

CopperString 2.0

Social

Volume 2 Chapter 14





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14. Social

14.1 Introduction

14.1.1 Project overview

The CopperString 2.0 Project (the Project) involves the construction and operation of approximately 1,060 km of extra high voltage overhead electricity transmission line that would extend from Mount Isa to the Powerlink transmission network, via a new connection point at Woodstock, south of Townsville.

The Project involves construction of seven new substations at Woodstock, Hughenden, Dajarra Road (Cloncurry), Mount Isa, Selwyn, Cannington Mine and Phosphate Hill Mine.

The CopperString transmission network is divided into the following eight sections as shown in Figure 14-1:

- 1. Woodstock Substation
- 2. Renewable Energy Hub
- 3. CopperString Core
- 4. Mount Isa Augmentation
- 5. Southern Connection
- 6. Cannington Connection
- 7. Phosphate Hill Connection
- 8. Kennedy Connection (option).

14.1.2 Objectives

The objective of the Environmental Impact Statement (EIS) is to ensure development should be designed and operated to:

- Minimise impacts on the environment and improve environmental outcomes.
- Protect the environmental values of land including soils, subsoils, landforms and associated flora and fauna.
- Contribute to community wellbeing.
- Contribute to strong and balanced social, economic, cultural and environmental sustainability.

14.1.3 Purpose of chapter

The analysis of the social impacts associated with the Project was completed by GHD. The technical assessment report is presented in Volume 3 Appendix Z Social impact assessment. This chapter is a summary of the social impact assessment (SIA) with further detailed information regarding relevant legislation and the methodology of the assessment provided in Volume 3 Appendix Z Social impact assessment.

Specifically, this chapter provides a summary of the:

• Social baseline of the local and regional study areas to better understand the social and economic conditions against which the social impacts were measured.

- Identified potential social benefits and impacts that may arise from the construction and operation of the Project.
- Proposed mitigation measures to minimise the impacts and enhance the benefits of the Project.

14.1.4 Defined terms

The following are a list of defined terms utilised throughout this chapter.

- 'The Project' means the CopperString 2.0 EIS Project
- '**CuString**' means CuString Pty Ltd, the proponent
- 'Corridor selection' means the baseline investigation corridor of the transmission line (a nominal 1,060 km long corridor). The corridor selection is 120 m wide from Woodstock to Dajarra Road, and 60 m wide from Dajarra Road to Mount Isa, Dajarra Road to Selwyn, and Selwyn to Phosphate Hill and Cannington. The 4 km long section of the corridor selection from Dajarra Road Substation to Chumvale Substation is 60 m wide and a 3 km long section from Dajarra Road Substation to the Dugald River 220 kV overhead line is 80 m wide.
- 'Project area' means the 120 m, 80 m or 60 m wide easement and associated infrastructure (including laydown areas, substations, CEV huts, access tracks, brake and winch site, and construction camps referred to in the EIS ToR (these include off easement components).



14.2 Methodology

14.2.1 Study area

The study area for the Project was determined with consideration for the social impacts and benefits of the Project. This included areas that may be affected by changes to amenity during construction or operation of the proposal or may supply goods and services, social infrastructure and the Project workforce.

Two study areas were utilised to capture the social influences of the Project. A local study area was defined as the Project corridor selection (refer to Section 14.1.4). The regional study area was defined as the seven local government areas (LGA) intersected by the Project, as shown in Figure 14-2:

- Burdekin Shire Council
- Charters Towers Regional Council
- Finders Shire Council
- Richmond Shire Council
- McKinlay Shire Council
- Cloncurry Shire Council
- Mount Isa City Council.

Where relevant, the regional study area baseline and impact assessment discusses the primary population centre of each LGA listed above, including Charters Towers, Pentland, Hughenden, Richmond, Julia Creek, Cloncurry, and Mount Isa. These study areas are further described in Section 14.3.

14.2.2 Legislative context and standards

The Coordinator-General declared the Project to be a coordinated project for which an environment impact statement is required under *State Development and Public Works Organisation Act 1971* (SDPWO Act) in February 2019. In September 2019, the Coordinator-General released the finalised Terms of Reference for the Project, which require the preparation of a SIA for the Project, consistent with the requirements of Coordinator-General's SIA Guideline (DSDMIP 2018). The SIA was prepared in accordance with the SIA Guideline (DSDMIP 2018), as detailed in throughout Sections 14.2.1 to 14.2.6.

14.2.3 Scoping

To provide a framework for the SIA, scoping of potential impacts and opportunities was undertaken. This assisted in determining the study area, scope of the social baseline, understanding of potential social impacts and opportunities, and identifying stakeholders to be consulted.



14.2.4 Existing environment

The social baseline is required to understand the existing social characteristics of the study area. It provides the basis for predicting and assessing the likely social values and characteristics that are likely to be impacted by the Project (DSDMIP 2018).

Data and information for the social baseline were gathered from the following sources:

- Australian Bureau of Statistics (ABS) Census 2016
- Local and state government websites and publications
- Information from stakeholder consultation.

The social baseline has been established at a LGA level. The size of populations in these LGAs means that LGA data generally reflects the primary population centres. Data for the State of Queensland is presented as a benchmark.

14.2.5 Stakeholder consultation

CuString has an ongoing stakeholder engagement program, the outcomes of which have informed the preparation of the SIA. In addition to CuString's engagement program, targeted consultation was undertaken to inform the preparation of this SIA in line with the objectives of the SIA Guideline (DSDMIP, 2018). Targeted consultation was undertaken with selected landholders, local government representatives and emergency services.

14.2.6 Impact assessment

The SIA identifies and assesses the potential social impacts and benefits of the Project using a data triangulation process. Potential impacts have been identified and described based on an initial scoping of social issues, results of stakeholder consultation, and a review of other technical studies prepared for the EIS, in line with the requirements of the SIA Guideline (DSDMIP, 2018).

