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SUPPLEMENTARY REPORT TO THE EIS

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15 Social

This chapter summarises the findings of the supplementary Social Technical Report (Appendix M) of this SREIS, which was undertaken to address changes to the social baseline and updates to the project description made since the EIS was finalised. In addition, the chapter provides an overview of the revised draft Social Impact Management Plan (SIMP) (Appendix N) of this SREIS.

The supplementary Social Technical Report (Appendix M) updates the social impact assessment (SIA) presented in the Social Technical Report (Appendix U) of the EIS, the main findings of which are summarised in the Social chapter (Section 24) of the EIS.

The complete revised project description is provided in the Project Description chapter (Section 3) of this SREIS, and aspects relevant to social impacts of the Project are also discussed in this chapter. In addition to the study findings, a list of key issues raised in submissions is presented, with responses to all submissions provided in the Submission Responses chapter (Section 21) of this SREIS.

15.1 Study Method

The assessment method adopted for the review of impacts involved a four-step process as described below.

Step 1- Identification of Relevant Project Description Changes

The revised project description developed by Arrow was examined to identify changes that could have a potential effect on the impacts identified in the Social Technical Report (Appendix U) of the EIS. Critical aspects of these changes included:

- Any changes to the Project component facilities and the Project footprint likely to alter the amount of land disturbed;
- Changes to the Project construction and operations workforce numbers and manning profile, including associated changes to camp accommodation arrangements and the estimated population influx to Project area towns;
- Changes to the phasing of development across the Project area; and
- Changes to the expected traffic levels and durations on local and State-controlled road networks in the Project area.

These changes are described in Section 15.2 of this chapter.

Step 2- Confirmation of the Policy and Regulatory Environment Changes and Status

The Queensland CSG regulatory and statutory planning environments have undergone continual change over the last 18 months. These changes were examined to identify those with relevance to the Project development and for the management of social impact to communities within the Project area. These changes are described in Section 15.3 of this chapter.

Step 3- Update of the Relevant Baseline Profile Indicators

While the social profile of a community is invariably dynamic, communities within the Project area have a high level of exposure to the coal mining sector and have consequently been recently subjected to the effects of economic adjustment in the sector due to low commodity prices. Changes of particular relevance include housing affordability and the local labour market status, as well as the forecast levels for non-residential workers (NRW) expected in the local government areas affected by the Project.

Step 4- Review and Validation of Impacts

The final step involved reviewing the effects of the changes on the impacts identified in the social impact assessment. Where impacts are consistent with those already identified, the likelihood and consequences are assessed to determine whether there are changes to the assessed significance rating. Any changes in the significance of impacts identified triggers a review of the proposed management measures in the SIMP to assess their suitability for management of the revised impact.

15.2 Project Description Updates of Relevance

15.2.1 Footprint Changes

Key project description changes / components that will have an effect on the potential for social impact are shown in Table 15-1. While the Project development area remains at approximately 8,000 km^2, planning is now based on 33 drainage areas of 6 km radius (approximately 373,200 ha) in comparison with the EIS base case of 17 development areas of 12 km radius (approximately 769,000 ha), as shown in the Project Description chapter (Section 3, Figure 3–1) of this SREIS. Drainage area infrastructure will include wells, linear infrastructure including gathering pipelines and access tracks, field compression facilities (FCFs), pipelines, water treatment facilities (WTFs), and power generation and distribution infrastructure.

Where possible, multiple wells may be grouped on a singular pad location to form a multi-well pad. Multi-well pads consolidate a group of wells at one surface location, whilst targeting multiple coal seams, which will typically allow:

- A reduction in the total number of well pad sites; and
- An increase in the distance between any two well sites.

As a consequence, the introduction of multi-well pad sites into the Project will reduce the total surface impact, especially in terms of linear infrastructure due to the significantly reduced number of well pads expected. Arrow is also aiming to minimise pad footprint as much as possible, particularly during the operational phase.

Table 15-1 Project Components with an Effect on the Potential for Social Impact

Project Description - EIS case	Project Description - SREIS case
• 8,000 km^2 Project development area; • 14 development regions; and • 17 catchment areas (approximate 12 km radius).	• 8,000 km^2 Project development area; • 9 development regions; and • 33 drainage areas (approximate 6 km radius).
Well count up to 6,625.	Well count approximately 4,000.
• Well types: Surface-In-Seam (SIS) chevrons and multi-seam hydraulically fractured; and • No multi-well pads.	• Well types: horizontal SIS, inclusive Multi Branch Lateral (MBL) and multi-seam hydraulically fractured; and • Maximum of 12 (6 vertical production plus 6 lateral) wells.
• 4 IPFs; • 3 CGPFs; and • 10 FCFs.	• 2 CGPFs – with co-located WTFs; and • 33 FCFs. Note – there is potential for a third WTF to be constructed in the Blackwater region in Phase 2+ of the Project.
Primary power self-generation.	• Primary power grid; and • Temporary 2 year self-generation scenario.

