

Bowen and Galilee Basins non-resident population projections, 2021 to 2025

Introduction

The resource sector in regional Queensland utilises fly-in/fly-out and drive-in/drive-out (FIFO/DIDO) workers as a source of labour supply. These non-resident workers live in the regions only while on-shift (refer to Notes, page 12). The Australian Bureau of Statistics' (ABS) official population estimates and the Queensland Government's population projections for these areas only include residents.

To support planning for population change, the Queensland Government Statistician's Office (QGSO) publishes annual non-resident population estimates and projections for selected resource regions. This report provides a range of non-resident population projections for local government areas (LGAs) in the Bowen and Galilee Basin regions (Figure 1), from 2021 to 2025.

The projection series represent the projected non-resident populations associated with existing resource operations and future projects in the region. Projects are categorised according to their standing in the approvals pipeline, including stages of the environmental impact statement (EIS) process, and progress towards achieving financial close. Series A is based on existing operations, projects under construction and approved projects that have reached financial close. Series B, C and D projections are based on projects that are at earlier stages of the approvals process.

Projections in this report are derived from surveys conducted by QGSO and other sources. Data tables to supplement the report are available on the QGSO website (www.qgso.qld.gov.au).

Key points

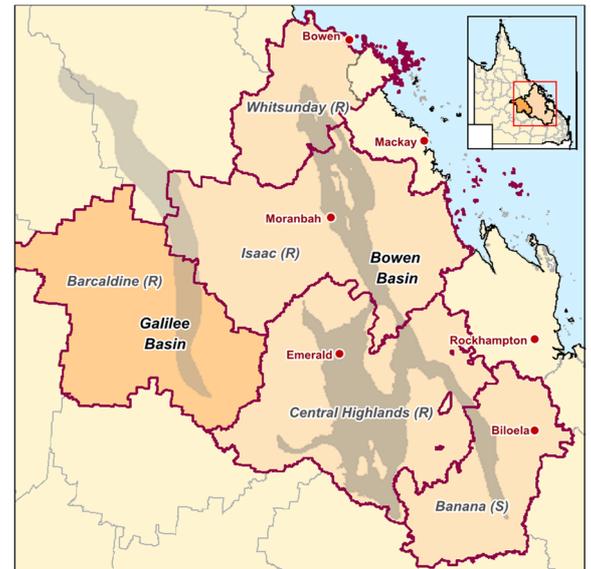
For the Bowen Basin region:

- The non-resident population was 19,000 persons in June 2020, up from 18,410 persons in June 2019.
- All four projection series anticipate that the non-resident population will increase between June 2020 and June 2021.
- According to the Series A projection, the non-resident population will grow to 19,310 persons in June 2021, before declining gradually to 17,310 persons by 2025.
- Series B and C follow a similar trajectory to Series A, peaking in June 2021 before declining overall to 18,650 and 18,750 persons respectively in 2025.
- Series D projects overall growth in the non-resident population, reaching a peak of 20,260 persons in 2024. Numbers are expected to remain above 2020 levels over the projections period.
- The LGA of Isaac (R) will continue to have the largest non-resident population in the Bowen Basin over the projections period. According to Series A, the non-resident population is expected to decline to 11,180 persons in 2025. Under Series D, the non-resident population is projected to reach a peak of 13,560 persons in 2023.

For the Galilee Basin region:

- Series A reflects the baseline non-resident population of Barcaldine (R), which was estimated at 10 persons in June 2020. Under Series B, the non-resident population is projected to increase to 390 persons by 2025.

Figure 1 Bowen and Galilee Basins



In this publication, the Bowen Basin comprises the LGAs of Banana (S), Central Highlands (R), Isaac (R) and Whitsunday (R) (Bowen only)¹. The Galilee Basin is defined as the LGA of Barcaldine (R).

¹ Whitsunday (R) (Bowen only) comprises the statistical areas level 2 (SA2s) of Bowen and Collinsville, which cover the area of former Bowen Shire.



Bowen and Galilee Basins – future influences

The Bowen Basin is Queensland's major coal mining region, with 43 coal mining operations and two gold mines as at March 2021, along with coal seam gas (CSG) and conventional gas operations, renewable energy projects, and other resource industry related infrastructure (Table 7, pages 10–12). The coal industry will continue to be the major influence on the region's non-resident population between 2021 and 2025.

Resource industry projects that have moved along the approvals pipeline since February 2020 include:

- The **Olive Downs Project**, a greenfield open-cut metallurgical coal project 40 km south-east of Moranbah that will produce up to 15 Mtpa, received its environmental authority (EA) in October 2019 (Pembroke Resources, 2019), Australian Government environmental approvals in May 2020 (Pembroke Resources, 2020b), and mining leases (ML) in September 2020 (Pembroke Resources, 2020a). Pembroke Resources has assembled the key elements required to commence construction while it finalises finance and offtake partners.
- Stanmore Coal's **Isaac Downs Project** published an environmental impact statement (EIS) in March 2020 and completed the EIS process in early March 2021 (Queensland Government, 2021; Stanmore Coal, 2021). Subject to remaining approvals, construction and mining operations are expected to commence later in 2021. The project, an open-cut metallurgical coal mine 10 km south-east of Moranbah, will extend the life of the company's assets at the Isaac Plains Complex.
- Vitrinite submitted ML and EA applications for the **Vulcan Mine Complex** in 2020 (Vitrinite, 2020b). Located between Dysart and Moranbah, the 1.95 Mtpa open-cut hard coking coal project does not require an EIS (Vitrinite, 2020a).
- Bowen Coking Coal advanced approvals for **Broadmeadow East** and **Isaac River**, two small open-cut coking coal projects near Moranbah, in 2020 (Bowen Coking Coal, 2021a; Bowen Coking Coal, 2021b). Both projects are located close to existing infrastructure and plan to use coal handling facilities at nearby sites. Final approvals for both projects are expected in the second half of 2021.
- Glencore Coal's **Valeria Project** submitted an initial advice statement (IAS) in April 2020 and was declared a coordinated project in June 2020 (DSDILGP, 2020). Valeria is a proposed greenfield open-cut thermal and metallurgical coal mine with a yield of up to 17 Mtpa and is located 27 km north-west of Emerald.
- The **Urannah Project** was declared a coordinated project in May 2020, with draft terms of reference (TOR) for the EIS published in November 2020 and final TOR released in March 2021 (DSDILGP, 2021). Located 86 km south-east of Collinsville in the LGAs of Mackay (R), Whitsunday (R) and Isaac (R), the project comprises a dam, pumped hydro-electric power scheme, water distribution network, and irrigation precinct. The proponent is Bowen River Utilities.

Projection methodology

QGSO's non-resident population projection methodology comprises four different series, which represent a range of possible outcomes arising from the future development of resource projects and operations in the Bowen and Galilee Basins. Each series estimates the non-resident population that would be present in each LGA at 30 June of each year from 2021 to 2025, should the listed operations and projects proceed as assumed.

