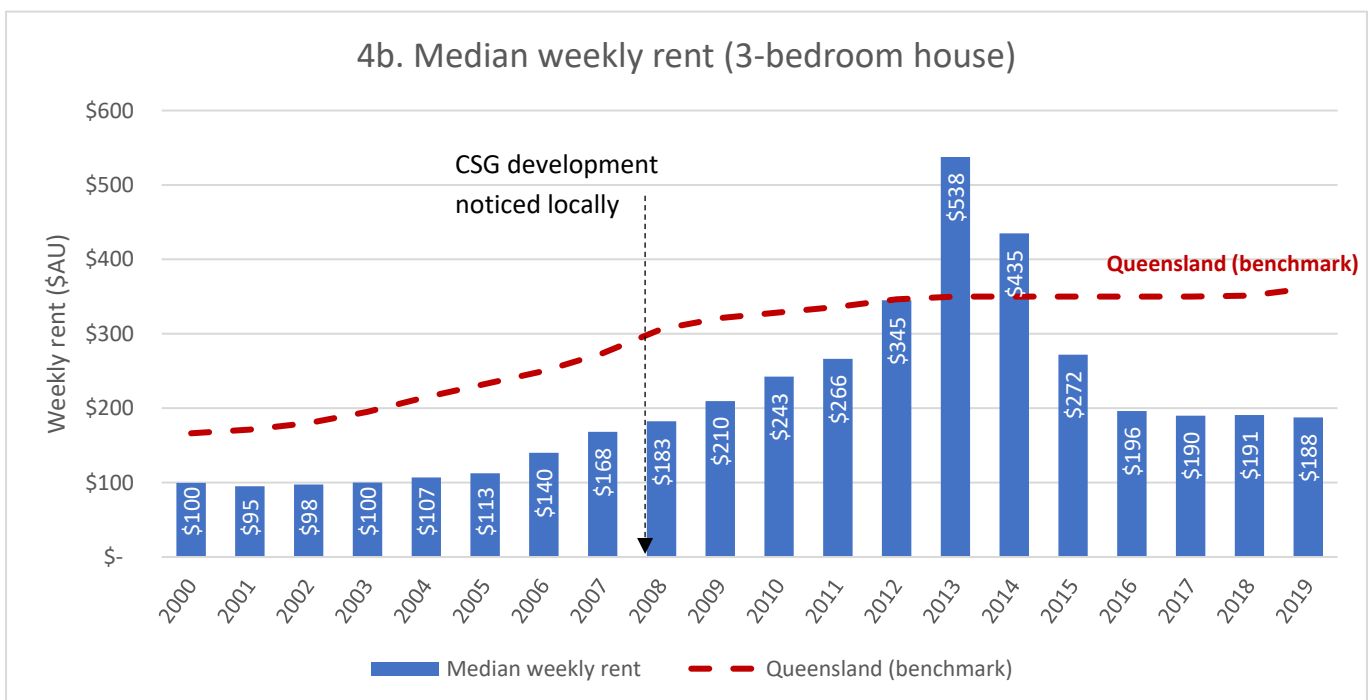
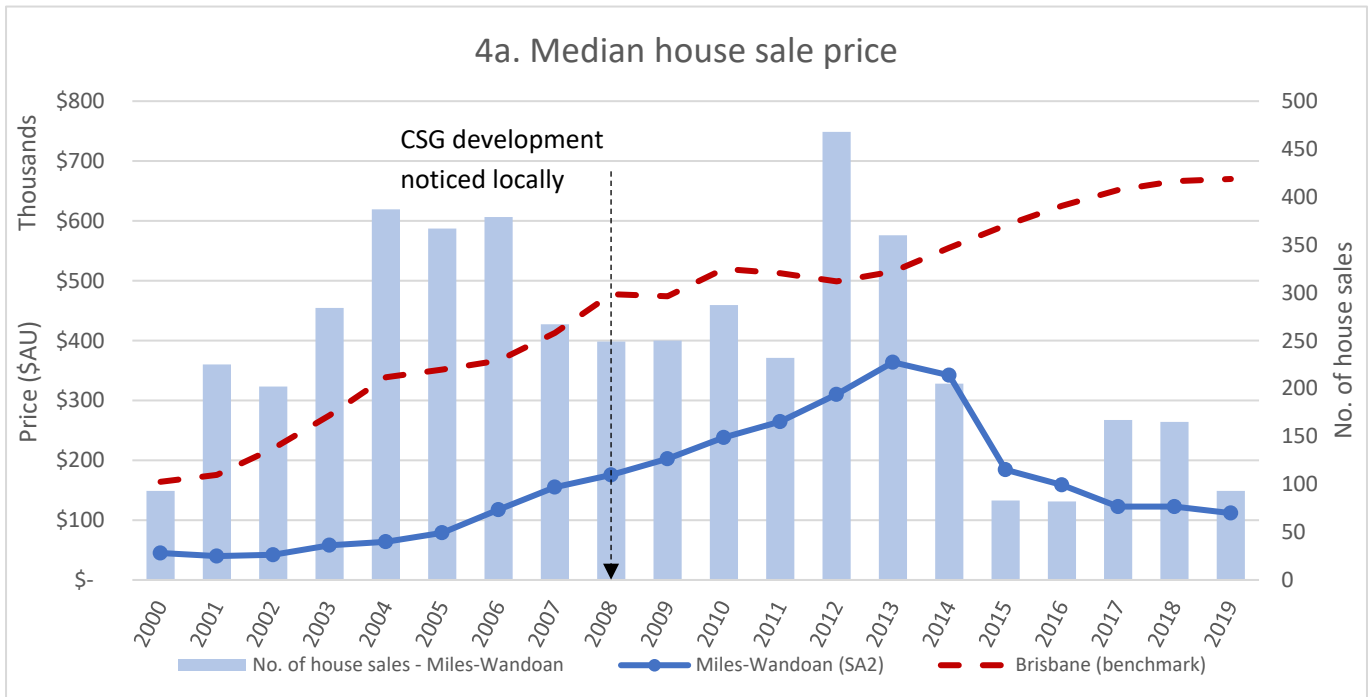
#### During CSG construction period (2011 – 2014):