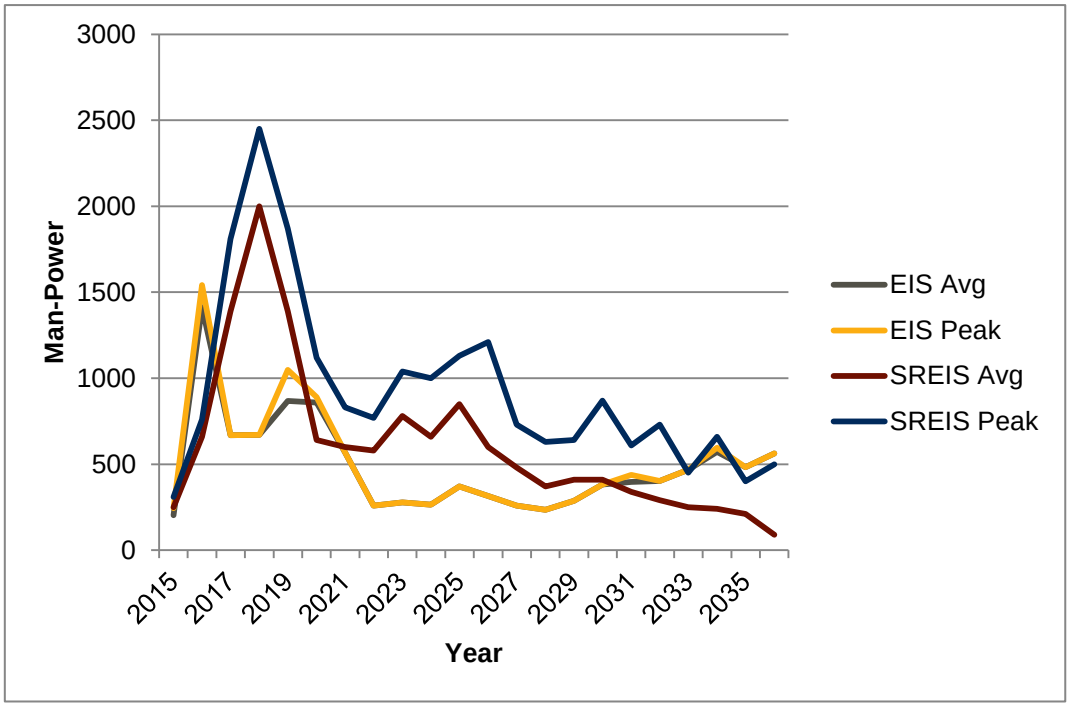
Due to travel distances and times between the CGPFs and Moranbah, it is proposed that a North Maintenance Base will be co-located with the North Central Operating Base (COB) to serve CGPF1, associated FCFs, wells and gathering system and the WTF1. Similarly a South Maintenance Base will be co-located with the South COB to serve CGPF2, associated FCFs, wells and gathering system and the WTF2.

Additionally, it is expected that there will be a centralised support facility (including main office, warehouse and workshop) in the Moranbah area to support the Bowen operations, with only limited store facilities (routine consumables stock only) and workshops located at the COBs.

15.2.2 Workforce Profile

A comparison of the construction workforce for the EIS and SREIS reference project descriptions is shown in Figure 15-1.

Figure 15-1 Workforce Time Profile Comparison



The labour input has risen from 10,788 person-years for the EIS reference case to 13,490 person-years for the SREIS reference case (an increase of 25%). The assumption remains that the entire construction workforce is FIFO, with 100% living in temporary workforce accommodation facilities (TWAFs). TWAFs will be sized based on this assumption.

Excluding workover crews, approximately 250 to 300 operations and maintenance personnel will be required for the Project operations, maintenance, and support and administration teams (this excludes Arrow Brisbane-based staff and field maintenance contractors). This peak is expected to be reached by 2028 and remain at plateau for approximately 13 years before starting to decline as gas is depleted. The workover crews (which include the well completion crews given that the same rigs will be used) are expected to range between 10 and 100 people over the life of the Project (averaging at around 65 personnel onsite at any given time). These are all assumed to be FIFO roles sourced from outside the region.