The four projection series represent the estimated non-resident populations associated with existing operations and future projects. Projects are categorised according to their standing in the approvals pipeline, including stages of the environmental impact statement (EIS) process², and progress towards achieving financial close.

- **Series A** projection is based on the number of non-resident workers on-shift who were engaged in existing resource operations at June 2020. The projection takes into account future changes to those operational workforces as advised by company sources, as well as the estimated construction and operational workforces of Category A projects (i.e. those that are approved and have reached 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 have an EIS approved and are awaiting other approvals and/or financial close).
- **Series C** projection includes the Series A and B projections, plus projected growth in the non-resident population arising from Category C projects (those that have published an EIS but are not yet approved).
- **Series D** projection includes the Series A, B and C projections, plus projected growth in the non-resident population from Category D projects (those that have yet to publish an EIS, including projects that have lodged an initial advice statement (IAS), as well as projects that have yet to begin the approvals process).

² The projections also include some projects that do not require an EIS. Such projects are still subject to other approvals.

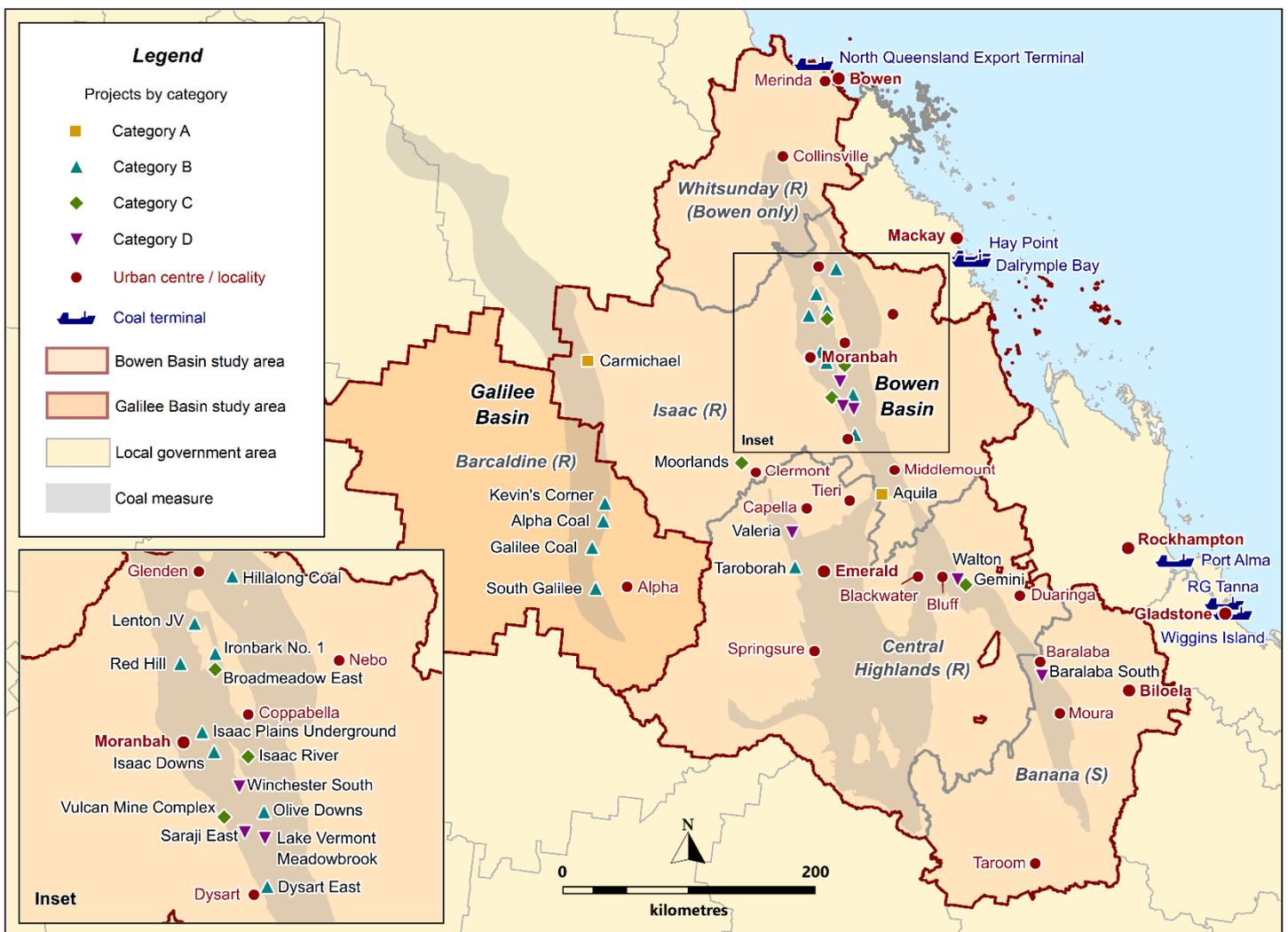
Only series containing more than one project are published in this report.

Where financial close for an approved project has been delayed indefinitely, or where it is not possible to give consideration to indicative workforce data or sequencing, the project is designated as **Category E** and is not included in any of the four projection series. Other projects that are dependent on Category E projects in order to commence are also designated as Category E and are excluded from consideration in the projections.

Users of these projections should note that there is a degree of uncertainty about the likelihood of these projects proceeding as assumed and, as such, the projections should be regarded as being indicative of the range of potential outcomes rather than forecasts of future growth. QGSO does not advocate any of the projection series as being the most likely or favoured outcome. See caveats on page 12 of this report for further details.

A full list of existing operations and projects included in each category is available in Table 7 (pages 10–12), and a map of selected projects in the Bowen and Galilee Basins is shown in Figure 2.

Figure 2 Coal projects^(a), Bowen and Galilee Basins



(a) Does not include other resource projects or existing operations. Project locations shown in map are indicative only. Project status is current as at March 2021. Does not include Category E projects. See Table 7 (pages 10–12) for a full list of existing operations and projects by project category.

Source: QGSO, 2021

Projected non-resident population, Bowen Basin

The Bowen Basin had a non-resident population of 19,000 persons in June 2020, up from 18,410 persons in June 2019 (Figure 3). This increase was largely due to a combination of project construction and ongoing coal industry activity, which more than made up for mine closures and reduced gas activity (QGSO, 2020).