The impact assessment was undertaken using a likelihood and consequence rating based on the following considerations:

- Baseline conditions were used as a basis against which the impacts were measured.
- The vulnerability and adaptability of stakeholders who would experience the impact.
- The extent and severity of the impact meaning how far and how many would experience the impact and at what intensity.
- The duration of the impact, whether it would be a short term or long-term change in the baseline conditions. Short term changes are intermittent and temporary changes during the construction phase and long-term changes are considered to be continuous permanent changes.
- The subjective nature of social impacts; it is recognised that social impacts are often experienced and perceived differently by different people.

14.3 Existing environment

14.3.1 Local study area

The local study area incorporates the area within the corridor selection, which covers over 1,060 km across seven LGAs and intersects 130 land parcels. These properties are predominantly used for rural grazing and cattle breeding. There are no zoned residential land or dwellings located in the local study area.

It is understood from consultation that some landholders have engaged in multi-generational pastoral practices on the land. Aerial or heli-mustering is a common practice in the local study area. The practice involves flying helicopters are low altitudes to direct stock. With most properties being vast and cattle spread across expansive areas, heli-mustering has become a prominent method of managing stock due the time savings presented by the use of aircraft over horse back or motorbike. Existing distribution and sub-transmission lines that intersect and service landholders' properties were identified as a hazard when undertaking heli mustering.

14.3.2 Regional study area

As discussed in Section 14.2.1, the regional study area includes the Burdekin, Charter Towers, Flinders, Richmond, McKinlay, Cloncurry and Mount Isa LGAs. Each LGA shares similar social characteristics while also displaying their own unique individual set values, strengths and challenges. In this baseline, each of these communities will be considered in their own merit.

Burdekin

The corridor selection originates in the west of the Burdekin LGA. Approximately 16 km of the corridor selection is located in the Burdekin LGA.

The Burdekin LGA is mostly rural and has a strong agricultural and rural identity with Ayr and Home Hill as its main population centres. Residents view the LGA as having high liveability, with outdoor recreation including nature based tourism and sporting being highly valued (Burdekin Shire Council, 2017). The areas demographic profile is characterised by an ageing population, which includes a high proportion of senior workers, aged 50 to 64 years old (21.6%) and retirees aged 65 to 74 years old (11.8%) (ABS, 2017).

The agricultural, forestry and fishing industry employed almost one quarter of all the employed population as at the 2016 Census (ABS, 2017). The region also supports horticultural, aquaculture and manufacturing industries (Burdekin Shire Council, 2019).

The Burdekin LGA had a slightly higher unemployment rate at 6.8% than that of the State (5.7%) in December 2019 (Australian Government, 2019). The median household income was lower (\$1,177) when compared to the State (\$1,402) with 42% of all household considered as low income households.¹ (PHIDU Torrens University Australia, 2019a) (ABS, 2017). The Project initiates in the west of the Burdekin LGA which according to ABS data has a SEIFA Index of Relative Socio-Economic Advantage/Disadvantage (IRSAD).² decile of 6, indicating a relative lack of disadvantage (ABS, 2018).

¹ Low income households are defined here as households in the bottom 40% of equalised income distribution. Equalised household income is the total household income adjusted by the number of persons within a household. It enables the comparison of income for a single person household with that of a multi-family household

² The Index of Relative Socio-Economic Advantage/Disadvantage (IRSAD) summarises information about the socio-economic conditions of people and households within an area, based on measures of relative advantage and disadvantage. The IRSAD divides a population of the state into ten equal groups. The lowest scoring 10 percent of these groups are given a decile number of 1, which indicates the highest level of disadvantage, and the highest scoring 10 percent of areas are given a decile of 10, which indicates the lowest level of disadvantage.

Charters Towers

The corridor selection runs through the middle of the Charters Towers LGA, originating in the east approximately 15 km north of Ravenswood and extending for approximately 218 km. The corridor selection exits the LGA approximately 15 km south-west from the Burra Range lookout.

Charters Towers is an inland regional council that incorporates the regional centre of Charters Towers and a number of smaller localities, and a large area of rural homesteads. It is described as the 'education centre of the west' and includes a number of private colleges that support regional and rural populations making the education sector the LGAs largest (Charters Towers Regional Council, n.d.) (Queensland Government, 2019). Being a regional centre, it is well serviced by social infrastructure including a health centre, rehabilitation unit and emergency services (police, fire and ambulance). The areas demographic profile is characterised by a high proportion or retirees aged 65 to 74 years (11.1%) and secondary schoolers aged 12 to 17 years (11.1%) when compared to the State (4.5% and 7.5% respectively) (ABS, 2017).

Charters Towers LGA had the highest unemployment rate in the regional study area in December 2019 at 9.7% (Australian Government, 2019). However, during consultation it was found that the LGA struggles to attract and retain skills workers suggesting a skills shortage. Median weekly household income was also the lowest in the regional study area (\$1,047) with the highest proportion of low income households (44%) when compared to each LGA and similar to the State (41%) (PHIDU Torrens University Australia, 2019a) (ABS, 2017). The rural area s of the Charters Towers GA that the Project intersects range from decile 3 in the east to decile 1 in the west, indicating relatively high levels of disadvantage. Charters Towers itself is relatively disadvantaged, with most of the town within deciles 1-3 within the IRSAD (ABS, 2018).

Flinders

The corridor selection runs through the middle of the Flinders LGA, originating in the east approximately 17 km south of Torrens Creek and extending for approximately 195 km. The Project corridor exits the LGA approximately 24 km south from Marathon.