While the EIS reference case assumed that 10% of operational workers could be recruited locally, the SREIS case increases that level to 20% on the following assumptions:

- The cost of housing is moderating;
- There will be a higher level of desire to move out of coal mining employment given the recent downturn in coal prices and associated industry restructuring; and
- Local government programs to attract workers to reside in the region are moderately successful.

While up to 60 personnel may be recruited from within the Bowen Basin under those assumptions, for accommodation sizing it is assumed that they will all require camp accommodation due to the distance of facilities from towns and fatigue management constraints on daily travel from towns to facility sites. Consequently, each permanent camp will have the capacity to accommodate more than 150 personnel from the operations team.

A summary of the operational workforce numbers and their residential status is given in Table 15-2.

Table 15-2 Operational Workforce Estimated Numbers and Residential Status

Project Case	2016	2020	2024	2028	2034	2041
EIS	**203**	**326**	**418**	**492**	**597**	**600**
EIS case local (10% from Bowen Basin)	20	33	42	49	60	60
EIS case FIFO	183	293	376	443	537	540
In-migrants (Assume from 2020, 5% of FIFO workers elect to reside in Moranbah)		15	19	22	27	27
Population influx (assuming each worker has 1.6 dependents)		39	49	57	70	70
SREIS	**100**	**200**	**250**	**300**	**300**	**300**
SREIS case local (assuming 20% from Bowen Basin, all with existing housing)	20	40	50	60	60	60
SREIS Operations FIFO numbers	80	160	200	240	240	240
Employee influx (assuming from 2020, 5% of FIFO workers elect to reside in Moranbah)	-	8	10	12	12	12
Population influx (assuming each worker has 1.6 dependents)		21	26	31	31	31

15.2.3 Development Phasing

The anticipated development sequence for the Project is detailed in Table 15-3. The major difference in phasing is that the development in the revised Project is continuous over the three phases, whereas the EIS reference case envisaged no construction activity occurring in the Phase 2 period from 2023-2027.

Table 15-3 Development Phasing and Project Description

Phase	Years	Project Description EIS Case		Project Description SREIS Case	
		Development activity	**Development zones (catchment areas)**	**Development activity**	**Development zones (drainage areas)**
1	0-5 2017-2022	• 7 catchment areas; • 3 CGPFs; • 3 IPFs; and • 1 FCF.	• Red Hill / Suttor Creek (2); • Peak Downs / South Walker (2); • Coxendean (2); and • Picardy (1).	• 17 drainage areas (FCFs); • 2 CGPFs and WTFs; and • 192,000 ha.	• Red Hill / Suttor Creek (7); • Peak Downs / Coxendean (7); and • Picardy (3).
2	6-10 2023-2027			• 11 drainage areas (FCFs); and • 124,300 ha.	• South Walker/Bowen East (5); • Peak Downs / Coxendean (2); • Picardy (3); and • Blackwater (1).
2+	11+ 2028-	• 10 catchment areas; • 9 FCFs; and • 1 IPF.	• Coxendean(1); • Picardy (2); • Blackwater (1); • Bowen East(3); and • Red Hill (1).	• 5 drainage areas (FCFs); and • 56,500 ha.	• Suttor Creek (1); • Coxendean (1); and • Blackwater (3).

15.2.4 Operations and Maintenance Changes

Arrow intends to implement the not normally manned (NNM) philosophy for the Project gas facilities. NNM operations are those where operations staff are not permanently allocated to a specific facility, but allocated across a number of facilities and visit a facility on an as needed basis. The introduction of the NNM concept is related to and associated with the operations of the CGPFs, FCFs, WTFs, wellheads, and gathering system. Hence in the NNM philosophy all operators are allocated to a specific COB with its associated gas drainage areas. The main centralised warehouse and workshop for the Project operations is planned to be located in Moranbah.

15.2.5 Camp Location and Size

Table 15-4 lists the NRW accommodation options for the EIS and SREIS reference cases. The workforce needed to establish the camps will initially be accommodated in existing commercial camp facilities until sufficient rooms are established to permit transfer to the camp construction site. In the Dysart / Middlemount area there are currently at least 2,800 commercial camp rooms available from other parties, while in the Moranbah area there are currently in excess of 1,500 commercial camp rooms available from other parties.

