

Bowen and Galilee Basins non-resident population projections, 2022 to 2026

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 2022 to 2026.

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 18,950 persons in June 2021, down slightly from 19,000 persons in June 2020.
- All four projection series expect the region's non-resident population to decrease between June 2021 and June 2022.
- Under Series A and B, the Bowen Basin's non-resident population is expected to remain below June 2021 levels over the projections period. In contrast, the Series C and D projections anticipate that the non-resident population will grow overall, reaching more than 20,000 persons by 2026.
- According to the Series A projection, the non-resident population of the Bowen Basin will decline overall to 17,260 persons in 2026. Series B projects the non-resident population will decrease to 17,470 persons in June 2022, then increase to reach 18,570 persons by 2026.
- The Series C projection anticipates that the non-resident population of the Bowen Basin will grow overall to reach 20,080 persons by 2026. Series D follows a similar trajectory, increasing to a peak of 20,760 persons in 2026.
- The LGA of Isaac will continue to have the largest non-resident population in the Bowen Basin over the projections period. Series A projects the non-resident population will decline overall from 12,080 persons in 2021 to 11,060 persons by 2025. Under Series D, the non-resident population is expected to grow to 13,270 persons in 2026.

For the Galilee Basin region:

- Series A reflects the baseline non-resident population of Barcaldine, which was estimated at 30 persons in June 2021. Under Series B, the non-resident population is projected to increase to 410 persons by 2026.

Figure 1 Bowen and Galilee Basins



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

¹ Whitsunday (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 2022, 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 2022 and 2026.

The following Bowen Basin coal projects progressed between March 2021 and March 2022:

- The **Isaac Downs Project** near Moranbah received final Queensland Government approvals in July 2021, with mining activities expected to commence in the second quarter of 2022 (Queensland Government, 2021c; Stanmore Resources, 2022). The open-cut mine is forecast to produce up to 2.5 Mtpa of metallurgical coal.
- Development continued at the **Vulcan Mine Complex** south-east of Moranbah, with the Vulcan Coal Mine receiving a mining lease in September 2021 (Vitrinite, 2021). The hard-coking coal mine, a 1.95 Mtpa open-cut operation, has developed from the Jupiter Bulk Sample Pit Project.
- **Broadmeadow East**, a small open-cut coking coal project near Moranbah, received the final approvals required to begin mining operations, with activities expected to start shortly after March 2022 (Bowen Coking Coal, 2022).
- The environmental impact statement (EIS) for the **Saraji East Mining Lease Project**, an 11 Mtpa run-of-mine (ROM) underground metallurgical coal mine development 30 km north of Dysart, was released for public consultation in May 2021 (Queensland Government, 2021d). The proponent is currently responding to submissions.
- The draft EIS for the **Winchester South** project, a proposed 17 Mtpa ROM primarily metallurgical open-cut coal mine south-east of Moranbah, was released for public consultation in August 2021 (DSDILGP, 2022). Additional information for the EIS now being prepared by the proponent.
- The EIS for the **Ensham Life of Mine Extension Project** received Queensland Government approval in November 2021, and is now awaiting Commonwealth Government approval (DAWE, 2022; Queensland Government, 2021a). The project is an underground extension of the existing Ensham mine near Emerald.

Gas activity will continue to influence the region's non-resident population out to 2026. Gladstone LNG (GLNG) began drilling for the second phase of its project at Arcadia in Central Highlands in late 2021 (Santos, 2022). Facility construction commenced early in 2022, with the first of 200 wells expected online in the second half of 2022.

Several renewable energy projects will also contribute to resource activity in the Bowen Basin over the projections period. Construction of stage one of the **Clarke Creek Wind and Solar Farm** in Isaac began in February 2022 and is anticipated to be fully operational in 2024 (Squadron Energy, 2022). In addition, four new wind projects—**Lotus Creek Wind Farm** in Isaac and **Boulder Creek Wind Farm**, **Callide Wind Farm** and **Specimen Hill Wind Farm** in Banana—are awaiting regulatory approvals (DP Energy, 2022; Epuron, 2022a; Epuron, 2022b; Epuron, 2022c).

In the Galilee Basin, the Queensland Planning Minister called in a development application for the **Waratah Coal Power Station** project in December 2021, and has now commenced assessment of the application in accordance with the Development Assessment Rules and the *Planning Act 2016* (Queensland Government, 2021b).

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 2022 to 2026, 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 2021. The projection takes into account future changes to those operational workforces as reported 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).

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

- **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 that 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).