Most residents in the Flinders LGA reside in rural areas and the administrative and population centre of Hughenden. It includes Hughenden Health Service, emergency services (police, fire and ambulance) and several recreation areas including three national parks. During consultation the community were described as having traditional country values who embrace and enjoy a rural lifestyle.

The areas demographic profile is characterised by an ageing population with a high proportion of retirees aged 50 to 64 years old (13.5%) when compared to each LGA in the study area and the State (9.0%) (ABS, 2017). The population of the LGA is also forecast to decline by 26.8% from 2016 to 2041 (QGSO, 2018).

The economy is predominantly agriculture and accounts for 35.9% of employment in the region (ABS, 2017). Since 2016, the areas unemployment rate has consistently been below the state average, however during consultation it was confirmed that attracting skilled workers and migrants was challenge. Median weekly household income was the second lowest in the LGA (\$1,407) and lower than the state (\$1,402) with 39% of all households defined as low income households (PHIDU Torrens University Australia, 2019b) (ABS, 2017). The rural areas of Flinders were relatively advantaged, with statistical area 1s (SA1s).³ placed within deciles 6 to 7 with most disadvantage concentrated in Hughenden with SA1s placed within deciles 2-3 (ABS, 2018).

³ SA1s are the smallest statistical area reported by the ABS. They have been used in the review of the IRSAD Index to understand how disadvantage may change within the relatively large areas of each LGA considered in the regional study area.



Richmond

The corridor selection runs through the middle of the Richmond LGA, originating in the east approximately 27 km south-east of Richmond and extending for approximately 102 km. The corridor selection exists the LGA 18 km from Nonda.

The Richmond LGA is predominantly rural, and Richmond is its administrative and population centre. It contains Richmond Health Service, a police station and an auxiliary rural fire service. The areas demographic profile is characterised by a younger population with a higher proportion of people in the young workforce cohort aged 25 to 34 years old (18.0%) when compared to the state (13.8%) (ABS, 2017). The area's population is forecast to decline by 29.6% between 2016 to 2041 (QGSO, 2018).

Agricultural, Forestry and Fishing accounts for 32.7% of all employment in the area and has a very high reliance on the non-resident workers who account for 46% of the total 2016 workforce (ABS, 2017) (AEC Group, 2018). The unemployment rate is low (2.8%) while the Indigenous unemployment rate is high (25.0%) (Australian Government, 2019). Median household income (\$1,183) is the third highest in the study area and lower when compared to the state (\$1,402) (ABS, 2017). Just over two thirds (36%) of all households are considered low income households (PHIDU Torrens University Australia, 2019b). The rural area of the Richmond LGA is relatively advantaged, with SA1s placed within decile 7; however, the town of Richmond is relatively disadvantaged, with the population placed within deciles 2-3 (ABS, 2018).

McKinlay

The corridor selection runs through the middle of the McKinlay LGA, originating in the east approximately 21 km south-east of Nella and extending for approximately 149 km. The corridor selection exits the LGA approximately 17 km south-west from Oorindi.

The McKinlay LGA is a predominantly rural area and has four primary settlements including Julia Creek its population and administration centre. The LGA includes the McKinlay Shire Multi-Purpose Health Service and emergency services (police, fire and ambulance). The community were described as highly connected with a high volunteer base during consultation. The areas demographic profile is characterised by less retirees aged 65 to 74 and more young workers aged 25 to 34 years old (16.6%) when compared to the state (13.8%) (ABS, 2017). The population is forecast to decrease by 23.7% from 2016 to 2041, which was confirmed as key challenge during consultation with Council (QGSO, 2018).

Challenges for the region noted during consultation was maintaining, expanding and diversifying industry and employment opportunities. The region is a major grazing centre of cattle and sheep with the main industry of employment being Agricultural, forestry and fishing (39.4%) (ABS, 2017). The LGA also hosts several mining operations, including the Eloise Copper Mine and South32's Cannington mine. Median household income (\$1,135) is below the state (\$1,402) and 30% of households are low-income households (ABS, 2017). Similar to other areas in the study area, the LGAs rural area is relatively advantaged, with SA1s placed within decile 8-9. However, Julia Creek is relatively disadvantaged, within the SA1 placed within decile 3 (ABS, 2018).

Cloncurry

The corridor selection runs through the middle of the Cloncurry LGA, extending for approximately 149 km. Approximately 11 km south-west of Cloncurry, the Project selection corridor diverges and forks south for approximately 90 km to the Selwyn substation, where it forks into two lines. The first runs approximately 60 km to the south-west to the Phosphate Hill Power Station. The other fork heads approximately 60 km to the Cannington sub-station.

The Cloncurry LGA is approximately 100 km east of Mount Isa. Cloncurry is its administrative centre and includes Cloncurry Hospital, emergency service (police, fire and ambulance) and



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several recreational areas including the Ballara Nature Refuge. The community has a strong history of beef grazing who pride themselves on being welcoming and a country town atmosphere. The areas demographic profile is characterised by a high proportion of Indigenous people (22.8%) and young workers aged 25 to 34 years in the LGA (18.3%) when compared to the State (4.0% and 13.8% respectively) (ABS, 2017). The area's population has declined by 7.9% since 2008 (QGSO, 2020) and is forecast to decline by a further 28.5% from 2016 to 2041 (QGSO, 2018).

The mining industry is a major employer in the LGA, accounting for 25.6% of all employment in 2016 (ABS, 2017). Similar to the Richmond LGA, Cloncurry had a high reliance on the non-resident workforce, where non-residents accounted for 53% of the total 2016 workforce. Median household income was the second highest in the regional study area (\$1,646) and higher than the State (\$1,402) (ABS, 2017). The Cloncurry LGA presents a range of SEIFA IRSAD deciles, in the northern rural areas it is neither relatively advantaged or disadvantaged and is placed within decile 5. The southern rural area of the Cloncurry LGA is relatively disadvantaged and is placed in the lowest decile (1). In Cloncurry itself, SA1s are placed within deciles 2-6 (ABS, 2018).