Construction of new duplexes and hotels were “too late to benefit fully from the boom” as NRWs were moved out of town to camps.

**Since CSG construction period (2015 – now):** Now an excess of accommodation exists and the resident population is not increasing. The number of vacant houses is a significant concern – there is no work for people to move to town for, so it is unlikely that anyone will rent or buy. A few sales have happened but these were thought to be actioned by the banks. While house prices remain low, rural property prices are increasing as buyers look to speculate on income from future CSG wells

**Future expectations:** Rents and housing prices will remain at affordable levels in the near future. Would hopefully increase if there was a change in demand as CSG and coal activity increases. If the NRWs can be housed in the empty accommodation in towns and not in the workers' camps, benefits will accrue. Would prefer to see families move in though.

## 4. Housing

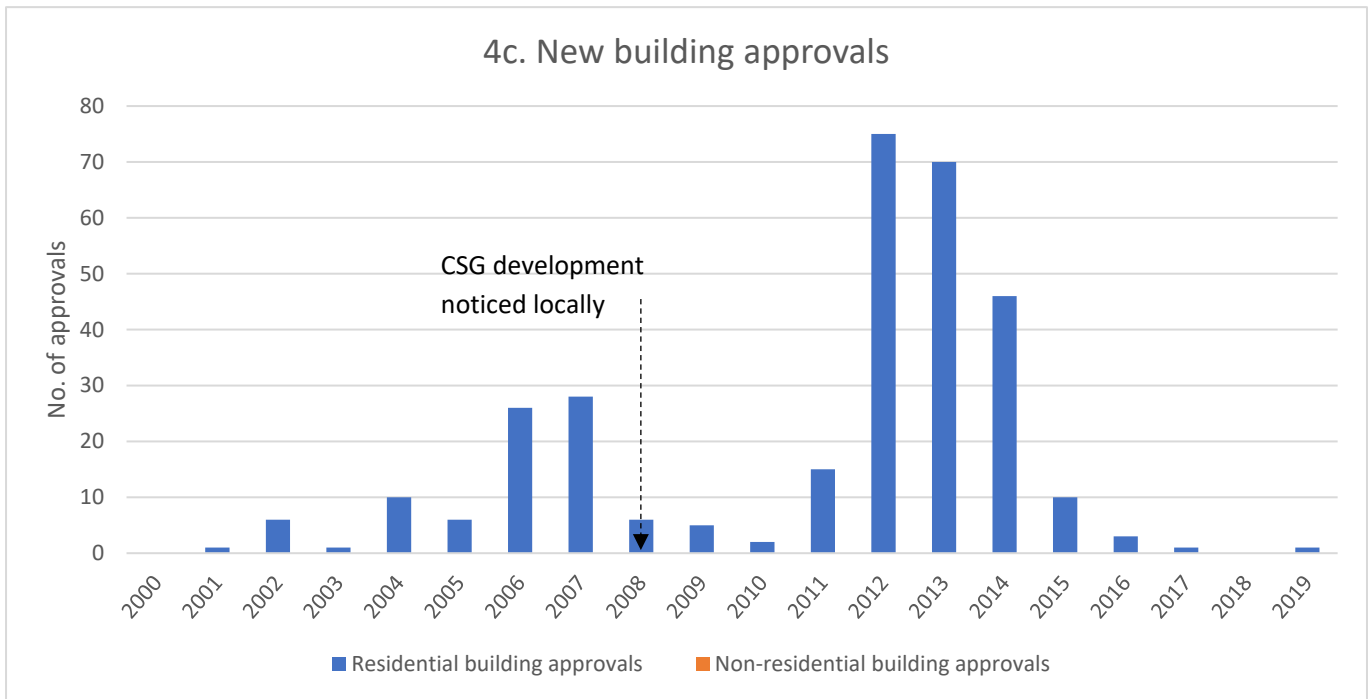


#### Data notes

- 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 (Miles-Wandoan) statistical boundary
- Median data is an average of the reported quarterly medians per year