Table 15-4 Summary of Accommodation Camp Options

TWAF	Location	Max capacity (year expected)
EIS Reference Project case		
1	IPF area 4, Red Hill 40 km north of Moranbah	291 (2020)
2	IPF area 5, South Walker 50 km north-east of Moranbah	259 (2016)
3	IPF area 7, Coxendean 20 km north of Dysart	298 (2016)
4	IPF area 19, Blackwater 35 km north of Blackwater	386 (2034)
SREIS Reference Project Case		
1	CGPF1 North, Red Hill, approximately 40 km north of Moranbah	1,225 (2018)
2	CGPF2 South, Peak Downs, approximately 40 km south-east of Moranbah	1,225 (2018)

Table 15-5 outlines the parameters that will guide the establishment and operation of the camp facilities.

Table 15-5 Summary of Accommodation Camp Parameters

Accommodation Aspect	Strategy
Site selection	It is currently envisaged that purpose-built accommodation will be constructed as follows: Two main villages located near CGPF1 and CGPF2, designed and built as permanent accommodation solutions to house the construction workforce and long term permanent staff. Villages are expected to cater for FIFO workers (including workover crews). In an effort to minimise staff travelling time, several additional smaller TWAFs (currently estimated at four) are expected to be required when the facilities associated with the drainage areas furthest away from the CGPFs are under construction. The following factors will be considered during site selection: • Achieve a maximum commuting time of approximately 30 minutes to the work fronts; • Design; • Environmental constraints; • Social constraints; • Native Title sensitivities; and • Avoid strategic cropping land.
Village size	The final size and number of accommodation villages will be influenced by: • The rate of Project development; • The distance between nearby gas processing facility sites; • Opportunities for efficient use (or reuse) of accommodation infrastructure and resources; and • The level of overlap between temporary construction workforce and permanent staff. Accommodation villages will be sized to accommodate: • 100% of the peak construction workforce including the wells and gathering line installation construction teams; and • 100% of permanent FIFO and local based operations staff.

Accommodation Aspect	Strategy
Village facilities	Accommodation villages are designed to be self-sufficient in terms of power, water and sewage services, and will include: • Individual sleeping quarters; • Catering services, commercial kitchen and dining area; • Recreation facilities; • Ensuite facilities; • Laundry facilities; • First aid; • Vehicle parking; and • Security fence. Onsite couple and family accommodation is not anticipated.
Establishment	Accommodation villages will be modular in design to enable them to expand and contract in line with the requirements. The 'pioneer' workforce required to establish accommodation villages will be housed in existing accommodation camps in the area until sufficient units are constructed.
Short-term accommodation	In addition to the construction workforce, Arrow anticipates a constant stream (average of 20 persons, five days a week) of management personnel and specialist consultants who may visit the Project development area. Where possible, these personnel will be housed in accommodation villages. However, during peak activities, it is likely these personnel will seek motel or similar accommodation in nearby towns.

Small mobile camps to house drilling and completions staff may also be required in a location central to the drilling activities, if being undertaken at a significant distance from the larger camps. These smaller mobile camps would contain a small canteen, vehicle parking areas, waste collection and storage areas.

15.2.6 Submissions

Submissions on the EIS raised a range of issues relating to social impacts. The issues fall in to broad topics, which are listed below:

- Community values, lifestyle and connections;
- Compensation;
- Consultation;
- Education, training and employment;
- Health, emergency and community services;
- Health issues;
- Housing and accommodation availability and affordability;
- Land use and property;
- Local businesses and workforce competition;
- SIMP actions; and
- Study method.

Responses to issues raised in the submissions relating to community consultation and social impacts have been provided in the Submission Responses chapter (Section 21) of this SREIS.

15.3 Study Findings

15.3.1 Existing Environment

Policy and Regulatory

A range of policy and regulatory changes have occurred since the publication of the EIS. These changes ultimately aim to support the co-existence of gas development projects with existing land uses, as well as improving the preparedness of regional communities to manage potential pressures that may result from resource development projects in their locality.

The Queensland Government established the GasFields Commission in 2013; the Commission's role is to improve co-existence between landholders, communities and the gas industry via a variety of functions including:

- Reviewing legislation and regulation;
- Obtaining and publishing factual information;
- Identifying and advising on coexistence issues;
- Facilitating better relationships and resolving issues;
- Promoting scientific research to address knowledge gaps; and
- Making recommendations to government and industry.

Additionally, the Government has increased a Royalties for the Regions program which provides funding back to communities. The Dysart Medical Centre, a medical centre with three consulting rooms and two treatment rooms on Queensland Health land, has benefited from this program.