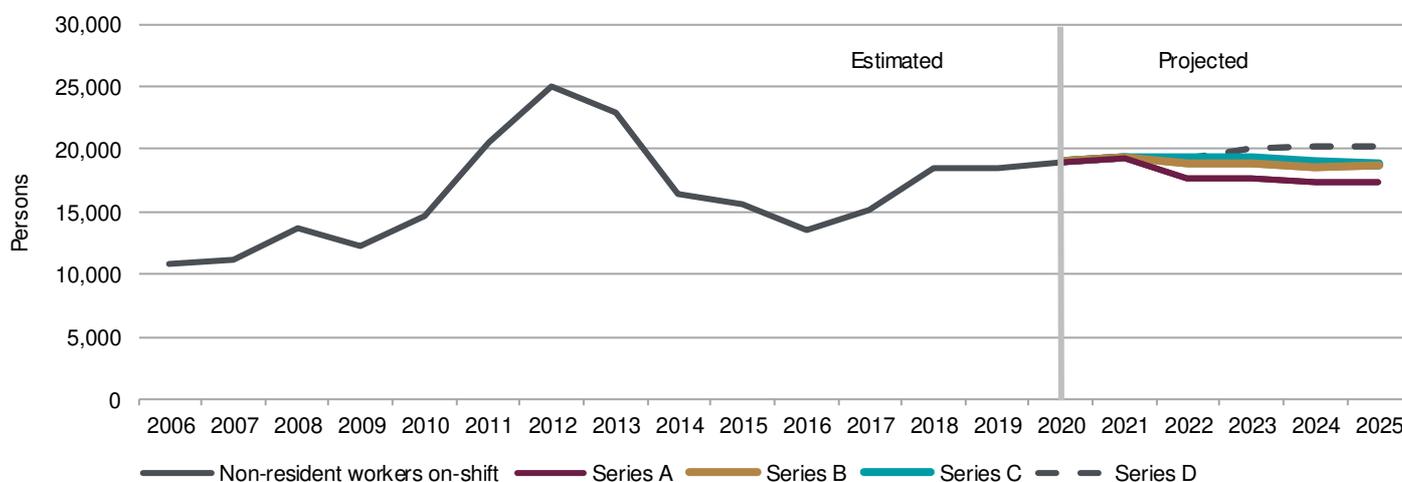
Four projection series are presented for the Bowen Basin (Table 1). Series A, B and C anticipate the non-resident population will increase from June 2020 to June 2021, before declining overall to 2025. Series D projects overall growth in the non-resident population, with numbers expected to remain above 2020 levels over the projections period.

According to the Series A projection, the non-resident population of the Bowen Basin will grow to 19,310 persons in June 2021, before falling to 17,760 persons in 2022 and declining gradually to 17,310 persons by 2025. This series reflects changes to the non-resident workforces of existing operations, as well as the construction and operations workforces of projects that are either under construction or have reached financial close but are yet to begin construction.

Under Series B, the region's non-resident population is expected to increase to 19,350 persons in June 2021, before declining overall to 18,650 persons in 2025. This series factors in the impact of coal and other projects that have yet to reach financial close (Table 7, pages 10–12). The Series C projection, which takes into account four coal projects that are not yet approved, follows a similar trajectory to Series B, reaching 19,370 persons in 2021, then slowly decreasing to 18,750 persons in 2025.

In contrast to the other series, the Series D projection anticipates the region's non-resident population will grow overall to 20,260 persons in 2024, before falling to 20,180 persons in 2025. This series includes the additional influence of several projects in the early stages of planning. While the non-resident population is projected to reach more than 20,000 persons under this series, it will remain below the 25,040 persons recorded at the peak of the resources boom in 2012.

Figure 3 Estimated and projected non-resident population, Bowen Basin



Source: QGSO estimates, 2006 to 2020; QGSO projections, 2021 to 2025

Table 1 Projected non-resident population, Bowen Basin

Projection series ^(a)	Number of non-resident workers on-shift at 30 June					
	Estimated	Projected				
	2020	2021	2022	2023	2024	2025
Series A	19,000	19,310	17,760	17,640	17,420	17,310
Series B	19,000	19,350	18,870	18,860	18,620	18,650
Series C	19,000	19,370	19,090	19,080	18,760	18,750
Series D	19,000	19,370	19,120	20,110	20,260	20,180

(a) One project in Series C in Central Highlands (R) is excluded from the projections for the Bowen Basin.

Figures in all tables have been rounded to the nearest 10; see Notes at end of report for details.

Source: QGSO estimates, 2020; QGSO projections, 2021 to 2025

Banana (S)

The LGA of Banana (S) had three coal mines, a gold mine and a coal-fired power station operating in March 2021 (Table 7, pages 10–12). Gas operations were also active in the area.

The non-resident population of Banana (S) grew to 1,500 persons in June 2020, up from 1,240 persons in June 2019, driven by coal and gas activity (Figure 4). Despite growth since June 2016, the non-resident population remains well below the peak of 2,750 persons recorded in June 2013, when coal seam gas pipeline and gas field construction were underway.

One projection series is presented for Banana (S) (Table 2). According to Series A, the non-resident population will decline slowly to 1,410 persons in 2024 and 2025. This series includes the non-resident population impacts of existing resource operations in the LGA and Moura Solar Farm, which is expected to begin construction during 2021 (MYTILINEOS, 2021).

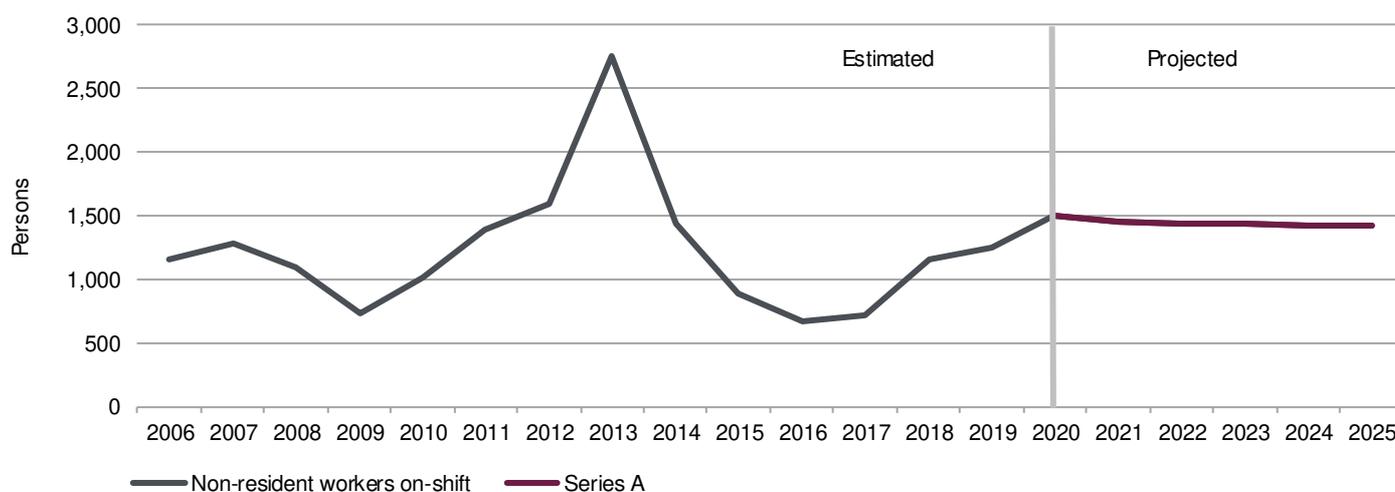
Series B in Banana (S) has a single project—the Banana Range Wind Farm—which is included in the Series B projection for the Bowen Basin region (Table 1).