## 4. Housing



### Data notes

- Source: QGSO Regional Database dataset 'Building Approvals (Jul 2001 to Dec 2019) [ABS 8731.0] (ASGS 2016)', <http://www.qgso.qld.gov.au/products/tables/qld-regional-database/index.php>
- Data based on SA2 (Miles-Wandoan) statistical boundary
- Approvals shown for private buildings only; public developments are excluded
- Private non-residential building approvals remained at zero between 2002 and 2019

## 5. Safety & wellbeing

### 2019 summary

Wandoan a very safe place to live with a connected, resilient community. Crime rates did increase during the CSG construction period (2012-2015) but have since dropped back to around the Queensland rate.

### Context

- Drug offences are perceived to be on the rise in all rural QLD towns.
- Crime statistics can be subject to significant variation based on factors such as police resourcing, enforcement and prevention strategies, and community awareness and reporting.
- There was a high level of police special operations in 2018-2019 targeting drugs in the Darling Downs.

### Trends reflected in the data

**Historical trend:** In line with Western Downs as a whole, most offences and their total number in Wandoan well below Queensland averages in 2000s.

**During CSG construction period (2011 – 2014):** Significant increase in various offences since 2012. Traffic offences increased to above the Qld rate in 2012, and peaked at 3 times the Qld rate in 2013/14, falling back to around the Qld rate in 2015/16. Theft, drug and good order offences also increased in 2012 and 2013- with drugs and good order at 3 times the Qld rate in 2013.

**Since CSG construction period (2015 – 2019):** Drugs offences returned to the norm in 2019 after a rash of offences in 2018 and are currently the same as the Queensland baseline. Traffic offences have been below the Queensland benchmark rate since 2016, however the total crime rate rose to 3 times the Queensland benchmark in 2018 due to an increase in “other offences”.

### Community insights and perceptions

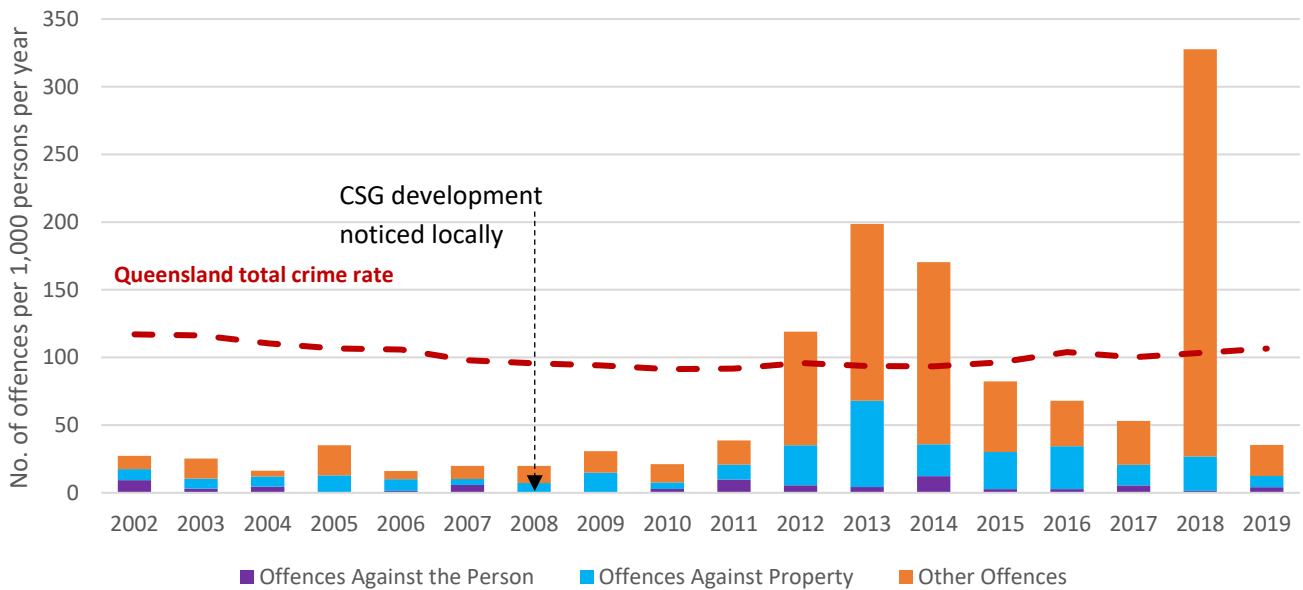
**During CSG construction period (2011 – 2014):** Increased traffic from CSG activity coupled with local roads not built for the volume of traffic exacerbated the number of traffic offences. A change in policing strategy led to higher vigilance and detection of traffic and drug offences during this period. There was thought to a ring of theft targeting ute and truck accessories.