Mount Isa

The Mount Isa LGA is a northern regional hub and is centred on the population and administrative centre of Mount Isa. It includes Mount Isa Hospital, Dajarra Health Centre, emergency services (police, fire and ambulance). The demographic profile is characterised by a high proportion Indigenous people (16.9%) and young workers aged 25 to 34 years in the LGA (18.9%) when compared to the State (4.0% and 13.8% respectively) (ABS, 2017). The Mount Isa LGA was found to have elevated levels of physiological distress (13.6%) and fair or poor health (18.2%) when compared to the state (12.0% and 15.4% respectively) (PHIDU Torrens University Australia, 2019b).

The mining industry was the industry of employment for 30.6% of employees in 2016 (ABS, 2017). In December 2019, the unemployment rate (8.2%) was higher when compared to the state (5.7%). Median weekly household income was the highest in the regional study area (\$2,132) and higher than the State (\$1,402) (ABS, 2017). The Mount Isa LGA presents a range of SEIFA deciles; the majority of the rural areas of the Mount Isa LGA are within decile 5 with some areas in decile 2. In the Mount Isa township, there was a spread of advantage from deciles 6 to 10 around the southern and western periphery of the town and deciles 1 to 2 in the north of the town. The centre of the town has a population within the mid-range (4-5) (ABS, 2018).

14.3.3 Workforce profile

The following section details the anticipated workforce for the construction and operations phases of the Project. This workforce profile includes the workforce numbers for each phase, the likely workforce source, and the proposed accommodation arrangements for the construction workforce.

Construction workforce

The source of the workforce is largely dictated by the availability of skilled workers in an area. The expected construction workforce skills and source of these skills has been detailed in Volume 3 Appendix AB Economic Impact Assessment and is summarised as follows:

• **Civil workers**, which will include piling rig offsiders, roads crew, vegetation clearing crew, concreting crew and steel fixers in yard. The skills required for this type of work are generic and local workers will be given preference wherever possible. In general, these workers will be based in regional Queensland.





- Fibre jointers. This work will most likely be undertaken by a Queensland-based company.
- Steel construction workers and the aerial crew, which will include riggers, truck drivers, crane operators, and helicopter pilots. CuString is confident that most of these workers will be Australian residents on a FIFO basis to Townsville or Cloncurry, but with some itinerant workers from overseas (possibly from Asia or South America).

The final workforce numbers and source will be determined by the construction Contractor, who will be guided to maximise regional workforce as per the local training, education and employment program within the workforce management plan.

Accommodation

Preliminary camp locations, their capacity and their expected operation duration have been summarised in Table 14-1. The capacity in each camp is based on a requirement to accommodate any unanticipated staffing requirements.

Where appropriate worker accommodation facilities already exist, workers may be accommodated in these facilities, pending further engagement with proprietors and other relevant stakeholders.

Table 14-1	Accommodation	location and	operational	duration
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Accommodation location	Accommodation capacity (beds)	Operational duration
Woodstock	350	20 months
Charters Towers	350	7 months
Pentland	350	14 months
Hughenden	350	20 months
Richmond	350	4 months
Julia Creek	350	10 months
Cloncurry	350	21 months
Selwyn Substation	250	18 months
Mount Isa	250	14 months

Operation workforce

The Project's operational workforce will require up to 30 full time equivalent personnel for project maintenance and network control. Project maintenance of the transmission network is likely to be contracted to existing transmission line maintenance providers in the region. Specialist crews would be required to inspect and maintain the substation infrastructure. The maintenance workforce has been estimated at 15 personnel, from the regional study area. The network control workforce will be based in Townsville with an estimated maintenance workforce of 15 people.

14.4 Impact assessment

This section describes and assesses the potential social impacts that may result from construction and operation of the Project on the regional study area. The risk of these impacts based on their likelihood and consequence to the communities in and surrounding the Project are summarised in Section 14.7. A summary of the proposed strategies to mitigate and manage social impacts is provided in Section 14.6. The detailed social impact management plan is provided in Volume 3 Appendix W, Social impact assessment.

14.4.1 Construction

Design response

Design factors that influenced the selection of the corridor selection are considered as part of a Volume 3 Appendix D Corridor selection report.

The corridor selection's design response will be focused on:

- Limiting rural land fragmentation by locating the corridor selection along land parcel boundaries and away from areas used for key land use practices, where practicably possible.
- Avoiding disturbance of sensitive land uses, including townships and localities, by ensuring the implementation of suitable separation distances.
- Avoiding disturbance of homesteads on rural properties. The corridor selection process has achieved a minimum separation distance of 750 m from existing homesteads on rural properties. The exception to this is near workers accommodation associated with the Mica Creek Power Station, which are located between 145 m and 310 m from corridor selection.
- Consultation with local communities and stakeholders in the regional study area has been undertaken to gain an understanding on the receptiveness of the Project, and potential issues. These have been taken into account in the current corridor selection process.
- Avoiding areas of moderate visual sensitivity as far as practicable.
- Predominately areas with low vegetation will be selected for substation locations.

14.4.2 Local study area

Landholder wellbeing

The time required by landholders to engage with CuString for land access negotiation during the pre-construction phase of the Project, has the potential to result in feelings of stress, anxiety, and frustration for landholders, particularly those who do not wish to host Project infrastructure. These emotions may continue through to and during the construction of the Project. Consultation found that many landholders reported low levels of stress and frustration associated with the Project. However, it is recognised that there are differing views on hosting Project infrastructure.