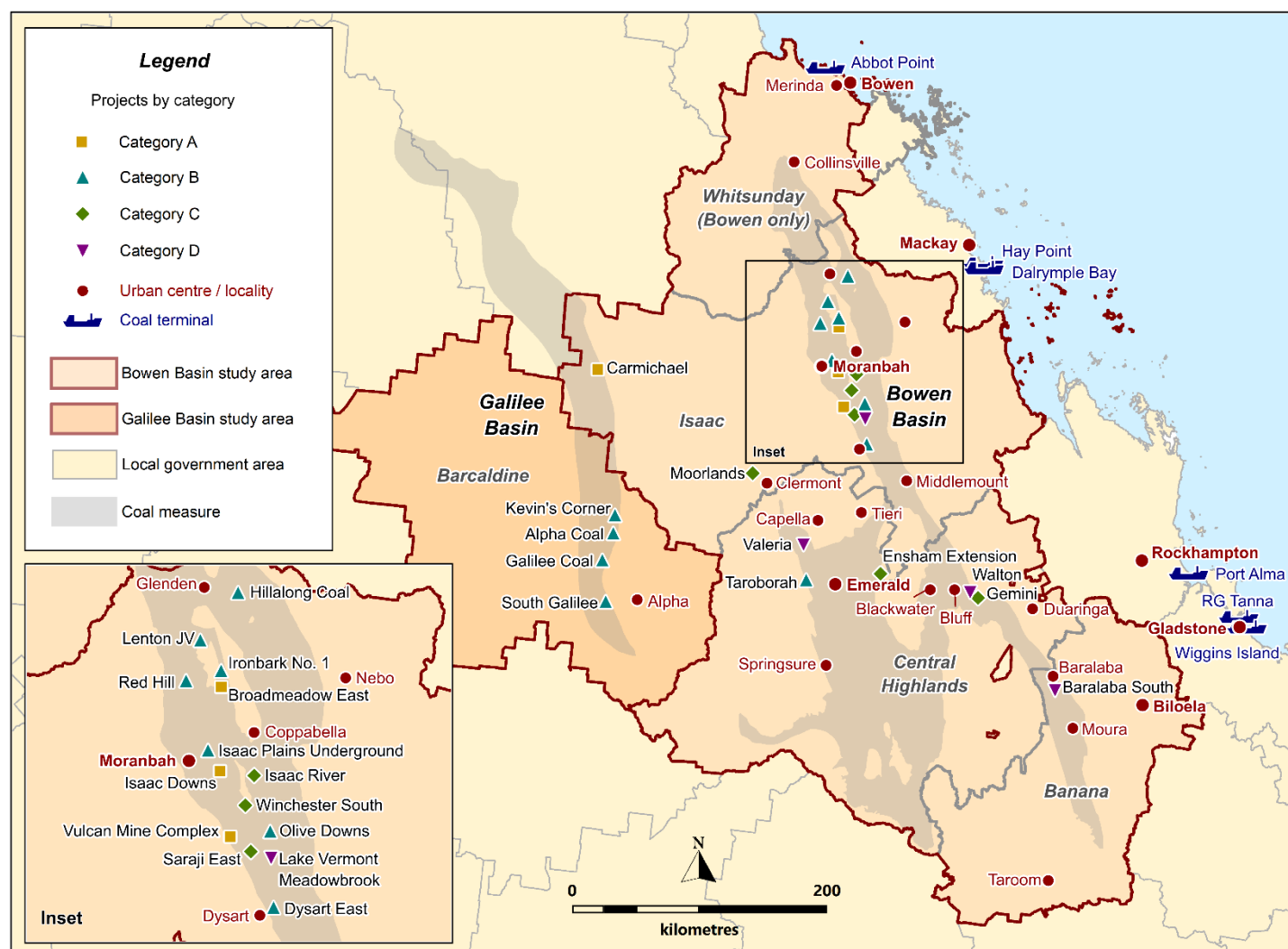
Only series containing more than one project are published in this report.

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 2022. 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, 2022

Projected non-resident population, Bowen Basin

The Bowen Basin had a non-resident population of 18,950 persons in June 2021, a slight decline of 50 persons from June 2020 (19,000 persons) (Figure 3). This small decrease was due to a combination of factors, with an increase in mine and rail construction workers outweighed by reduced numbers at some coal operations (QGSO, 2021).