**Since CSG construction period (2015 – now):** Drug use is not thought to be a problem in town as those groups left a few years ago. Other crimes are also not believed to be occurring now as they are in similar towns.

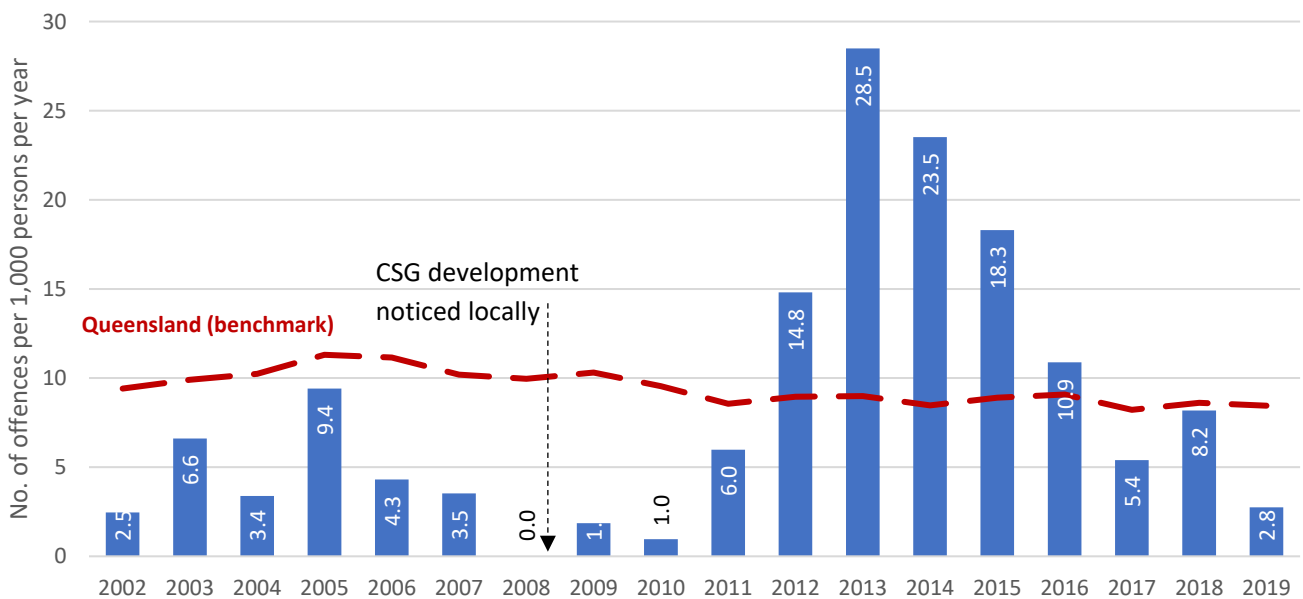
**Future expectations:** Road improvements in the area are expected to reduce the number of traffic related instances, even if traffic picks up. There is a chance for increased petty theft and home invasions in the next few years as certain groups follow the new faces into town or take advantage of the older and trusting Wandoan residents.