The impacts to landholder wellbeing will be managed through:

- Developing a land access management plan for each landholder that documents the agreed access, rehabilitation, and communication arrangements
- Developing and implementing a Construction Environmental Management Plan for the Project
- Developing a Code of Conduct, that outlines the behaviour expected of CuString staff and contractors when interacting with each other, landholders and other community members

Developing a stakeholder engagement plan to communicate project related updates and complaints management procedure to effectively respond to and monitor complaints.

Impacts on landholders and the productivity of their properties

The construction of the Project has the potential to result in a number of changes to property management and infrastructure for landholders such as vegetation clearing, introduction of weeds, restricting use of construction area for grazing and damage to property. These changes are likely to result in increased requirements for property management by the landholders.

The Project's planning and construction will also require landholders to engage with Project staff and manage Project activities on their properties. This may reduce the time available for regular agricultural or property maintenance activities and result in flow on reduction in property productivity. Impacts on landholders and the productivity of their properties will be managed through:

- Land access and compensation negotiations will be undertaken individually with affected landholders.
- Developing and implementing a Construction Environmental Management Plan for the Project
- Developing a land access management plan for each landholder that documents the agreed access, rehabilitation, and communication arrangements
- Developing a Code of Conduct, that outlines the behaviour expected of CuString staff and contractors when interacting with each other, landholders and other community members

Impacts on amenity and privacy

The Project's construction would involve vegetation removal, foundation installation, construction of the transmission towers, conductor stringing, and rehabilitation. Construction activities are likely to result in temporary changes in air quality and noise amenity, including increased dust, noise, and traffic. Depending on the location of the construction works relevant to the activities of landholders, changes in air quality and noise amenity may be noticeable and be perceived as intrusive and annoying at time for some as it may momentarily/temporarily disrupt some day to day activities such as conversations, watching television, resting or relaxation, particularly given that many landholders currently enjoy remote and quiet rural lifestyle.

Similarly, the presence of the Project's construction workforce may result in a loss of privacy for landholders. This change would be felt differently depending on the landholder and the value placed on privacy. It was noted during consultation that privacy was highly regarded by a number of landholders.

The changes in amenity and privacy are expected to be minimised for the majority of landholders, based on the separation distances between dwellings and the Project corridor selection. However, this SIA recognises that the underlying sensitivity of landholders is personal in nature and the level of intrusion and change of amenity would be influenced by the activities undertaken on the property in proximity to the Project and viewpoints from dwellings. The impacts to landholder amenity and privacy will be managed through:

- Developing and implementing a Construction Environmental Management Plan for the Project, which will mitigate noise, air quality and visual impacts to receivers.
- Developing a land access management plan for each landholder that documents the agreed access, rehabilitation, communication and compensation arrangements.

- Developing a Code of Conduct, that outlines the behaviour expected of CuString staff and contractors when interacting with each other, landholders and other community members.
- Developing a complaints management procedure to effectively respond to and monitor complaints.

14.4.3 Regional study area

14.4.3.1 Economy

Regional economic benefits

The economic impacts of the Project have been assessed for North-West Queensland, Queensland and Australia as a whole. As detailed in Volume 2 Chapter 16 Economic, over the period to 2050, the Project is projected to increase the real economic output of:

- North-West Queensland by a cumulative total of \$142.6 billion (with a net present value of \$81.0 billion, using a 3% real discount rate).
- Queensland by a cumulative total of \$139.5 billion (with a net present value of \$79.3 billion, using a 3% cent real discount rate).
- Australia by a cumulative total of \$131.8 billion (with a net present value of \$75.0 billion, using a 3% real discount rate).

Real income is household or individual income that has been adjusted to reflect inflation. Over the period 2020 to 2050, the Project is projected to increase the real income of:

- North-West Queensland by a cumulative total of \$17.4 billion (with a net present value of \$10.4 billion, using a 3% real discount rate).
- Queensland as a whole by a cumulative total of \$54.3 billion (with a net present value of \$31.7 billion, using a 3% real discount rate).
- Australia as a whole by a cumulative total of \$78.4 billion (with a net present value of \$45.8 billion, using a 3% real discount rate).

Increase in employment opportunities

As discussed in Section 14.3.3, the Project will generate direct and indirect construction employment opportunities. The construction workforce will peak at 950 full time employees. Where possible and competitive, the Project will employ and subcontract locally and regionally. However, it was noted during consultation that much of the regional study area has a skills shortage. That is, despite unemployment rates in some cases being higher than the Queensland unemployment rate (Section 14.3.2), many regional employers struggle to attract and retain skilled and unskilled workers. This means that engaging the local and regional workforce may be challenging for the Project.

The Indigenous population in many parts of the regional study area experiences high unemployment compared to their non-Indigenous counterparts. However, it is recognised that Indigenous people face other social barriers to employment, including poorer health, low levels of work retention and high levels of interaction with the criminal justice system (AIHW 2012). This means that engaging the regional Indigenous workforce may be challenging for the Project.

CuString will work with councils, education, and training providers, and local employment agencies to develop a local and Indigenous workforce participation plan that:

- Prioritises local and regional employment
- Maximises Indigenous employment, through investment in work-ready programs in the region



- Identifies opportunities for the employment of apprentices and trainees
- Work with local training providers to provide training for regional Indigenous and non-Indigenous workers to gain the required qualification to be employed on the project.

CuString will incorporate the above requirements into their tender evaluation process for major contracts and will work with construction alliance partners to ensure that local and Indigenous employment strategies are incorporated into the Project's major contracts.

Increase in business opportunities

As discussed in Section 14.3.3, where appropriate and competitive local businesses and service providers would have an opportunity to provide goods and services for the Project. These include:

- Goods and services required to support the operation of the construction camps such as catering, cleaning, laundry, security and maintenance.
- Non-transmission infrastructure specific services, such as fencing, earthworks, and vegetation management and rehabilitation.