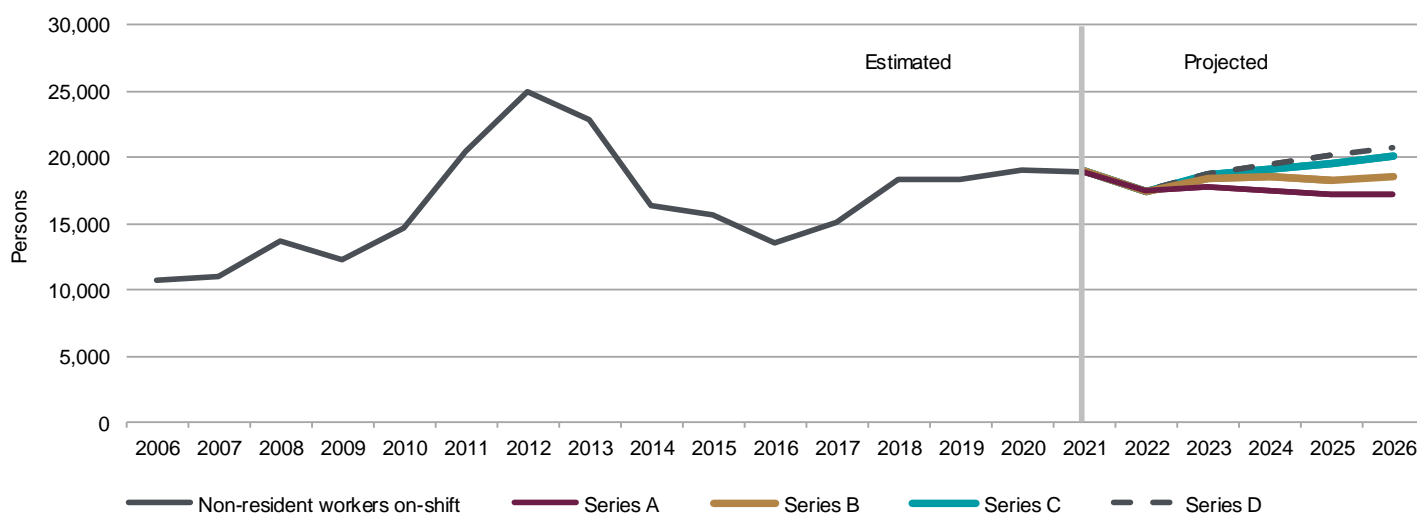
Four projection series are presented for the Bowen Basin (Table 1). All four series anticipate the region's non-resident population will decrease between June 2021 and June 2022 as major project construction winds down. According to Series A and B, the non-resident population is expected to remain below the June 2021 base year estimate over the projections period. In contrast, Series C and D project annual non-resident population growth from 2022 to 2026.

According to the Series A projection, the non-resident population of the Bowen Basin will fall to 17,450 persons in June 2022, then increase to 17,780 persons in 2023, before declining to 17,260 persons by 2026. 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 and are yet to begin construction.

Under Series B, the region's non-resident population is expected to decrease to 17,470 persons in June 2022, before increasing to between 18,230 and 18,570 persons over the remainder of the projections period. This series factors in the additional influence of eight coal and seven other projects that have yet to reach financial close (Table 7, pages 10–12).

The Series C projection, which accounts for 10 projects that are not yet approved, anticipates that the non-resident population of the Bowen Basin will grow overall to reach 20,080 persons by 2026. Series D includes a further five projects in the early stages of planning. This series follows the same trajectory as Series C to 2023, then increases to a peak of 20,760 persons in 2026. While the non-resident population is projected to reach more than 20,000 persons under both these 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 2021; QGSO projections, 2022 to 2026

Table 1 Projected non-resident population, Bowen Basin

Projection series ^(a)	Number of non-resident workers on-shift at 30 June					
	Estimated		Projected			
	2021	2022	2023	2024	2025	2026
Series A	18,950	17,450	17,780	17,570	17,210	17,260
Series B	18,950	17,470	18,430	18,490	18,230	18,570
Series C	18,950	17,470	18,710	19,160	19,510	20,080
Series D	18,950	17,470	18,710	19,470	20,120	20,760

(a) Series B projections for Banana and Central Highlands and Series D projections for Banana and Whitsunday (Bowen only) are not published at the LGA level, although they are included in the relevant series 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, 2021; QGSO projections, 2022 to 2026

Banana

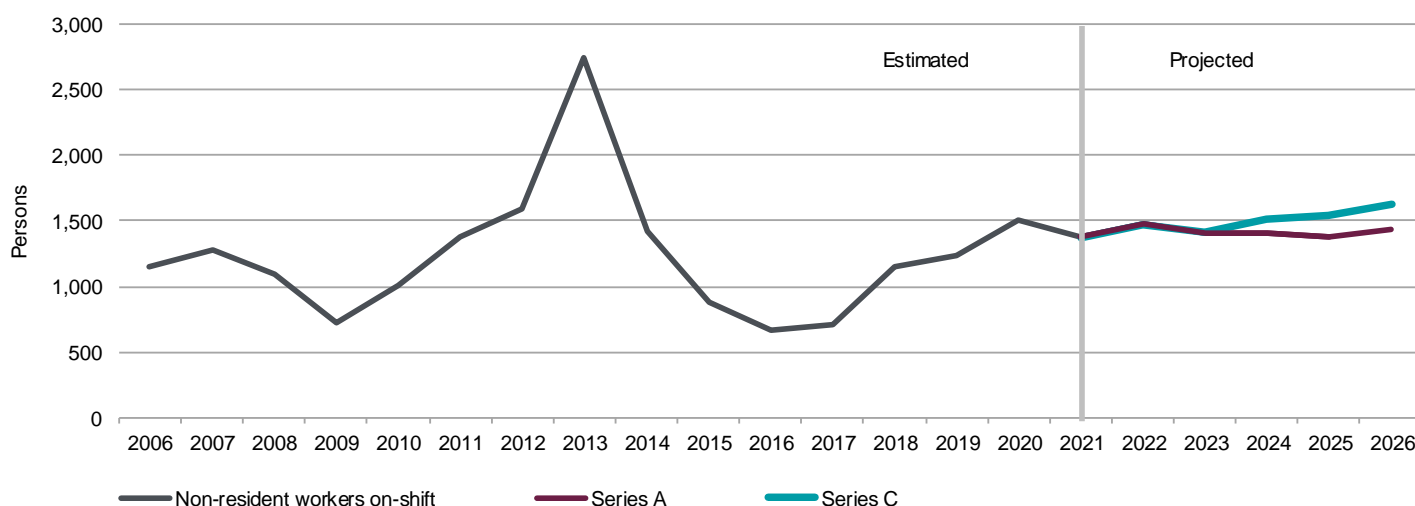
The LGA of Banana had three coal mines, a gold mine and a coal-fired power station in operation as at March 2022 (Table 7, pages 10–12). Gas operations were also active in the area.