## 5. Safety & wellbeing

### 5a. Total offences



### 5b. Traffic and related offences

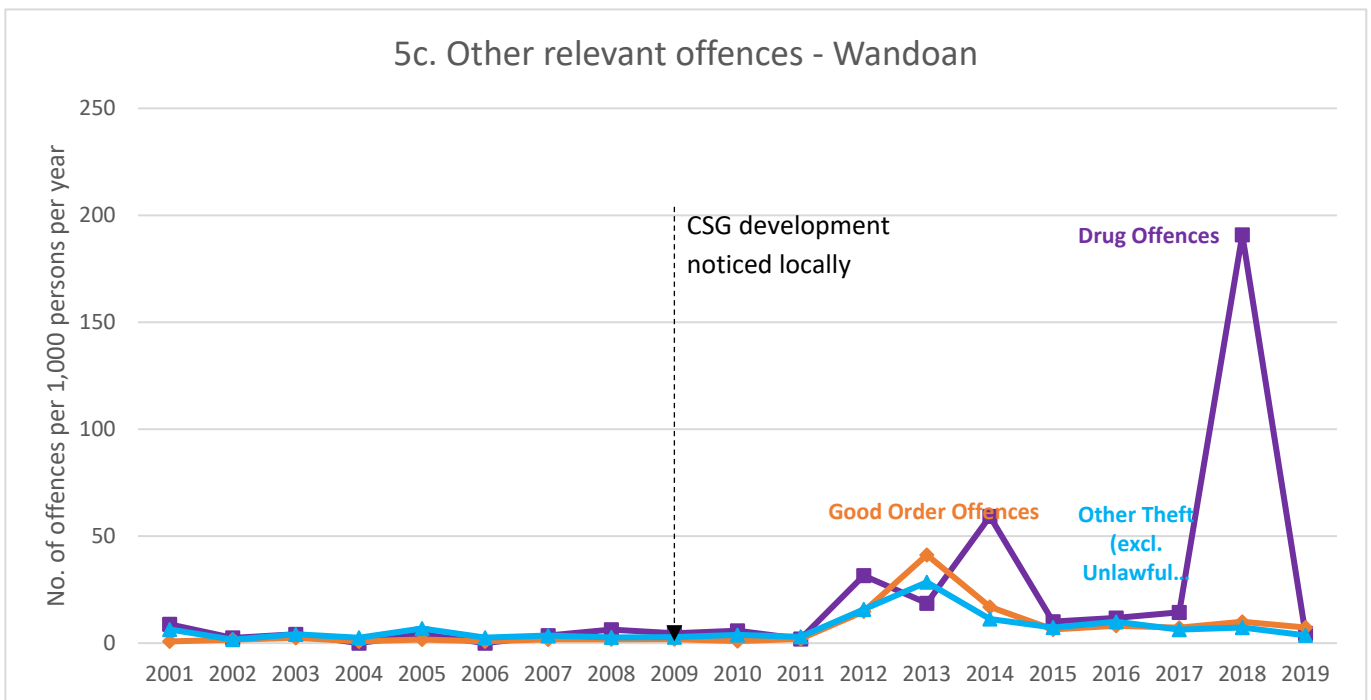


#### Data notes

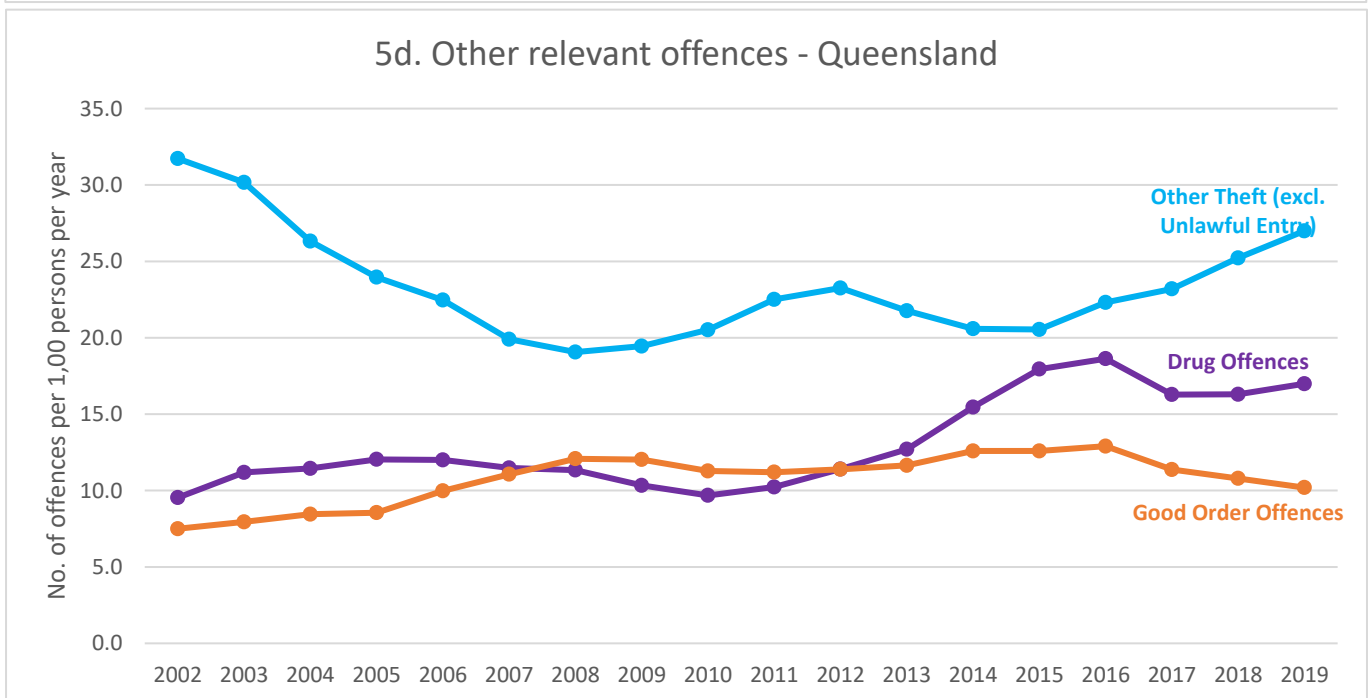
- Source: Queensland Police Service (QPS), <https://www.police.qld.gov.au/maps-and-statistics>
- Crime rate data (per 100,000 people) obtained by QPS Division and Queensland State; data was adjusted to be presented as number of offences per 1,000 people per year