Further to these initiatives, DSDIP released a suite of regulatory guidelines in relation to the assessment and management of the impacts of major resource projects (DSDIP, 2013a). These included:

- Managing the impacts of major projects in resource communities;
- Preparing an environmental impact statement: Guideline for proponents; and
- SIA guideline.

In addition and complementary to these guidelines, in March 2013 the Queensland Resources Council, with support from the Australian Petroleum Production and Exploration Association released the *Queensland Resources and Energy Sector Code of Practice for Local Content* (QRC, 2013).

Regional Planning

In March 2013, the State Government released its *Regional and Resource Towns Action Plan* (DSDIP, 2013c) that "identifies short-term initiatives and 'on the ground' projects to address local issues, such as housing availability and affordability". Of particular relevance to the potential impacts of the Project, specifically housing affordability and land supply is the planned development of residential land within Moranbah, Dysart, Middlemount and Blackwater.

The *Central Queensland Regional Plan* (DSDIP, 2013b) was approved by the Deputy Premier and Minister for State Development, Infrastructure and Planning on 14 October 2013 to take effect from 18 October 2013, and forms part of the State Government's new statutory regional planning agenda. The

Government states that the regional plans seek to provide certainty for the future growth of towns and to mediate the conflict between agriculture and resource activities in the region through the implementation of regional planning policies.

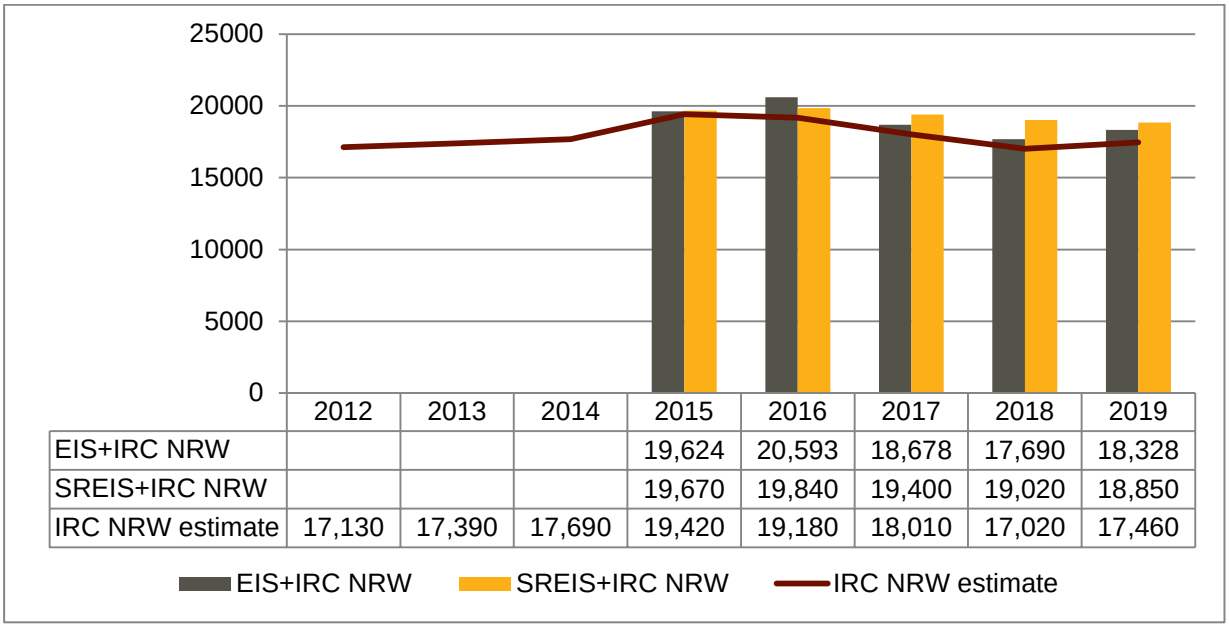
Population

A review of the most recent demographic statistics indicates minor changes to the estimated resident population used in the EIS. However, these changes do not affect the outcomes of the EIS impact assessment. There have been more significant changes to the estimates of NRW in the regional towns based on the latest survey by the Government Statistician. Key changes in NRW estimates include:

- Slight increases in NRW as a proportion of the population in Moranbah (10%), Dysart (12%) and Middlemount (5%) in contrast to considerable reductions in Glenden (-83%) and Nebo (-265%). The estimated proportion of NRW in Blackwater was unchanged; and
- The projected population of the regional council areas that cover the Project area (Isaac Regional Council (IRC) and Central Highlands Regional Council) indicate a slight rise in the Estimated Resident Population as a proportion of the full-time equivalent population overall.