There is no Series C projection for Banana (S), as there are no projects in this category.

Series D in Banana (S) has a single project—Baralaba South—which is included in the Series D projection for the Bowen Basin region (Table 1).

The projection series for Banana (S) does not include consideration of the Nathan Dam and Pipeline project, which is classified as Category E (Table 7, pages 10–12).

Figure 4 Estimated and projected non-resident population, Banana (S)



Source: QGSO estimates, 2006 to 2020; QGSO projections, 2021 to 2025

Table 2 Projected non-resident population, Banana (S)

Projection series ^(a)	Number of non-resident workers on-shift at 30 June					
	Estimated	Projected				
	2020	2021	2022	2023	2024	2025
Series A	1,500	1,460	1,440	1,430	1,410	1,410

(a) Series B and Series D projections for Banana (S) are not published. There is no Series C projection for Banana (S).

Source: QGSO estimates, 2020; QGSO projections, 2021 to 2025

Central Highlands (R)

In March 2021, there were 12 coal mining operations in Central Highlands (R), as well as gas drilling and operations (Table 7, pages 10–12). The non-resident population fell from 4,380 persons in June 2019 to 3,890 persons in June 2020 (Figure 5), primarily due to mine closures, including a temporary shutdown at Rolleston, and reduced gas activity (QGSO, 2020).

Two projection series are presented for Central Highlands (R) (Table 3). Under Series A, the non-resident population is projected to increase from 2020 levels and remain above 4,000 persons over the projections period, peaking at 4,170 persons in 2022. This series factors in changes in the non-resident workforces of existing coal mines and gas operations in the LGA.

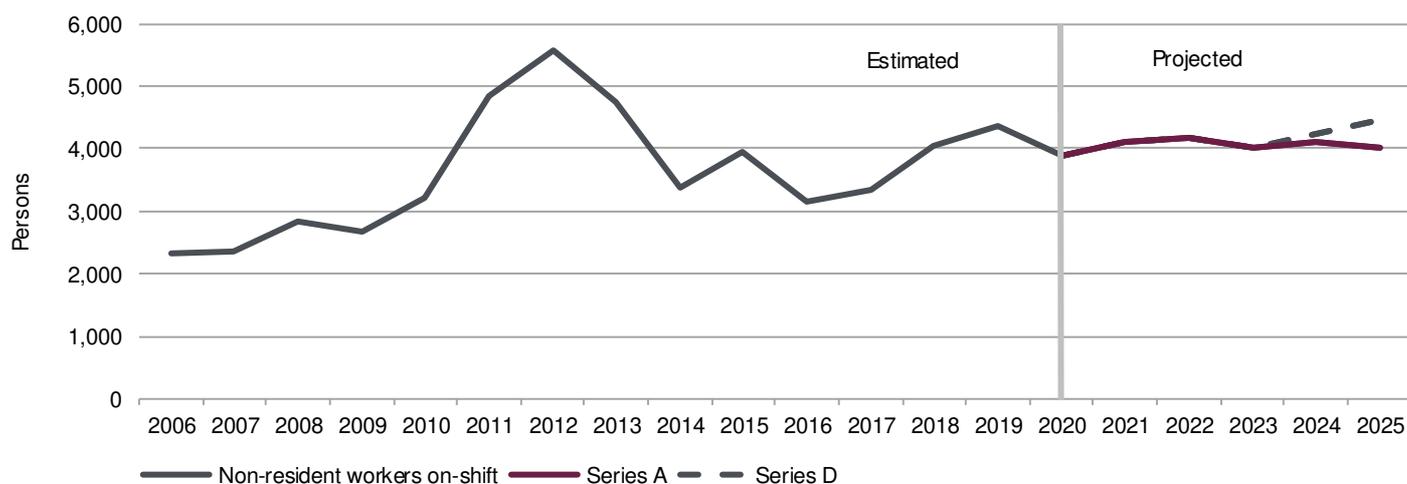
Series B in Central Highlands (R) has a single project—Taraborah—which is included in the Series B projection for the Bowen Basin region (Table 1).

Series C in Central Highlands (R) has a single project—the Gemini Project—which is excluded from the projections for the Bowen Basin region (Table 1).

Series D includes the additional influence of two coal projects—Valeria and Walton Coal Project—in the early stages of planning. According to this series, the non-resident population of Central Highlands (R) will grow to reach 4,460 persons in 2025.

None of the projection series for Central Highlands (R) include consideration of the Greater Mahalo Development Area, Minyango or Washpool Coal projects, which are classified as Category E (Table 7, pages 10–12).

Figure 5 Estimated and projected non-resident population, Central Highlands (R)



Source: QGSO estimates, 2006 to 2020; QGSO projections, 2021 to 2025

Table 3 Projected non-resident population, Central Highlands (R)

Projection series ^(a)	Number of non-resident workers on-shift at 30 June					
	Estimated	Projected				
		2020	2021	2022	2023	2024
Series A	3,890	4,100	4,170	4,000	4,110	4,030
Series D	3,890	4,100	4,170	4,000	4,240	4,460

(a) Series B and Series C projections for Central Highlands (R) are not published.

Source: QGSO estimates, 2020; QGSO projections, 2021 to 2025

Isaac (R)

Isaac (R) had 27 of the 43 coal operations in the Bowen Basin as at March 2021, along with four other resource operations and three projects under construction (Table 7, pages 10–12). The non-resident population of Isaac (R) increased from 12,130 persons in June 2019 to 12,770 persons in June 2020 (Figure 6).

Four projection series are presented for Isaac (R) (Table 4). Series A includes the non-resident workforces of existing mine and gas operations in the LGA, and the construction and operations workforces for Aquila, Carmichael and Carmichael Rail Network. Under Series A, the non-resident population of Isaac (R) is expected to fall to 11,500 persons by 2022 as project construction is completed, then continue to decline overall to reach 11,180 persons in 2025.