## 5. Safety & wellbeing

### 5c. Other relevant offences - Wandoan



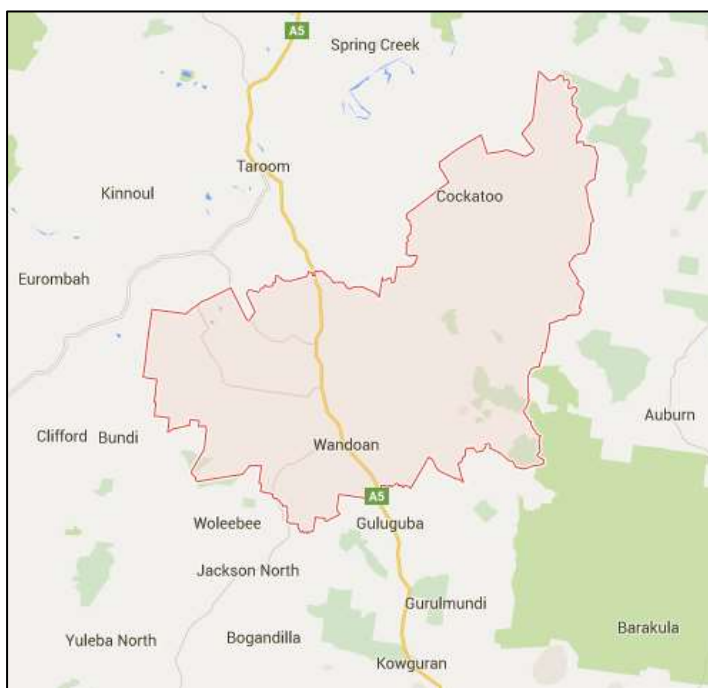
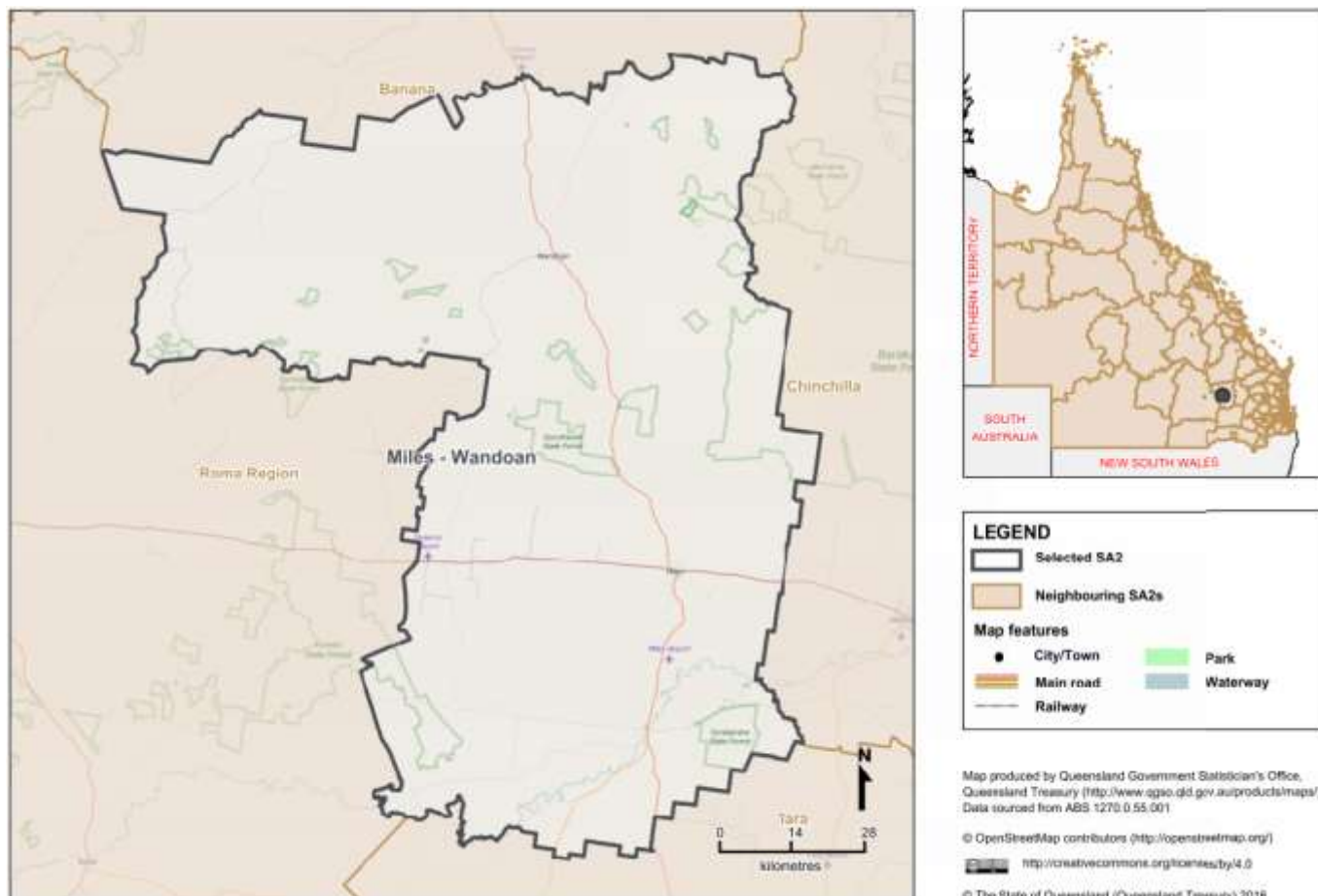
### 5d. Other relevant offences - Queensland