Figure 15-2 compares the incremental increase in NRW between the EIS and SREIS reference case NRW for the IRC area, which will host the two construction camps for the Project. As shown, the NRW expected for the Project in the SREIS is slightly higher than that estimated for the EIS. The greatest change to the estimated NRW in the IRC area will occur between 2017 and 2019.

Figure 15-2 EIS and SREIS NRW Estimates Compared to NRW Projections



	2012	2013	2014	2015	2016	2017	2018	2019
EIS+IRC NRW				19,624	20,593	18,678	17,690	18,328
SREIS+IRC NRW				19,670	19,840	19,400	19,020	18,850
IRC NRW estimate	17,130	17,390	17,690	19,420	19,180	18,010	17,020	17,460

Source: NRW-Government Statistician, Series C Non-resident population projections, 2012-2013; Arrow workforce estimates

These estimates have the potential to change rapidly as companies in the coal mining sector reduce or increase the use of contractors in response to market conditions for coal production. Towns where the numbers of NRW within their boundaries constitute a higher proportion of the full-time equivalent population, such as Dysart, Nebo and Middlemount, will be particularly susceptible to impacts that may result from these rapid changes. These impacts include reduced demand for local businesses and difficulty in encouraging NRW to engage with local residents and to participate in local activities. On a regional scale, NRW comprise 40% of the full-time equivalent population for the IRC. Rapid changes in these numbers, combined with any employment loss for local residents due to industry conditions, may present challenges to local government.

Housing Cost and Affordability

Housing costs, and consequently the affordability of housing, have altered significantly following the decline in the coal mining sector. There have been dramatic declines in median housing costs (both rental and sales) across all primary towns in the Project area, which was particularly notable in Moranbah. These large reductions in housing costs are often a reflection of the unsustainably high cost of housing in these areas at the time of the EIS. The largest change (2012-2013) in housing costs across the Project area was seen in Moranbah, where the median cost of purchase reduced by 58% and median rental cost per week reduced by 80%. On the whole, housing affordability (cost and availability when compared to median income) has increased considerably across the Project area.

However, the housing market in the Project area is quite volatile and subject to significant swings depending on the state of the coal mining industry. There are also significant market interventions in the housing market in the Project area through Economic Development Queensland and housing investment through conditions imposed on mining developments. The lower cost of housing in the Project area may mean that there is potential for a higher population influx associated with the Project. Given the complexity of housing cost and affordability in the Project area, the impact of the Project on housing affordability in the longer term is uncertain and will benefit from on-going monitoring.

Employment

Media reports and statements from resource industry peak bodies indicate that there have been significant job losses in the coal industry. Consequently, there has been a sharp rise in unemployment between June 2012 and June 2013. Although the rise in unemployment appears dramatic, the communities in the Project area continue to have unemployment rates below that of the national and State average.

Despite the rise in unemployment, the labour force has continued to grow in the Project area. The labour force is likely to continue to grow, possibly with some growth in unemployment levels. However, unemployment levels will be lower than those in the broader region or at State levels, indicating tight labour markets, particularly for skilled workers. This may have an influence on the ability of the Project to recruit locally, as some coal mining employees may see the potential for employment in the long-term operating environment of the Project to be more stable than employment in the coal mining sector.

15.3.2 Potential Impacts and Management Measures

Population and Demographic Profile

The validity of the assumptions used in the EIS were reviewed in light of changes to the social baseline profile and the revised project description. Arrow does not intend to compel locally-engaged workers to reside in the camps while on-shift. Transport arrangements for locally engaged workers are currently under consideration.

Detailed logistical planning will be undertaken at a later stage; however, it is unlikely that the Project would lead to any decrease in the size of the local resident community as was considered in the EIS. In contrast, recent falls in the cost of housing may act to encourage a degree of relocation to the Project area for operational workers.

The increase of NRW (2.2% or approximately 400 workers) estimated for the construction phase of the Project between 2015 and 2019, is not expected to impose any incremental impact as they will all be accommodated in the TWAFs to be established.

The operational workforce assumptions indicate that the residential population of Moranbah may increase by up to 125 persons (or approximately 1.0% above the projected population level at 2020) should an optimistic scenario prevail. An increase of this level would be in line with the confidence limits of organic growth expected, and should not impose any significant change that normal community servicing could not accommodate.