The non-resident population of Banana was 1,370 persons in June 2021, down from 1,500 persons in June 2020, with lower numbers at coal and gas operations (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 projects were underway.

Two projection series are presented for Banana (Table 2). According to Series A, the non-resident population will increase to 1,480 persons in 2022 and remain slightly above the 2021 estimate over the projections period. This series includes the non-resident population influences of existing resource operations in the LGA and Moura Solar Farm, which commenced construction in early 2022 (Banana Shire Council, 2022).

Series C for Banana includes three wind farm projects—Boulder Creek, Callide and Specimen Hill—that are not yet approved. Under this scenario, the non-resident population of Banana will reach 1,630 persons in 2026.

Figure 4 Estimated and projected non-resident population, Banana



Source: QGSO estimates, 2006 to 2021; QGSO projections, 2022 to 2026

Table 2 Projected non-resident population, Banana

Projection series ^(a)	Number of non-resident workers on-shift at 30 June						
	Estimated	Projected					
	2021	2022	2023	2024	2025	2026	
Series A	1,370	1,480	1,400	1,410	1,380	1,440	
Series C	1,370	1,480	1,410	1,510	1,540	1,630	

(a) Series B and Series D projections for Banana are not published at the LGA level, although they are included in Series B and Series D projections for the Bowen Basin.

Source: QGSO estimates, 2021; QGSO projections, 2022 to 2026

Central Highlands

In March 2022, there were 12 coal mining operations in the LGA of Central Highlands, as well as gas drilling and operations (Table 7, pages 10–12). The non-resident population increased from 3,890 persons in June 2020 to 4,100 persons in June 2021 (Figure 5), following the resumption of operations at Rolleston mine which was closed temporarily in mid-2020 (QGSO, 2021).

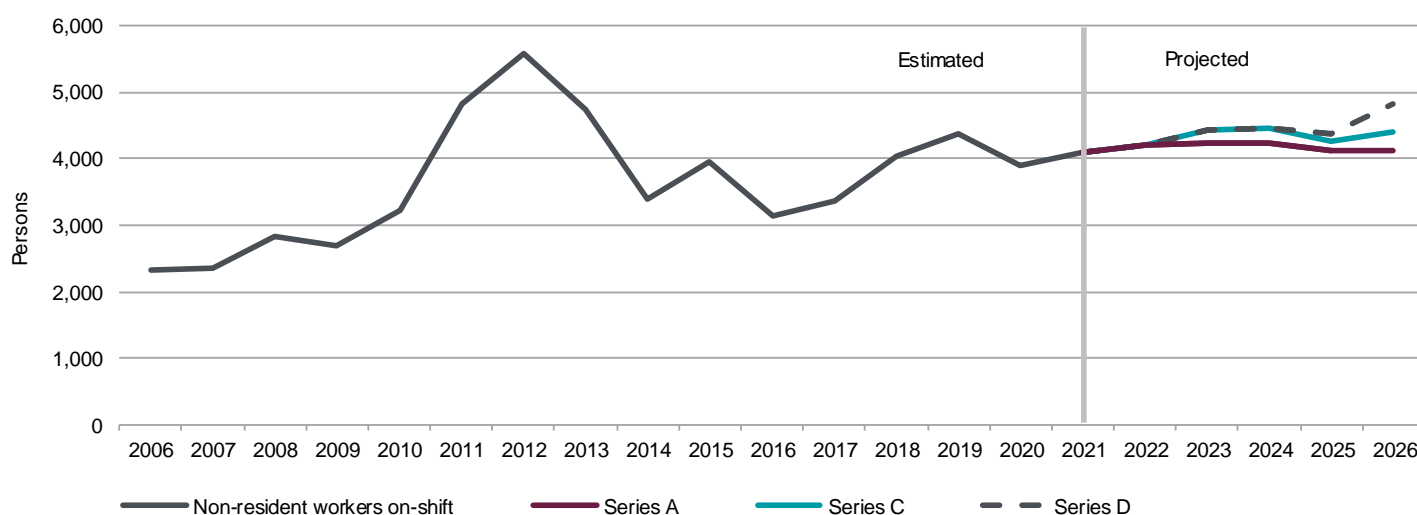
Three projection series are presented for Central Highlands (Table 3). Under Series A, the non-resident population is projected to increase to 4,230 persons in 2023 and 2024, before declining to 4,120 persons in 2025 and 2026. This series factors in changes in the non-resident workforces of existing coal mines and gas developments in the LGA, including work on the second phase of GLNG's Arcadia project.