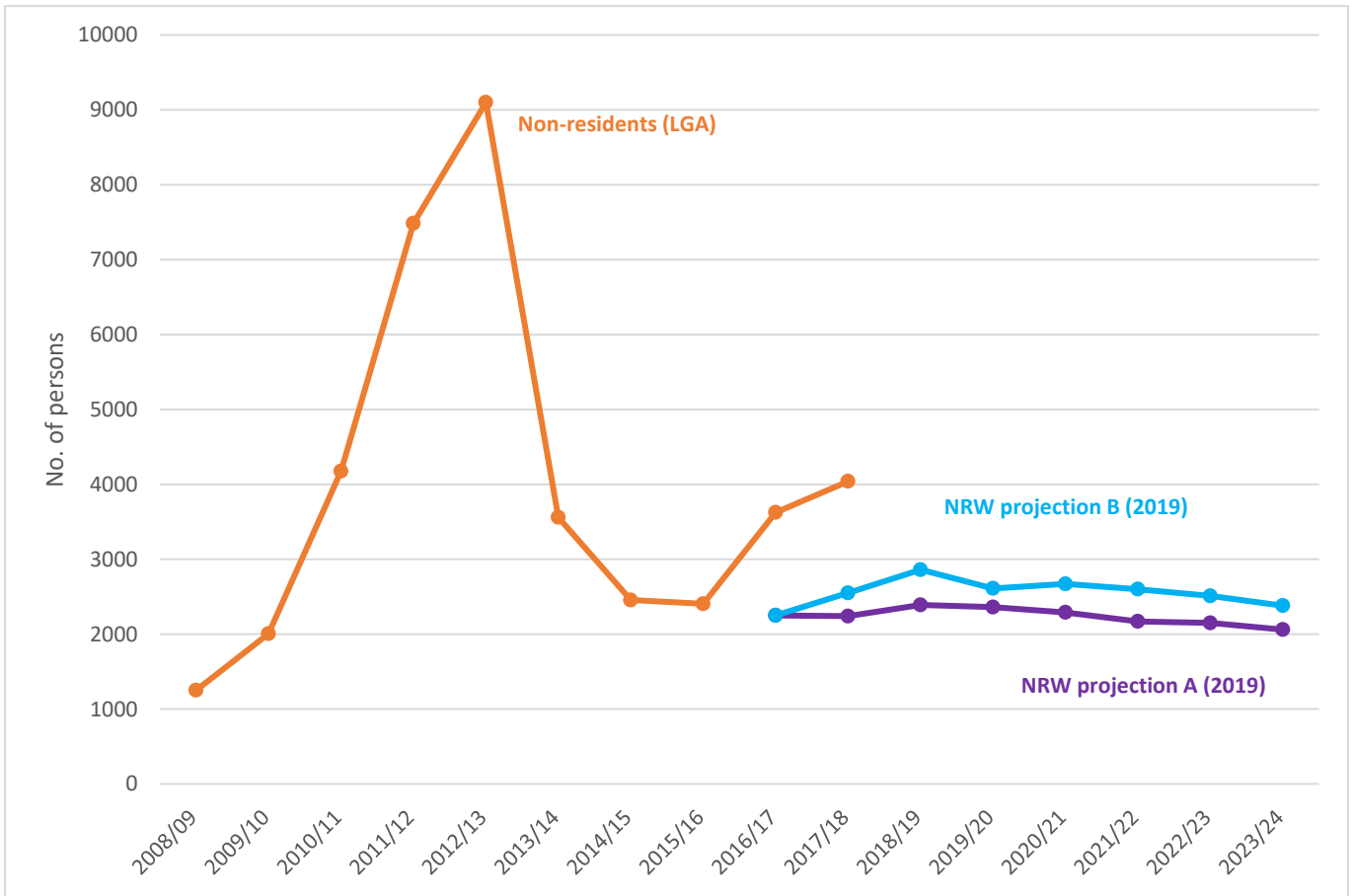
#### Data notes

- 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 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)