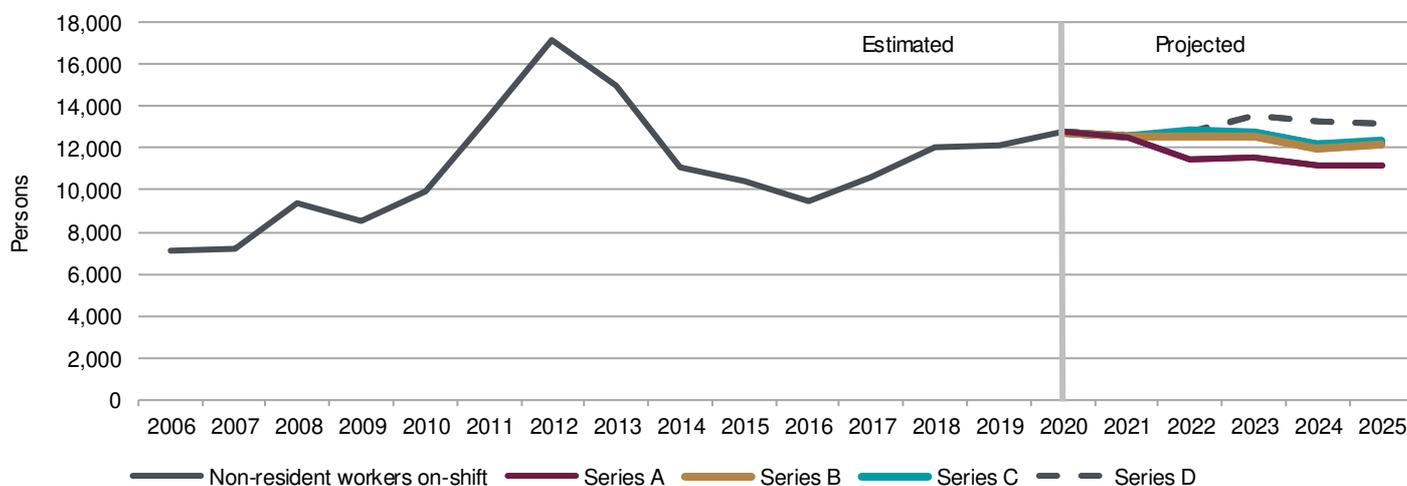
Series B projects the non-resident population of Isaac (R) will decline to 12,550 persons in June 2021 and remain around this level until 2023, before falling further to reach 12,190 persons in 2025. This series factors in the construction and production workforces of eight coal projects, two rail projects and one renewable project, which have been approved but are yet to reach financial close.

According to Series C, the non-resident population of Isaac (R) will increase to 12,740 persons in 2022 and 2023, then decline to 12,300 persons in 2025. Series C accounts for the impact of four additional coal projects that are not yet approved, namely Broadmeadow East, Isaac River, Moorlands Project and the Vulcan Mine Complex.

Under Series D, the non-resident population of Isaac (R) follows the same trajectory as Series C until 2022, before increasing to 13,560 persons in 2023 and then declining to 13,200 persons in 2025. This series considers the influence of three coal projects and one infrastructure project in preliminary planning stages.

None of the projection series for Isaac (R) include consideration of the Arrow Bowen Pipeline, Bowen Gas Project, Codrilla, Eagle Downs, Hail Creek Transition Project or Moranbah South projects, which are classified as Category E (Table 7, pages 10–12).

Figure 6 Estimated and projected non-resident population, Isaac (R)



Source: QGSO estimates, 2006 to 2020; QGSO projections, 2021 to 2025

Table 4 Projected non-resident population, Isaac (R)

Projection series	Number of non-resident workers on-shift at 30 June					
	Estimated	Projected				
	2020	2021	2022	2023	2024	2025
Series A	12,770	12,510	11,500	11,520	11,210	11,180
Series B	12,770	12,550	12,520	12,520	11,990	12,190
Series C	12,770	12,570	12,740	12,740	12,130	12,300
Series D	12,770	12,570	12,740	13,560	13,290	13,200

Source: QGSO estimates, 2020; QGSO projections, 2021 to 2025

Whitsunday (R) (Bowen only)

In March 2021, there were two coal mining operations, a gold mine, and North Queensland Export Terminal in Whitsunday (R) (Bowen only), as well as the Carmichael Rail Network under construction (Table 7, pages 10–12). The non-resident population of Whitsunday (R) (Bowen only) was 840 persons in June 2020, up from 660 persons in June 2019, with rail project construction and ongoing coal operations contributing to the increase (QGSO, 2020).

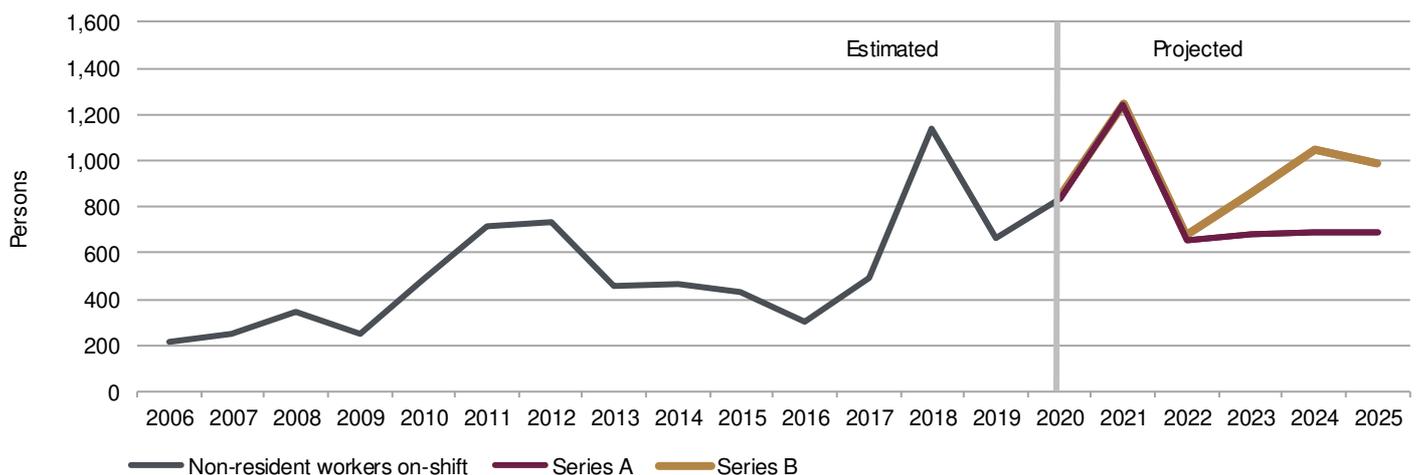
Two projection series are presented for Whitsunday (R) (Bowen only) (Table 5). The Series A projection anticipates the non-resident population will peak at 1,240 persons in June 2021, before settling between 660 and 690 persons from 2022 to 2025. This series reflects the anticipated non-resident workforces of existing operations and the Carmichael Rail Network.

According to Series B for Whitsunday (R) (Bowen only), the non-resident population is expected to follow a similar trajectory to Series A until 2022, and then increase to 1,040 persons in 2024. Series B reflects the additional influences of the non-resident construction workforces for rail components of two Galilee Basin coal projects and three port development projects.

There is no Series C projection for Whitsunday (R) (Bowen only), as there are no projects in this category.

Series D in Whitsunday (R) (Bowen only) has a single project—the Urannah Project—which is included in the Series D projection for the Bowen Basin region (Table 1).