Under Series C, the non-resident population of Central Highlands is expected to reach a peak of 4,460 persons in 2024. This series includes the Gemini Project and Ensham Life of Mine Extension Project, which are not yet approved.

Series D for Central Highlands includes the additional influences of the Walton and Valeria coal projects. Under this series, the non-resident population is projected to grow to 4,820 persons in 2026, approximately 720 persons higher than in 2021 although lower than the peak reached in 2012 (5,580 persons).

None of the projection series for Central Highlands includes 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



Source: QGSO estimates, 2006 to 2021; QGSO projections, 2022 to 2026

Table 3 Projected non-resident population, Central Highlands

Projection series ^(a)	Number of non-resident workers on-shift at 30 June					
	Estimated	Projected				
		2021	2022	2023	2024	2025
Series A	4,100	4,200	4,230	4,230	4,120	4,120
Series C	4,100	4,200	4,430	4,460	4,260	4,400
Series D	4,100	4,200	4,430	4,460	4,360	4,820

(a) The Series B projection for Central Highlands is not published at the LGA level, although it is included in the Series B projection for the Bowen Basin.

Source: QGSO estimates, 2021; QGSO projections, 2022 to 2026

Isaac

The LGA of Isaac had 26 of the 43 coal operations in the Bowen Basin as at March 2022, along with four other resource operations and six projects under construction (Table 7, pages 10–12). The non-resident population of Isaac decreased from 12,770 persons in June 2020 to 12,080 persons in June 2021 (Figure 6), with an increase in construction workers outweighed by reduced numbers due to lower production at some coal operations (QGSO, 2021).

Four projection series are presented for Isaac (Table 4). Series A includes the non-resident workforces of existing mine and gas operations in the LGA, as well as the construction and operations workforces for four coal projects, the Carmichael Rail Network, and Clarke Creek Wind and Solar Farm. Under Series A, the non-resident population of Isaac is expected to fall to 11,140 persons in 2022 as major project construction winds down, then increase slightly to 11,510 persons in 2023 before declining to 11,060 persons in 2025 and 2026.

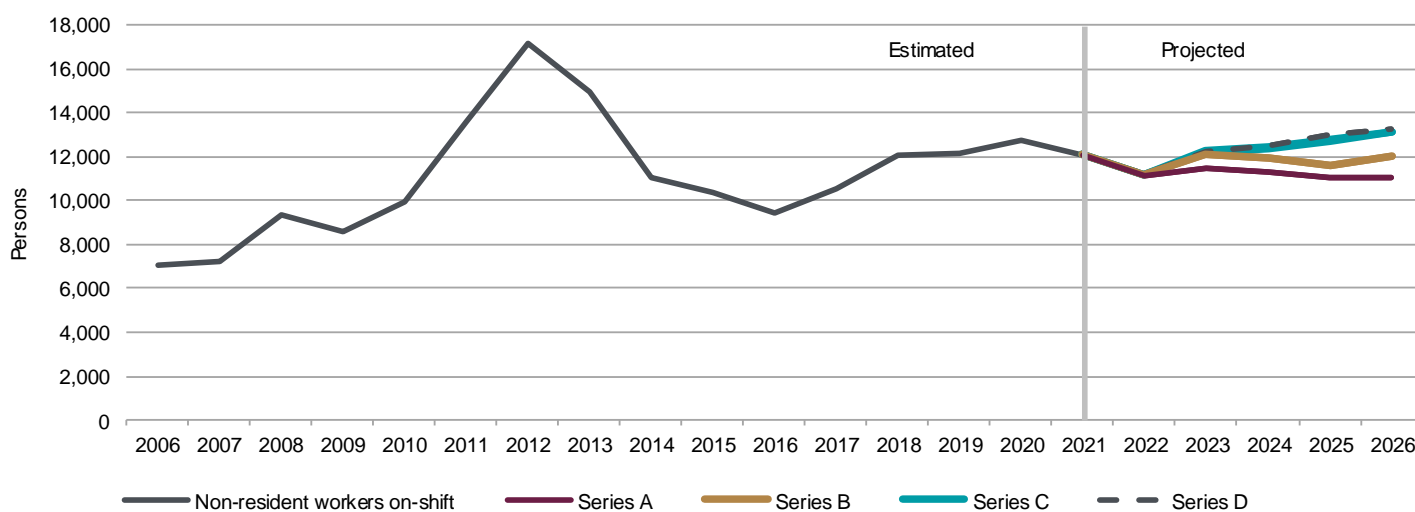
Series B projects the non-resident population of Isaac will decline to 11,160 persons in June 2022, then increase to 12,140 persons in 2023, before falling to below 12,000 persons over the remainder of the projections period. This series factors in the influence of seven coal projects, two rail projects and one infrastructure project, which have been approved and are yet to reach financial close.