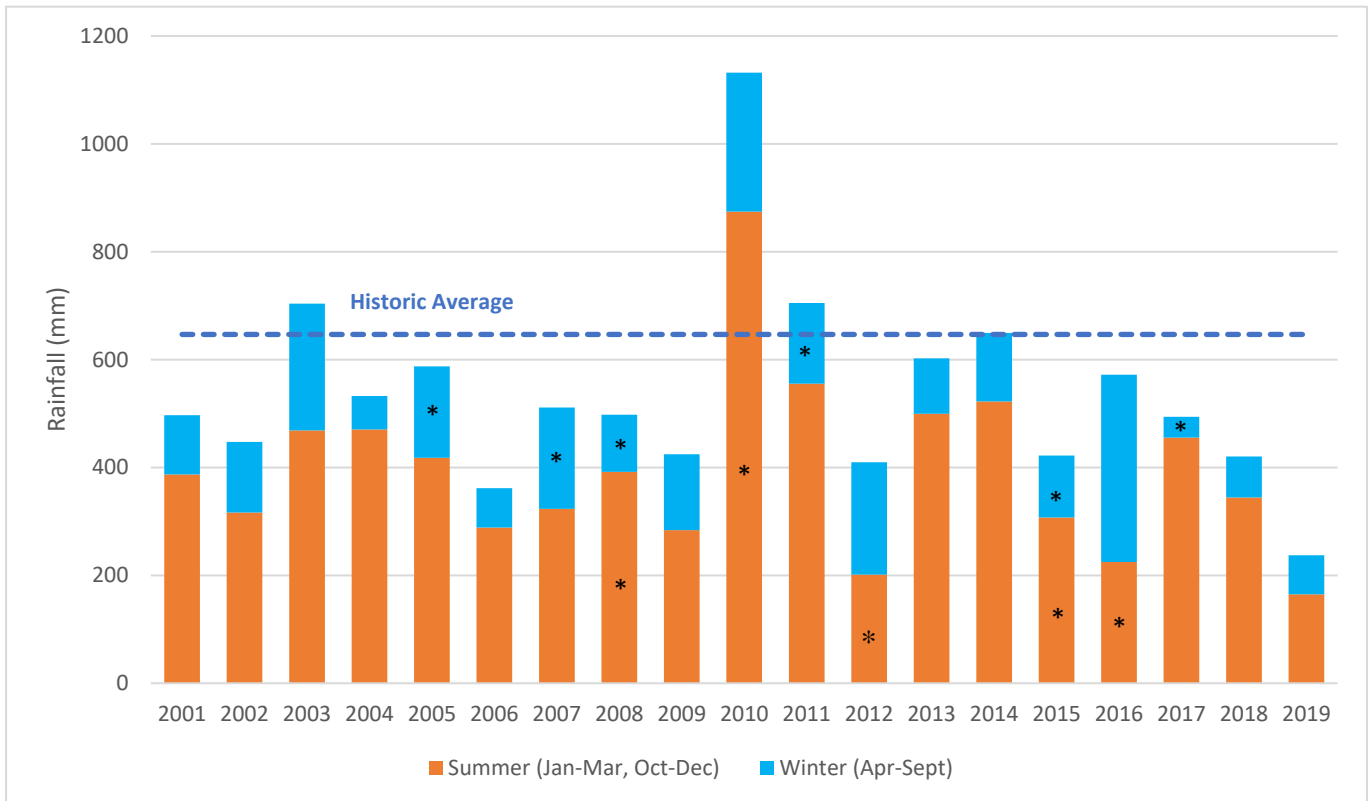
## Appendix B: Non-resident population projections - Western Downs



### Data notes

- 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: Wandoan rainfall (2002 – 2019)



### Data notes

- Source: Bureau of Meteorology Climate Data online, <http://www.bom.gov.au/climate/data/>
- Rainfall observations reported for Giligulgul 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 (CSRSM).
- Research Assistants: Jonathan Simpson, (2019-2020) Simone Elias, (2018) Sarah Choudhury, (2017) and Bec Colvin, (2016).
- Ms Sherylee Johnson, Research Technician, CCSG (2013-2016).
- Professor David Brereton, Associate Director, Sustainable Minerals Institute (2012-2016).
- Dr Vikki Uhlmann, Research Manager, CSRSM (2013 -2014).
- Ms Kylie May, Research Analyst, CSRSM (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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The University of Queensland, Brisbane, QLD, 4072  
M: 0418 619 341 | E: [k.witt@uq.edu.au](mailto:k.witt@uq.edu.au) | W: [www.natural-gas.centre.uq.edu.au](http://www.natural-gas.centre.uq.edu.au)

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.