The economic benefit would largely be restricted to formalised supply and sub-contracting opportunities. Consultation found that local businesses throughout the regional study area are experienced in delivering the services likely to be required by the Project.

CuString will work with councils, local economic development representatives and local suppliers to develop a local and Indigenous business participation plan that:

- Will outline an approach for CuString to engage with local businesses to ensure that they are aware of supply opportunities
- Give preference to local, regional and Indigenous-owned businesses in tendering evaluation where their offers meet CuString's scope of work and are equal in terms of health, safety, and environment requirements, price, timing, quality and other evaluation criteria.

CuString will incorporate the above requirements into contractor terms and conditions.

Short-term accommodation

The Project's construction workforce is expected to be housed in temporary purpose built or existing worker accommodation facilities. A number of councils noted that there were existing construction camps that may have the capacity to host the Project workforce. Should this occur, it is expected that this would result in increased business opportunities for the existing accommodation providers.

The Project's planning and design activities would also create a small, sporadic, and short-term demand for accommodation in the regional study area. The limited use of existing accommodation facilities would also limit the potential for undue demand on short term accommodation facilities, which may displace the use of these facilities by other users, such as tourists.

Opportunities for use of local accommodation may also be identified through meetings between a representative of the Construction Contractor and the local council and chamber of commerce.



14.4.3.2 Healthy, safe and connected communities

Decrease in perceived road safety

The Project is expected to utilise the State and local road network, including the Flinders and Barkly Highways, alongside local roads that have the required capacity for the Project's construction traffic. As detailed in Volume 3 Appendix U Transport impact assessment, the Project's construction traffic is expected to result in an increase in average annual daily trips on a number of state-controlled roads over a 5% impact threshold. This includes parts of the Flinders and Barkly highways, Cloncurry – Dajarra Road, Burdekin Falls Dam Road, Kennedy Developmental Road, Richmond – Winton Road, Julia Creek – Kynuna Road, and Mount Isa – Duchess Road. However, the trigger volume of 5% is easily exceeded due to the low base traffic volumes for many state-controlled roads west of Charters Towers.

An increase in heavy vehicles on the road network may give rise to perceptions of reduced road safety for other road users, as it is an already an existing concern for some stakeholders, as noted through the SIA consultation. This concern is likely to increase for sensitive road users, such as school buses.

The Project's use of the road network such as wider loads may result in short and temporary delays, and potentially result in a minor increase in travel time for other road along some roads. Any wide loads and associated delays would be subject to approval from the Department of Transport and Main Roads, Queensland Police Service and the relevant local government, and would be required to be included in the Contractor's construction program.

The extent of impacts to pavements and road user safety will be identified and managed in line with the additional investigations and management framework identified in Volume 3 Appendix U Transport impact assessment.

The Project's construction traffic related impacts will be managed by a Road Use Management Plan. The Road Use Management Plan will be developed in consultation with government agencies including the Department of Transport and Main Roads, local government authorities and the Queensland Police Service. The plan will include but not be limited to:

- Construction safety measures and awareness in local communities about construction traffic and safe behaviour around it.
- Manage the efficiency of the road network impacted by the Project, including consideration of existing periods of peak use and protecting sensitive users, including school bus operation hours, and during tourism events.
- Provide information to local road users about the construction traffic haul routes, including visitors the area through engagement with Tourist Information Centres.
- Maintain the local roads from any damage from the Project's construction traffic.

Other mitigation measures have been included in Table 13.4 in Volume 2 Chapter 13 Transport.

Community perceptions of safety

The presence of the construction workforce in regional towns was identified as a cause of potential concern for the community in the initial scoping for this SIA. During consultation, those with previous experience hosting non-residential workforces had limited concerns regarding non-residential workforce and community safety. However, in smaller communities such as Julia Creek, Richmond, and Hughenden, some concerns were raised about the social integration of the non-resident workforce. Specifically, it was noted that smaller communities in particular had low rates of crime, with a strong sense of safety and trust which is highly valued by the community, and expressed the importance of ensuring that feeling of safety was maintained. Those who did have experience in hosting camps, noted during SIA consultation that



workforces are drug and alcohol tested and managed by codes of conduct, and therefore unlikely to engage in undesirable behaviour, which may impact on perceptions of safety.

Similarly, hosting a non-resident workforce was seen by a number stakeholders to hold the potential to support community organisations, such as sports groups and local gyms. Although some opportunities for integration exist, for example, use of local gyms or outdoor recreation areas for exercising. However, given the temporary nature of the construction workforce and long shifts, other opportunities for integration of the workforce with local communities, such as participation in local sporting clubs would be limited.

The above discussion generally relates to communities that host a non-resident workforce camp within or proximal to the community. Where camps are located some distance from a community, such as the camps proposed for Julia Creek and Charters Towers, the potential for the community to experience changes in the perception of safety is often very limited due to the separation of the workforce from the community. At the same time, non-resident workforce separation from a community is likely to reduce workforce spending in a community and therefore limit the potential economic benefits associated with the temporary increase in population.

CuString have undertaken consultation with Burdekin, Charters Towers, Flinders, Richmond and Cloncurry local governments regarding the location of construction camps in January 2020. Local governments generally requested that further consultation be held when the Project is ready to commence. Follow up consultations were held in October 2020 and negotiations are continuing.

While the potential for the construction workforce to negatively impact the community safety and values is limited, CuString will develop a workforce management plan, including a code of conduct, which will address:

- Workforce code of conduct and behaviour management
- Fitness for work policy including drug and alcohol testing
- Expectations and standards when dealing with external parties and the broader community
- Promoting the participation of workforce in local clubs and events.