According to Series C, Isaac's non-resident population will grow to reach 13,100 persons in 2026. Series C accounts for the additional impacts of Lotus Creek Wind Farm and four coal projects that are not yet approved.

Under Series D, the non-resident population of Isaac will follow the same trajectory as Series C until 2023, before increasing to 13,270 persons in 2026, which is below the peak reached in 2012 (17,130 persons). This series considers the influence of one coal project and one infrastructure project in preliminary planning stages.

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

Figure 6 Estimated and projected non-resident population, Isaac



Source: QGSO estimates, 2006 to 2021; QGSO projections, 2022 to 2026

Table 4 Projected non-resident population, Isaac

Projection series	Number of non-resident workers on-shift at 30 June					
	Estimated	Projected				
	2021	2022	2023	2024	2025	2026
Series A	12,080	11,140	11,510	11,270	11,060	11,060
Series B	12,080	11,160	12,140	11,970	11,640	11,980
Series C	12,080	11,160	12,210	12,370	12,710	13,100
Series D	12,080	11,160	12,210	12,520	13,010	13,270

Source: QGSO estimates, 2021; QGSO projections, 2022 to 2026

Whitsunday (Bowen only)

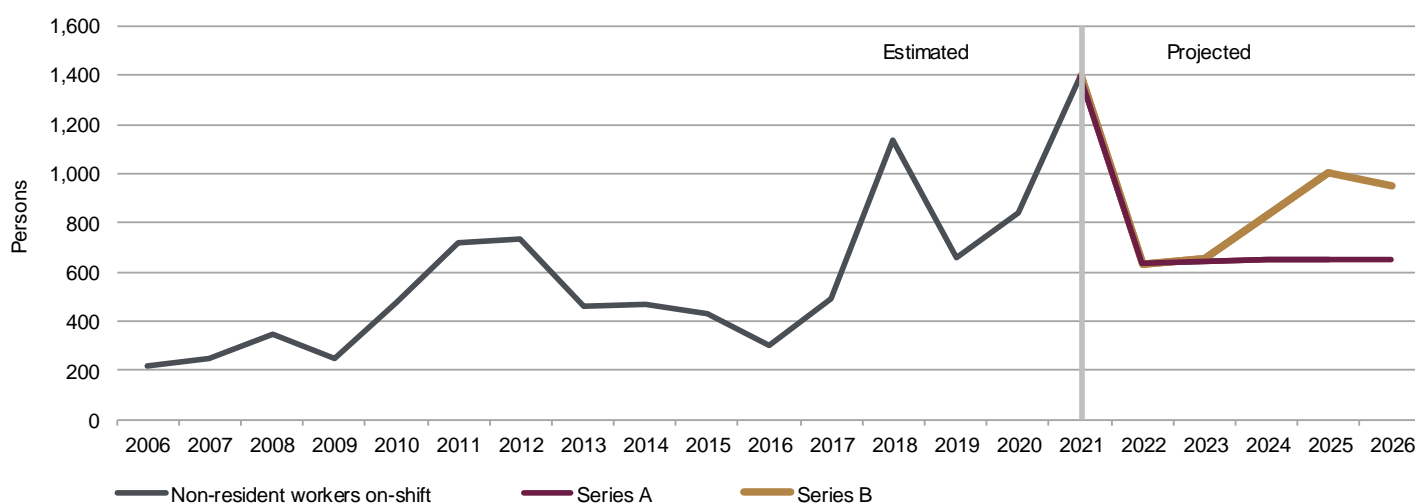
In March 2022, there were two coal mining operations, a gold mine, and Abbot Point Operations in the LGA of Whitsunday (Bowen only), as well as the Carmichael Rail Network under construction (Table 7, pages 10–12). The non-resident population of Whitsunday (Bowen only) was 1,390 persons in June 2021, up from 840 persons in June 2020, driven by construction activity on the Carmichael Rail Network (QGSO, 2021).