Figure 7 Estimated and projected non-resident population, Whitsunday (R) (Bowen only)



Source: QGSO estimates, 2006 to 2020; QGSO projections, 2021 to 2025

Table 5 Projected non-resident population, Whitsunday (R) (Bowen only)

Projection series ^(a)	Number of non-resident workers on-shift at 30 June					
	Estimated	Projected				
	2020	2021	2022	2023	2024	2025
Series A	840	1,240	660	680	690	690
Series B	840	1,240	680	860	1,040	990

(a) There is no Series C projection for Whitsunday (R) (Bowen only). The Series D projection for Whitsunday (R) (Bowen only) is not published.

Source: QGSO estimates, 2020; QGSO projections, 2021 to 2025

Projected non-resident population, Galilee Basin

The Galilee Basin coal measure spans a number of LGAs, including Barcaldine (R) to the south and the Bowen Basin LGA of Isaac (R) to the east (Figure 2). The following projections refer only to the non-resident population impacts of Galilee Basin projects that will occur in Barcaldine (R)³.

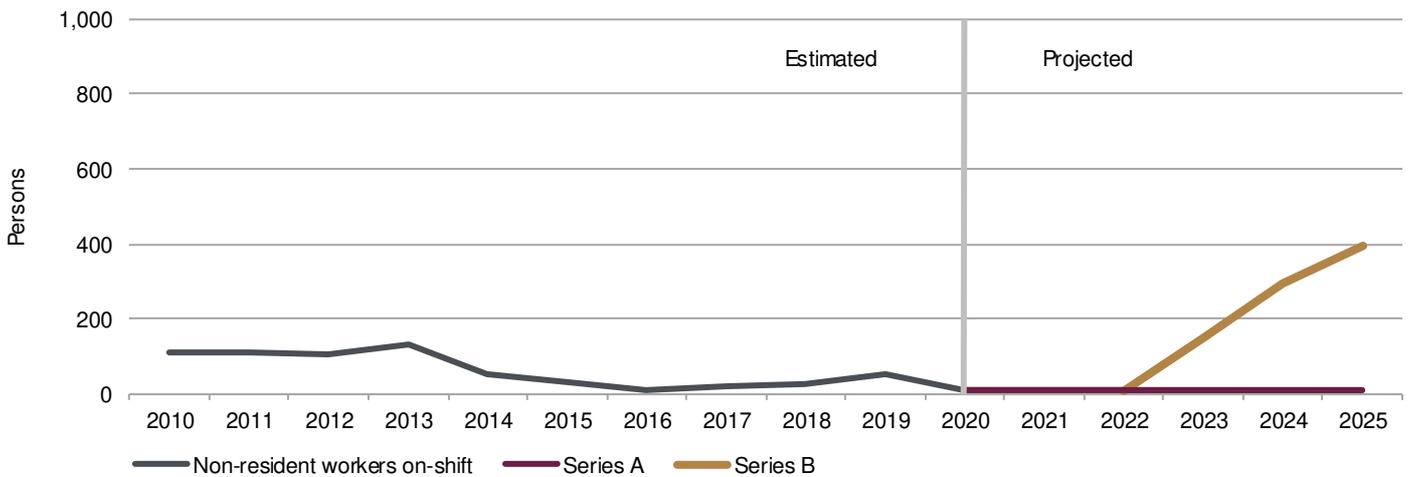
While there are no coal mines currently operating or under construction in Barcaldine (R), several large mines and associated rail projects are planned for the LGA. Due to the remote location of these projects, workforces will be largely FIFO/DIDO rather than locally resident. Non-resident population change will be driven predominantly by large temporary construction workforces, which will later be replaced by smaller ongoing production workforces as mines become operational.

Two projection series are presented for Barcaldine (R) (Figure 8, Table 6). The Series A projection reflects the baseline non-resident population of the LGA, which usually comprises FIFO/DIDO workers engaged in resource exploration activities and maintenance of existing infrastructure. This small population—estimated at 10 persons in June 2020—is not expected to increase substantially prior to commencement of any major project.

Series B includes six projects—the Alpha Coal mine and rail project, Galilee Coal mine and rail project, Kevin's Corner and South Galilee Coal—that have an approved EIS but have yet to reach financial close. This series anticipates that the non-resident population of Barcaldine (R) will remain at 10 persons until 2022, then grow to reach 390 persons in 2025 as project construction progresses.

There are no Series C or Series D projections for Barcaldine (R), as there are no projects in these categories.

Figure 8 Estimated and projected non-resident population, Barcaldine (R)



Source: QGSO estimates, 2010 to 2020; QGSO projections, 2021 to 2025

Table 6 Projected non-resident population, Barcaldine (R)

Projection series ^(a)	Number of non-resident workers on-shift at 30 June					
	Estimated		Projected			
	2020	2021	2022	2023	2024	2025
Series A	10	10	10	10	10	10
Series B	10	10	10	150	290	390

(a) There are no Series C or Series D projections for Barcaldine (R).

Source: QGSO estimates, 2020; QGSO projections, 2021 to 2025

³ For the purposes of this publication and population projections, the Galilee Basin is defined as Barcaldine (R). Where the population impacts of Galilee Basin projects will occur in Isaac (R) and Whitsunday (R) (Bowen only), they are included in projections for the Bowen Basin.