14.4.3.3 Community infrastructure

Impacts on health and emergency services

It is expected that the construction workforce would have the majority of their health needs addresses at their usual place of residence. However, as the workforce would be located in the regional study area for the duration of their shift, the workforce may need to access local general practitioner services. Similarly, in case of emergency or accident, the Project may need to access emergency or medical services within the closest town. Any increase in demand for health and emergency services would be therefore be small, sporadic and short term in nature.

Whilst most communities confirmed they had access to a general practitioner, higher levels of generalist or specialist care than available locally are generally referred to a secondary or tertiary health service at Mount Isa or Townsville. Consultation with emergency services providers within the regional study area indicated that local services would have the capacity to respond to any incidents from the Project.

The following management measures would be developed to manage the workforce's impact on health and emergency services:

• Conducting 'fit for work' examination for all project construction workforce

- Informing the workforce and any contractors of the limitations in medical services in the regional study area
- Developing a health and safety plan to minimise injuries and health emergencies of the workforce
- Incorporating first aid facilities, including the provision of a registered nurse at workforce accommodation and construction sites
- Developing an emergency response plan in consultation with local emergency service providers.

Workforce wellbeing

There are a number of factors that could influence workforce wellbeing, including non-residential workforce practices, which incorporate both non-residential living arrangements, alongside shiftwork. Research undertaken by the Centre for Transformative Work Design (2018) found that non-resident workers were at a greater risk of poor mental health than workers undertaking similar work under residential work arrangements. Other factors such as isolation, loneliness, long rosters and travelling long distances was also linked to poor mental health and well-being. Given the Project's construction workforce use of non-residential workforce practices, there is potential that the workforce would be exposed to practices that may adversely impact mental health and wellbeing.

The workforce management plan would be developed and include but not be limited to the following measures to promote wellbeing within the workforce:

- Workforce accommodation would be developed with view to the principles of the Economic Development Queensland Non-Resident Worker Accommodation Guideline (2015) with an emphasis on providing accommodation that adequately provides for occupants⁴. This would include but not be limited to providing access to amenities (e.g. barbeques, communal areas) and recreational activities that have a clear social element within or proximal to workforce accommodation.
- Access to telecommunication infrastructure (e.g. free Wi-Fi, mobile phone network) would be provided within workforce accommodation.
- Activities to integrate with the local community through memberships at local sporting and recreational clubs and community events. CuString, through its workers accommodation services provider would encourage and facilitate workers participate in local community sporting and recreational clubs and access local businesses and facilities.
- Mental health training for managers and supervisors
- Procedures for increasing the mental health literacy and wellbeing knowledge of the workforce
- Access to a mental health and wellbeing support services, including but not limited to the Employee Assistance Program.

In addition, fatigue and alcohol management strategies would be developed, as is discussed further in Volume 3 Chapter 16 Hazards, health and safety.

Recreational areas

Important historic and cultural recreation areas are located within the regional study area, a few of which are located within five kilometres from the corridor selection. During construction, a

⁴ As the Project's workforce accommodation facilities would be temporary, it is not expected that the requirements of the Guideline would be met in full, as the Guideline, including the design benchmarks were predominantly targeted at permanent and larger-scale camp-style facilities.



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range of equipment and activities will be visible including construction areas, gradual disturbance to natural vegetation within the corridor selection and the erection of towers. Volume 3 Appendix O Visual amenity found that the distance between the recreational area and the Project corridor selection, and the way in which the existing landscape would reduce the visibility of the Project would result in a limited change in visual amenity. Design methods to limit visual impacts include symmetry with roads over long distances, alignment with existing transmission lines, and vegetation screening of substations. Further design methods are included in Volume 2 Chapter 5 Land.

Consequently, the change in amenity from the Project's construction is unlikely to impact on the community use and enjoyment of nearby recreational areas.

14.4.3.4 Cumulative impacts

Competition for labour

There are a number of projects planned in the regional study that may occur at the same time as the Project's construction. During consultation it was also confirmed that there is a current skills shortage across the regional study area and there was unlikely to be the specialist skills required for the Project in the existing workforce.

Should all projects be developed, there is potential that there may be competition for labour in the regional study area, drawing workers from existing jobs and creating shortfalls. However, it is expected that the Project's workforce would be sourced from a combination of local and other parts of Queensland and Australia will be used for the Project along with opportunities for training local workforce.

To minimise draw of workforce from existing jobs, the following mitigation measures would be implemented:

- Continue to engage with Mount Isa Townsville Economic Zone (MITEZ) to discuss workforce procurement and timing of other projects.
- Maximise Indigenous employment, through investment in work-ready programs in the region
- Identify opportunities for the employment of apprentices and trainees
- Work with local training providers to provide training for regional Indigenous and non-Indigenous workers to gain the required qualification to be employed on the project.

14.5 **Operation**

14.5.1 Local study area

Landholder well being

Potential health impacts associated with electro-magnetic fields were raised during consultation. Volume 2 Chapter 16 Hazards, health and safety assesses the potential for health impacts due to the operation of the Project.

The presence of the Project in the local study area would generate a permanent hazard for helimustering. Volume 2 Chapter 17 Hazards, health and safety assesses the potential hazards and risk associated with heli-mustering.

Impacts on landholders and the productivity of their properties

Most of the land disturbed during the Project's construction would be reinstated during the Project's operation and would be available for use by landholders. However, within the corridor



selection, it is expected that there would be vegetation height restrictions, alongside potential limits to fuel load, in addition to restrictions on infrastructure development.

The presence of a transmission line on a property may alter the cost or number of heli-musters. Maintenance activities required during operations may increase the risk of weed spread through the movement of vehicles across properties with different management practices. Both these changes have the potential to increase landholders' costs to operate their property.