Two projection series are presented for Whitsunday (Bowen only) (Table 5). The Series A projection anticipates the non-resident population will decrease to 630 persons in 2022, then increase to reach 650 persons from 2024 onwards. This series reflects the anticipated non-resident workforces of existing operations and the transition of the Carmichael Rail Network to the operational phase.

According to Series B for Whitsunday (Bowen only), the non-resident population is expected to equal the Series A projection in 2022 (630 persons), and then increase to a peak of 1,010 persons in 2025. 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 (Bowen only), as there are no projects in this category.

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



Source: QGSO estimates, 2006 to 2021; QGSO projections, 2022 to 2026

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

Projection series ^(a)	Number of non-resident workers on-shift at 30 June					
	Estimated	Projected				
	2021	2022	2023	2024	2025	2026
Series A	1,390	630	640	650	650	650
Series B	1,390	630	660	830	1,010	950

(a) The Series D projection for Whitsunday (Bowen only) is not published at the LGA level, although it is included in the Series D projection for the Bowen Basin.

Source: QGSO estimates, 2021; QGSO projections, 2022 to 2026

Projected non-resident population, Galilee Basin

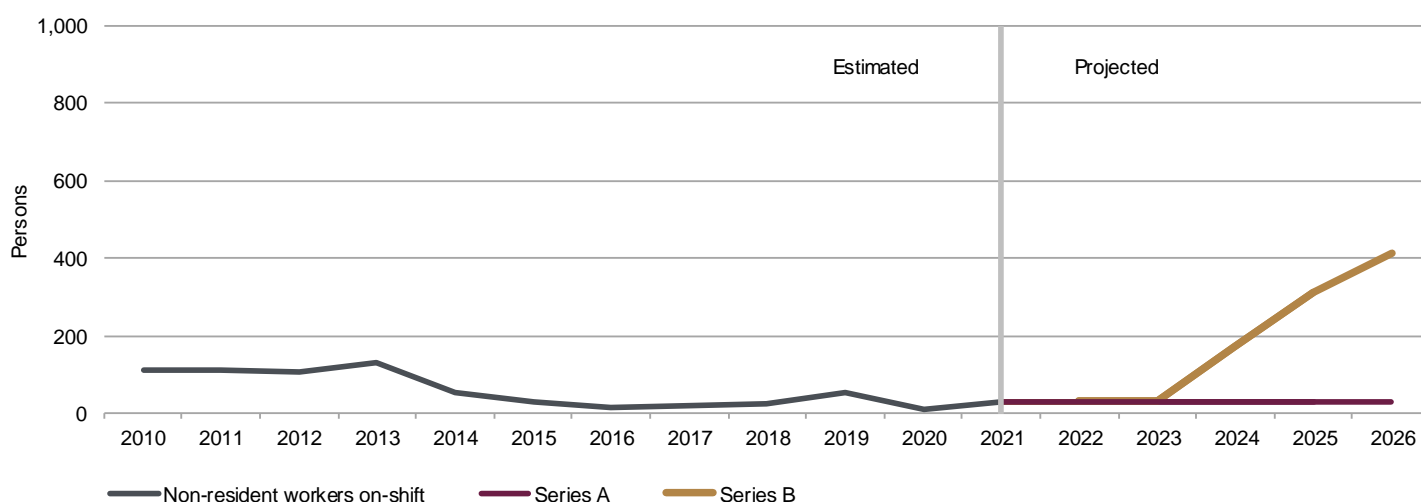
The Galilee Basin coal measure spans a number of LGAs, including Barcaldine in the south and the Bowen Basin LGA of Isaac in the east (Figure 1). The following projections refer only to the non-resident population impacts of Galilee Basin projects that will occur in Barcaldine³.

While there are no coal mines currently operating or under construction in Barcaldine, 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 be replaced later by smaller ongoing production workforces as mines become operational.

Two projection series are presented for Barcaldine (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 30 persons in June 2021—is not expected to change significantly prior to commencement of any major project.

Series B includes six projects—Alpha Coal mine and rail project, Galilee Coal mine and rail project, Kevin's Corner and South Galilee Coal—that have an approved EIS and have yet to reach financial close (Table 7, pages 10–12). This series anticipates that the non-resident population of Barcaldine will remain at 30 persons until 2023, then grow to reach 410 persons by 2026 as project construction progresses.