Table 7 Resource operations and projects, Bowen and Galilee Basins

Category ^(a)	Project / operation name	Company name	LGA
<i>Operations^(b)</i>			
A	Baralaba North	Baralaba Coal Company	Banana (S)
A	Blackwater	BHP	Central Highlands (R)
A	Blair Athol	TerraCom	Isaac (R)
A	Broadmeadow	BHP	Isaac (R)
A	Byerwen	QCoal Group	Isaac (R)
A	Callide	Batchfire Resources	Banana (S)
A	Callide Power Station	CS Energy	Banana (S)
A	Capcoal Surface Operations	Anglo American	Isaac (R)
A	Carborough Downs	Fitzroy Australia Resources	Isaac (R)
A	Caval Ridge	BHP	Isaac (R)
A	Clermont	Glencore Coal	Isaac (R)
A	Collinsville	Glencore Coal	Whitsunday (R) (Bowen only)
A	Coppabella	Peabody Energy	Isaac (R)
A	Coppabella Train Loadout Facility	Pacific National	Isaac (R)
A	Cracow Gold Mine	Aeris Resources	Banana (S)
A	Curragh	Coronado Coal	Central Highlands (R)
A	Daunia	BHP	Isaac (R)
A	Dawson	Anglo American	Banana (S)
A	Denison North (Rolleston)	Denison Gas	Central Highlands (R)
A	Ensham	Ensham Resources	Central Highlands (R)
A	Foxleigh	Middlemount South	Isaac (R)
A	GLNG Drilling and Completions	GLNG ^(c)	Banana (S), Central Highlands (R)
A	GLNG Surat Operations and Gas Gathering	GLNG	Banana (S), Central Highlands (R)
A	Goonyella Riverside	BHP	Isaac (R)
A	Grasstree	Anglo American	Isaac (R)
A	Greater Meridian SeamGas	WestSide Corporation	Banana (S)
A	Gregory Project	Sojitz Blue	Central Highlands (R), Isaac (R)
A	Grosvenor	Anglo American	Isaac (R)
A	Hail Creek	Glencore Coal	Isaac (R)
A	Isaac Plains Complex	Stanmore Coal	Isaac (R)
A	Jellinbah East	Jellinbah Group	Central Highlands (R)
A	Jellinbah Plains	Jellinbah Group	Central Highlands (R)
A	Kestrel	Kestrel Coal Resources	Central Highlands (R)
A	Lake Vermont	Jellinbah Group	Isaac (R)
A	Meteor Downs South	Sojitz Blue	Central Highlands (R)
A	Middlemount	Middlemount Coal	Isaac (R)
A	Millennium	Peabody Energy	Isaac (R)
A	Minerva	Sojitz Blue	Central Highlands (R)
A	Moorvale	Peabody Energy	Isaac (R)
A	Moranbah Ammonium Nitrate Plant	Incitec Pivot	Isaac (R)
A	Moranbah Gas Project	Arrow Energy	Isaac (R)
A	Moranbah North	Anglo American	Isaac (R)
A	Mt Carlton Gold Mine	Evolution Mining	Whitsunday (R) (Bowen only)
A	Nebo Rail Maintenance Facility	Pacific National	Isaac (R)
A	Newlands	Glencore Coal	Isaac (R)
A	North Goonyella	Peabody Energy	Isaac (R)
A	North Queensland Export Terminal	North Queensland Export Terminal	Whitsunday (R) (Bowen only)
A	Oaky Creek	Glencore Coal	Central Highlands (R)



Queensland Government Statistician's Office

A	Peak Downs	BHP	Isaac (R)
A	Poitrel	BHP	Isaac (R)
A	QCoal Northern Hub	QCoal Group	Whitsunday (R) (Bowen only)
A	Rolleston	Glencore Coal	Central Highlands (R)
A	Saraji	BHP	Isaac (R)
A	South Walker Creek	BHP	Isaac (R)
A	Yarrabee	Yancoal Australia	Central Highlands (R)

Projects

A	Aquila	Anglo American	Isaac (R)
A	Carmichael	Bravus Mining and Resources	Isaac (R)
A	Carmichael Rail Network	Bravus Mining and Resources	Isaac (R), Whitsunday (R) (Bowen only)
A	Moura Solar Farm	MYTILINEOS	Banana (S)
B	Abbot Point Coal Terminal (T0)	North Queensland Export Terminal	Whitsunday (R) (Bowen only)
B	Abbot Point Coal Terminal (T3)	GVK Hancock Coal	Whitsunday (R) (Bowen only)
B	Abbot Point Growth Gateway	North Qld Bulk Ports Corporation	Whitsunday (R) (Bowen only)
B	Alpha Coal – mine	GVK Hancock Coal	Barcardine (R)
B	Alpha Coal – rail	GVK Hancock Coal	Barcardine (R), Isaac (R), Whitsunday (R) (Bowen only)
B	Banana Range Wind Farm	Lacour Energy	Banana (S)
B	Clarke Creek Wind and Solar Farm	Lacour Energy	Isaac (R)
B	Dysart East Coal	Bengal Coal	Isaac (R)
B	Galilee Coal Project – mine	Waratah Coal	Barcardine (R)
B	Galilee Coal Project – rail	Waratah Coal	Barcardine (R), Isaac (R), Whitsunday (R) (Bowen only)
B	Hillalong Coal	Shandong Energy Australia	Isaac (R)
B	Ironbark No. 1	Fitzroy Australia Resources	Isaac (R)
B	Isaac Downs Project	Stanmore Coal	Isaac (R)
B	Isaac Plains Underground	Stanmore Coal	Isaac (R)
B	Kevin's Corner	GVK Hancock Coal	Barcardine (R)
B	Lenton Joint Venture	New Hope Group	Isaac (R)
B	North Galilee Water Scheme	Bravus Mining and Resources	Isaac (R)
B	Olive Downs Project	Pembroke Resources	Isaac (R)
B	Red Hill Mining Lease Project	BHP	Isaac (R)
B	South Galilee Coal	AMCI	Barcardine (R)
B	Taraborah	Shenhua International Group	Central Highlands (R)
C	Broadmeadow East	Bowen Coking Coal	Isaac (R)
C	Gemini Project	Magnetic South	Central Highlands (R)
C	Isaac River	Bowen Coking Coal	Isaac (R)
C	Moorlands Project	Huaxin Energy	Isaac (R)
C	Vulcan Mine Complex	Vitrinite	Isaac (R)
D	Baralaba South	Mount Ramsay Coal Company	Banana (S)
D	Lake Vermont Meadowbrook Project	Bowen Basin Coal	Isaac (R)
D	Saraji East Mining Lease Project	BHP	Isaac (R)
D	Urannah Project	Bowen River Utilities	Isaac (R), Whitsunday (R) (Bowen only)
D	Valeria	Glencore Coal	Central Highlands (R)
D	Walton Coal Project	Aquila Resources	Central Highlands (R)
D	Winchester South	Whitehaven Coal	Isaac (R)
E	Arrow Bowen Pipeline	Arrow Energy	Isaac (R)
E	Bowen Gas Project	Arrow Energy	Isaac (R)
E	Codrilla	Peabody Energy	Isaac (R)
E	Eagle Downs	South32	Isaac (R)
E	Greater Mahalo Development Area	Comet Ridge	Central Highlands (R)
E	Hail Creek Transition Project	Glencore Coal	Isaac (R)



E	Minyango	Constellation Mining	Central Highlands (R)
E	Moranbah South	Anglo American	Isaac (R)
E	Nathan Dam and Pipeline Project	SunWater	Banana (S)
E	Washpool Coal	Aquila Resources	Central Highlands (R)

- (a) The five categories include operations and projects grouped according to their status in the approvals process as at March 2021. See methodology (page 2) and caveats (below) for further details.
- (b) Operations that are in care and maintenance or that have ceased production are not included in this list or in the projections. These include Bluff and Cook in Central Highlands (R) and Broadlea and Norwich Park in Isaac (R).
- (c) Santos Gladstone LNG (GLNG) is a joint venture between Santos, PETRONAS, Total and KOGAS.

Source: QGSO, 2021

Caveats

QGSO's non-resident population projections provide an estimate of the number of non-resident workers on-shift by LGA. They are based on the on-shift non-resident worker population estimates established in previous years and consider future workforce growth arising from resource industry and infrastructure projects planned for the region, as reported directly by resource companies.