Housing and Accommodation

The EIS concluded that there was not likely to be any direct increase in demand for housing, which is largely a consequence of the assumption that there would be minimal relocation to the region by the operational workforce. The Project characteristic of facilities and infrastructure (and hence construction workforce) being dispersed across a large area, compared to the more localised development of a mining project, supports this assessment. A possible increase in housing costs as a result of speculative activity was noted, and assessed as being unlikely and of overall low significance.

There have been significant falls in weekly rent costs and in median house prices over the last 12 to 18 months. As a result, there will be no change to the impacts assessed in the EIS. However, as stressed above, Arrow understands that the housing market in the Project area is volatile and future movement in housing costs are subject to considerable uncertainty. This warrants on-going close monitoring of the market.

Employment, Skills and Business

The EIS noted that the Project may bring about an increase in the number and type of apprenticeships available, improve regional training facilities, improve the retention of students to Year 12, and diversify the skills base of the regional population. These were all considered positive impacts with a medium level of significance. The EIS also identified an increase in opportunities for smaller local businesses, but notes the possibility of supply chain issues. The significance of this potential impact was rated as high.

Changes to the project description indicate that there will be an increase in the peak workforce during the construction phase, which may lead to increased opportunity for local employment. However, as overall levels of unemployment are low, any significant increase in local employment will continue to be constrained by the lack of locally available labour.

The Project Description chapter (Section 3) of this SREIS also indicates that the operational workforce will be significantly reduced, primarily due to the effects of automation on well-field and facilities operation.

Land Use and Property

The EIS identified a potential for disruption to agricultural production due to the direct impacts of construction activity, in particular the use of private roads on properties. If left unmanaged, the potential deterioration of local government roads was also expected to affect agricultural enterprises. While rated as unlikely, disruption to agricultural production was expected to be of moderate consequence with a resulting medium level of significance.

The revised project description has reduced the Project's footprint significantly. This reduction in disturbed area, combined with the use of multi-well pad sites, is expected to reduce the impact consequences for construction from moderate to minor, with a resulting significance of low.

Project gas facilities are planned to be highly automated, with control of the CSG production facilities managed centrally from Brisbane. Additionally, the use of not normally manned philosophy for the Project will further reduce the frequency of access (and hence potential disruption) to landholders in the region.

Community Values and Lifestyle

The EIS identified a potential detriment to the social fabric of the impacted communities, with residents viewing the presence of NRW as contrary to the sense of place. While this is dependent to a large extent on the location of the accommodation camps, there was also a concern that:

- Media reporting of the impacts of FIFO workforces has contributed to a negative perception of the region;
- Conflict among residents concerning NRW, their presence and location; and
- Personal safety is at risk due to anti-social behaviour associated with NRW resident in camps.

These impacts were all rated as possible with minor to moderate consequences, resulting in a medium level of significance.

The revised project description will maintain the separation between the community and the NRW by locating accommodation camps remote from the main communities. This is with the exception that they will be larger and possibly incorporate a higher level of amenity than the originally proposed four smaller camps. The workforce and camp residents will continue to be subject to a strict Code of Conduct, which has been shown to generally be effective in managing the behaviour of camp-based employees. Any construction and operations workers who relocate into the area are more likely to be accompanied by families, which encourages community integration and reduces the chances of anti-social behaviour.

Community Infrastructure and Services

The EIS assessed the impacts on community facilities (such as libraries) and services (such as childcare and other support services) as being limited in scope, with the more likely impacts being experienced in recreational facilities such as clubs and hotels and in outlets in the retail sector. The cumulative impact of other projects was also a significant factor in determining whether or not the impacts actually materialised.

The impacts on health services were noted as a particular concern for the community of Moranbah.

Although the revised project description has an increase in the construction workforce of around 2.2% (or 400 workers) between 2015 and 2019, this is not expected to impose any incremental impact on health service provision to residents of the area as they will all be accommodated in TWAFs, which will have on-site medical facilities that may include a medical service provider.

The revised operational workforce assumptions indicate that the residential population of Moranbah may increase by up to 125 persons (or approximately 1.0% above the projected population level at 2020) should an optimistic scenario prevail. An increase of this level would be in line with the confidence limits of organic growth expected, and is broadly in line with Queensland Health planning parameters for the delivery of public health services to the area.

The revised workforce assumptions are not expected to alter the impact significance identified in the Social Technical Report (Appendix U) of the EIS (assessed as medium level) and are capable of effective mitigation through the plans outlined in the SIMP (Appendix N) of the SREIS.