Figure 8 Estimated and projected non-resident population, Barcaldine



Source: QGSO estimates, 2006 to 2021; QGSO projections, 2022 to 2026

Table 6 Projected non-resident population, Barcaldine

Projection series	Number of non-resident workers on-shift at 30 June					
	Estimated	Projected				
	2021	2022	2023	2024	2025	2026
Series A	30	30	30	30	30	30
Series B	30	30	30	170	310	410

Source: QGSO estimates, 2021; QGSO projections, 2022 to 2026

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



Queensland Government Statistician's Office

Table 7 Resource operations and projects, Bowen and Galilee Basins

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

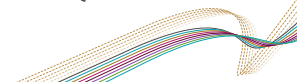


Queensland Government Statistician's Office

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

Projects

A	Broadmeadow East	Bowen Coking Coal	Isaac
A	Carmichael	Bravus Mining and Resources	Isaac
A	Carmichael Rail Network	Bravus Mining and Resources	Isaac, Whitsunday (Bowen only)
A	Clarke Creek Wind and Solar Farm	Squadron Energy	Isaac
A	Isaac Downs Project	Stanmore Resources	Isaac
A	Moura Solar Farm	MYTILINEOS	Banana
A	Vulcan Mine Complex	Vitrinite	Isaac
B	Abbot Point Coal Terminal (T0)	North Queensland Export Terminal	Whitsunday (Bowen only)
B	Abbot Point Coal Terminal (T3)	GVK Hancock Coal	Whitsunday (Bowen only)
B	Abbot Point Growth Gateway	North Qld Bulk Ports Corporation	Whitsunday (Bowen only)
B	Alpha Coal – mine	GVK Hancock Coal	Barcaldine
B	Alpha Coal – rail	GVK Hancock Coal	Barcaldine, Isaac, Whitsunday (Bowen only)
B	Banana Range Wind Farm	EDF Renewables	Banana
B	Dysart East Coal	Bengal Coal	Isaac
B	Galilee Coal Project – mine	Waratah Coal	Barcaldine
B	Galilee Coal Project – rail	Waratah Coal	Barcaldine, Isaac, Whitsunday (Bowen only)
B	Hillalong Coal	Shandong Energy Australia	Isaac
B	Ironbark No. 1	Fitzroy Australia Resources	Isaac
B	Isaac Plains Underground	Stanmore Resources	Isaac
B	Kevin's Corner	GVK Hancock Coal	Barcaldine
B	Lenton Joint Venture	Bowen Coking Coal	Isaac
B	North Galilee Water Scheme	Bravus Mining and Resources	Isaac
B	Olive Downs Project	Pembroke Resources	Isaac
B	Red Hill Mining Lease Project	BHP	Isaac
B	South Galilee Coal	AMCI	Barcaldine
B	Taraborah	Shenhua International Group	Central Highlands
C	Boulder Creek Wind Farm	Epuron	Banana
C	Callide Wind Farm	DP Energy	Banana
C	Ensham Life of Mine Extension Project	Ensham Resources	Central Highlands
C	Gemini Project	Magnetic South	Central Highlands
C	Isaac River	Bowen Coking Coal	Isaac
C	Lotus Creek Wind Farm	Epuron	Isaac
C	Moorlands Project	Huaxin Energy	Isaac
C	Saraji East Mining Lease Project	BHP	Isaac
C	Specimen Hill Wind Farm	Epuron	Banana
C	Winchester South	Whitehaven Coal	Isaac
D	Baralaba South	Mount Ramsay Coal Company	Banana
D	Waratah Coal Power Station	Waratah Coal	Barcaldine
D	Lake Vermont Meadowbrook Project	Bowen Basin Coal	Isaac
D	Urannah Project	Bowen River Utilities	Isaac, Whitsunday (Bowen only)
D	Valeria	Glencore Coal	Central Highlands
D	Walton Coal Project	Aquila Resources	Central Highlands
E	Arrow Bowen Pipeline	Arrow Energy	Isaac



E	Bowen Gas Project	Arrow Energy	Isaac
E	Codrilla	Peabody Energy	Isaac
E	Eagle Downs	South32	Isaac
E	Greater Mahalo Development Area	Comet Ridge	Central Highlands
E	Minyango	Constellation Mining	Central Highlands
E	Moranbah South	Anglo American	Isaac
E	Washpool Coal	Aquila Resources	Central Highlands

- (a) The five categories include operations and projects grouped according to their status in the approvals process as at March 2022. See methodology (page 2) and caveats (below) for further details.
- (b) Operations that have ceased production or were in care and maintenance in March 2022 are not included in this list or in the projections. These include Bluff and Jellinbah Plains in Central Highlands and Broadlea, Grasstree and Norwich Park in Isaac.
- (c) Santos Gladstone LNG (GLNG) is a joint venture between Santos, PETRONAS, Total and KOGAS.

Source: QGSO, 2022

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 by company sources.

Projections are based on the best available data and advice at the time of preparation. Non-resident populations are projected for the period to 2026 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 annual mid-year estimates.

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 2022 (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 although 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

Non-resident workers are people who fly-in/fly-out or drive-in/dive-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 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 and Whitsunday (Bowen only), rather than in Barcaldine.

Data in this report are derived from surveys conducted by QGSO in 2021 and other sources. The Survey of Accommodation Providers counted the number of non-resident workers on-shift during the last week of June 2021. See the *Bowen Basin population report, 2021* <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 Employment Survey collected workforce information from all resource companies with existing operations and projects in the Bowen and Galilee Basins as at June 2021. 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>.

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