Projections are based on the best available data and advice at the time of preparation. Non-resident populations are projected for the period to 2025 only, as the availability and reliability of information regarding operations and projects may diminish beyond that point. Project timeframes and workforce impacts may extend beyond the projections period. Projected numbers of non-resident workers on-shift presented in this report represent an estimate for 30 June of the indicated year. Temporary peaks and falls in project workforces may occur in between these mid-year estimates for successive years.

The four projection series represent a range of possible outcomes based on the status of projects in the approvals process at the time of production in March 2021 (see the projection methodology, page 2, for further details). These outcomes are subject to change over time as projects proceed through the approvals pipeline. Projections reflect the cumulative impacts of multiple projects at a given point in time, and changes to any individual project will affect the projected cumulative outcome.

Only series containing more than one project are published in this report.

Series D projections include projects that are in the early stages of planning and that have yet to proceed to a published EIS. Workforce data and indicative start dates provided to QGSO for these projects are preliminary company estimates, which may not be publicly available. Both estimated workforce numbers and project timeframes are subject to change during the course of project planning. As such, Series D projections should be regarded as having a higher degree of uncertainty than the other three series.

Category E comprises projects that have completed the approvals process but where financial close has been delayed indefinitely; projects where it is not possible to consider indicative workforce data or sequencing; and other projects that are dependent on the commencement of projects in this category. These projects could not be allocated to a projection series at the time of preparation. Changes in the status of these projects could substantially alter any or all of the possible outcomes represented by the four projection series.

The projections reflect certain assumptions about the likelihood of projects advancing according to advised commencement dates, sequencing of project stages and timing of workforce peaks. Changes to any of these factors can make a significant difference to the cumulative non-resident workforce at a given point in time, particularly during construction phases. Short-term influences such as extreme weather events, industrial action and supply chain delays can all result in changes to project scheduling and to these projections.

QGSO does not advocate any one series as being the most likely or favoured outcome and users should consider the assumptions affecting each potential scenario. Given the volatile nature of the resource sector and the inherent uncertainty about the likelihood of projects proceeding as indicated, these projections should be considered as being indicative of the range of potential outcomes rather than forecasts of future growth.

Notes

(R) – Regional Council (S) – Shire

Non-resident workers are people who fly-in/fly-out or drive-in/drive-out (FIFO/DIDO) to work and live in the area temporarily while rostered on, and who have their usual place of residence elsewhere. Non-resident workers include FIFO/DIDO mining and gas industry employees and contractors, construction workers and associated sub-contractors. Figures in this report refer to the number of non-resident workers on-shift or present in the area at a given point in time, and should not be confused with total non-resident workforce numbers.



The population impacts of Galilee Basin projects located in Isaac (R) are included in projections for the Bowen Basin rather than the Galilee Basin. Similarly, much of the rail and port construction and operations activities for the Galilee Basin projects will take place in the Bowen Basin LGAs of Isaac (R) and Whitsunday (R) (Bowen only), rather than in Barcaldine (R).

Data in this report are derived from surveys conducted by QGSO in 2020 and other sources. The Survey of Accommodation Providers counted the number of non-resident workers on-shift during the last week of June 2020. See the *Bowen Basin population report, 2020* <https://www.qgso.qld.gov.au/statistics/theme/population/non-resident-population-queensland-resource-regions/bowen-galilee-basins#current-release-bowen-basin-population-report> for further details. The Resource Operations Employment Survey and the Resource Projects Employment Survey gathered workforce information from all resource companies with existing operations or future projects in the Bowen and Galilee Basins as at June 2020. A full list of operations and projects is available in Table 7 of this report.

The total number of non-resident workers on-shift for the Bowen Basin represents the aggregate non-resident populations of all LGAs in the region. This total may include a small number of non-resident workers in each LGA who live elsewhere within the Bowen Basin.

Figures in tables have been rounded to the nearest 10. As a result of rounding, discrepancies may occur between sums of the component items and totals. Percentages and other calculations are made prior to rounding of figures and discrepancies might therefore exist between these calculations and those that could be derived from the rounded figures.

Data tables to supplement this report are available online at <https://www.qgso.qld.gov.au/statistics/theme/population/non-resident-population-queensland-resource-regions>.

References

Bowen Coking Coal (2021a) *Half Year Report for the Period Ended 31 December 2020*, 10 March 2021

<https://www.investi.com.au/api/announcements/bcb/efbc5d06-c7a.pdf>

Bowen Coking Coal (2021b) *Investor Presentation*, 15 March 2021 <https://www.investi.com.au/api/announcements/bcb/11ec65de-b29.pdf>

Department of State Development, Infrastructure, Local Government and Planning (DSDILGP) (2020) *Valeria Project* <https://www.statedevelopment.qld.gov.au/coordinator-general/assessments-and-approvals/coordinated-projects/current-projects/valeria-project>

Department of State Development, Infrastructure, Local Government and Planning (DSDILGP) (2021) *Urannah Project* <https://www.statedevelopment.qld.gov.au/coordinator-general/assessments-and-approvals/coordinated-projects/current-projects/urannah-project>

MYTILINEOS (2021) *Annual Financial Report for the period from the 1st January to the 31st December 2020*, 3 March 2021 https://www.mytilineos.gr/media/fudpd5qk/annual_financial_report_31-12-2020-eng.pdf

Pembroke Resources (2019) *Olive Downs Coking Coal Project Receives Environmental Approval*, 2 October 2019 <https://www.pembrokeresources.com.au/media/Olive%20Downs%20EA.pdf>

Pembroke Resources (2020a) *Jobs on the way with Mining Leases granted for Olive Downs Coking Coal Project*, 29 September 2020 https://www.pembrokeresources.com.au/media/20200929_Press%20Release%20-%20ML%20Approval_Final.pdf

Pembroke Resources (2020b) *Olive Downs Coking Coal Project Receives Federal Environmental Approval*, 14 May 2020 https://www.pembrokeresources.com.au/media/20200514_Press%20Release%20-%20EPBC%20Release%20Final.pdf

Queensland Government (2021) *Isaac Downs Project* <https://www.qld.gov.au/environment/pollution/management/eis-process/projects/completed/isaac-downs-project>

Queensland Government Statistician's Office (QGSO) (2020) *Bowen Basin population report, 2020* <https://www.qgso.qld.gov.au/statistics/theme/population/non-resident-population-queensland-resource-regions/bowen-galilee-basins#current-release-bowen-basin-population-report>

Stanmore Coal (2021) *Isaac Downs*, accessed 31 March 2021 https://stanmorecoal.com.au/project/isaac_downs

Vitrinite (2020a) *Site-specific EA Application Supporting Information, Vulcan Complex Project*, 21 September 2020 https://vitrinite.com.au/wp-content/uploads/2020/11/3-Final_VCP-EA-App_Supporting-Information-for-Site-specific-EA-Application.pdf

Vitrinite (2020b) *Vulcan Mine Complex Documentation* <https://vitrinite.com.au/community/vulcan-mine-complex/>