Health, Safety and Environment

The primary concern noted in the EIS was potential for community anxiety over a perceived negative impact on groundwater, and safety issues surrounding the production and transport of gas. The EIS assessed the significance of this impact as being medium, based on a likelihood of occurrence rated as unlikely, with consequences rated as moderate. Mitigation was based on the provision of information through the implementation of community engagement and health, safety and environment plans, reducing the consequences to minor. The changes to the project description are not likely to alter the perceptions of stakeholders in the local community in the near-term, though the reduction in area disturbed may reassure the community in the longer term. As such, the significance of the impact is not expected to change to any observable extent.

15.3.3 Summary of Impact Changes

Table 15-6 provides a summary of the impacts assessed as having a revised significance ranking based on updates to the project description and updated socio-economic data.

Table 15-6 Summary of Changes to Impacts

Potential Impact	Status	Phase	Pos / Neg	Likelihood	Consequence	Significance
Impacts on population and demographic profile: The project description changes are not likely to alter the level of significance for this category of impact.						
Impacts on housing and accommodation: The project description changes are not likely to alter the level of significance for this category of impact.						
Impacts on land use and property:						
Deterioration of roads and detrimental effect on agricultural activity.	Decreased consequence	Construction and operation	Neg	Unlikely	Minor	Low
Impacts on community values and lifestyles: The project description changes are not likely to alter the level of significance for this category of impact.						
Impacts on community infrastructure and services: The project description changes are not likely to alter the level of significance for this category of impact.						
Impacts on health, safety and environment: The project description changes are not likely to alter the level of significance for this category of impact.						

15.3.4 Draft SIMP update

Action Plans in the SIMP were revised and consolidated into five plans, as outlined in Table 15-7. The revised SIMP is provided in Appendix N of this SREIS.

Table 15-7 Key Action Plan Initiatives

Focus	Initiatives
Housing and accommodation	• Development of an early works accommodation strategy; and • Participation in regional planning forums concerning population growth and housing.
Health and community wellbeing	• Provision of Project-driven population growth forecasts to relevant agencies and local governments; • Extension of the Brighter Futures Program to the Project region; • Implementation of a community engagement plan that includes a Regional Community Consultation committee; and • Support for NRW involvement in community activities.
Workforce management	• Equipping TWAFs with adequate recreational and entertainment activities; • Provision of suitable on-site health services for Project employees; and • Education and training programs to maximise local employment and training opportunities.

Focus	Initiatives
Local content	• Commitment to the Queensland Resources and Energy Sector Code of Practice for Local Content; • Finalisation of an Australian Industry Participation Plan and the development and dissemination of a Local Content Policy and strategy; and • Continuation of the Whanu Binal program for Indigenous businesses.
Cumulative impacts	• Participation in regional development planning and issues coordination forums together with government and other project proponents; and • Participation in the Industry Leadership Group for CSG Resource Projects.

15.4 Conclusion

The SREIS has assessed that the changes in social impact from the EIS to the SREIS case to be minimal. The only area where the Project's potential impacts were changed is in relation to the deterioration of roads and consequential detrimental effect on agricultural activity land use and property. The revised project description has resulted in a significant reduction of the Project's footprint and reduced land access requirements during operations. These changes have decreased the Project's expected impacts on roads, land use and property to low.

While housing affordability in the Project area has improved considerably since the EIS, Arrow has maintained its commitment to monitoring housing affordability based on the inherent volatility of housing markets across the Project area.

Similarly, the impacts to community values and lifestyles and community infrastructure and services are considered to remain the same as those assessed during the EIS. The project description has maintained the separation of NRW accommodation from towns, largely mitigating impacts to community values by design. While the revised workforce profile has increased the expected non-resident and resident workforce, these populations are generally in line with confidence limits of organic growth expected and established planning parameters. However, Arrow recognises the sensitivity of impacts on health services in the Project and maintains its commitment to a number of initiatives, including the provision for on-site health services for Project employees.

The impacts surrounding health, safety and the environment have remained unchanged since the EIS, despite considerable reductions in the Project's footprint. Arrow has retained the risk rating of minor, recognising that the changes to the project description are not likely to alter the perceptions of stakeholders in the local community in the short-term.

Updates to the draft SIMP have consolidated Arrow's social impact management commitments into five action plans that are aligned with the impact areas addressed in the SREIS. Arrow has strengthened existing actions for managing social impacts and included additional actions to reflect changes to impacts where warranted. Arrow's social investment initiatives that are implemented through the Brighter Futures Program are also reflected in the updated SIMP.