The potential for landholders to increase costs to operate their property and business will be managed through the development of a landholder compensation agreement. Where the transmission line crosses any area that is used for aviation purposes, transmission line identification markers will be installed to indicate the position and/or direction of the transmission line. This does not include heli-mustering areas unless the land owners specifically apply for identification markers through the Network Service Provider.

The potential for spread of weeds during maintenance activities would be managed in line with the mitigation measures detailed in Volume 3 Appendix S Concept biosecurity plan.

Impacts on amenity and privacy

The presence of Project infrastructure will result in permanent change to the local landscape for nearby landholders and residents. However, it is expected that there is a sufficient buffer between residences and Project infrastructure that changes in visual amenity of landholders would be limited and over a period of time people adjust to the changes in visual amenity, as detailed in Volume 2 Chapter 5 Land.

The Project's operation would require minor maintenance activities, which would require ongoing property access. This may result in a temporary noise disturbance for landholders. However, impacts on landholder's amenity and privacy would be limited, as operational activities would be infrequent and temporary. The noise emission from wind effects on the conductors and structures during higher wind speeds or corona effect in wet weather will be negligible.

The impacts to landholder amenity and privacy during operation would be managed through:

- Developing a land access management plan for each landholder that documents the agreed access, rehabilitation, communication and compensation arrangements.
- Developing a Code of Conduct, that outlines the behaviour expected of CuString staff and contractors when interacting with each other, landholders and other community members
- Developing a complaints management procedure to effectively respond to and monitor complaints.

14.5.2 Regional study area

14.5.2.1 Economy

Employment opportunities

As discussed in Section 14.3.3, the Project's operational workforce will be up to 30 personnel, 15 of whom will maintenance and located in either Mount Isa or Townsville who are expected to stay in local accommodation during maintenance periods. The other 15 will be network control and permanently located in Townsville.

Business opportunities

While CuString is committed to regional industry participation, the Project's sourcing requirements and expenditure would be limited.

14.5.2.2 Community infrastructure

Recreational areas

Changes to the visual environment would include the presence of new power lines, towers, maintenance tracks, substations, and the removal of some vegetation. In general, Volume 2 Chapter 5 Land found that the distance between the recreational area and the Project, and the way in which the existing landscape would reduce the visibility of the Project would result in a limited change in visual amenity. This is in part a result of the corridor selection, which avoids and minimises amenity changes for nearby sensitive receptors.

Operation of the transmission line will require ongoing maintenance that will be of less scale and intensity than the construction activities. The scale of operational activities in the vicinity of recreational areas is expected to be small, sporadic and in some ways similar to usual activities in the surrounding area, such as presence of four-wheel drives and heli-mustering.

Overall, the change in amenity due to the presence of the Project's permanent infrastructure and operational activities would be unlikely to impact on the community use of recreational areas.

14.5.2.3 Cumulative impacts

Competition for labour

The operation workforce will be 30 personnel at peak, half of whom would be permanently located in Townsville and the other half within the regional study area (or also Townsville). Therefore, it is unlikely to result in competition for labour within the regional study area.

14.6 Social impact management plan

Management strategies that could be implemented to reduce potential negative social impacts and enhancement strategies to maximise opportunities have been summarised in Table 14-2 below. It is expected that the Social Impact Management Plan would be updated and approved by the Coordinator-General prior to the Project's construction. Other management plans that would influence the management of social impacts and opportunities include:

- Construction Environmental Management Plan
- Road Use Management Plan
- Emergency Response Plan
- Concept Biosecurity Plan.



Table 14-2	Social impact	management	plan strategies
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Strategy	Summary
Project planning and design	CuString will consider all Project design processes available to reduce the consequences of potential social impacts. These include the location of construction camps and location of laydown areas and concrete batching plants.
Landholder compensation negotiation	It is CuString's strong preference that a voluntary and commercial agreement is reached with landholders in the acquisition of an interest (easement) required for the Project. This process will follow detailed land access negotiations with landholders regarding the possible corridor selection and other specific issues regarding current and future land uses or operations.
Land access management plan	The land access management plan will identify agreed access arrangements during construction and operation, rehabilitation requirements after construction and communication arrangements for each property.
Community and stakeholder engagement plan	A community and stakeholder engagement plan will guide engagement with stakeholders during construction of the Project. The plan will act as a key mechanism to foster dialogue with communities and stakeholders and manage and monitor potential social impacts and opportunities of the Project. The Plan will include: • Identification of key stakeholders • Key messages • Engagement methods and activities • Complaints management procedure.
Workforce management plan	 The Workforce management plan will include a: Training and education program that will maximise employment including indigenous employment and train indigenous and non- indigenous workers who require additional qualifications to work on the Project. Code of conduct that describes the expected standard of behaviour for all personnel (construction and operation). Measures to develop a strong mental health culture and promote wellbeing within the workforce.
Local and Indigenous business and employment participation plans.	The local and Indigenous business participation plan will maximise opportunities for local and Indigenous businesses though relationships with local businesses, suppliers and key stakeholders and giving preference to local, regional and Indigenous-owned businesses in tendering evaluation.



14.7 Conclusion

This section summarises the potential impacts and mitigation measures associated with the Project, based on a risk assessment process as outlined in Section 14.2.6.

Table 14-3 and Table 14-4 show the potential pre-mitigated risks and the residual risks that remain after implementing the mitigation measures detailed in Section 14.6 for construction and operation respectively.

Table 14-3	Residual	risks	during	construction

Potential impact	Pre-mitigated risk	Residual risk
Local study area		
The Project's planning and construction may reduce the wellbeing of landholders through feelings of stress, anxiety, and frustration.	Medium	Medium
The Project's construction activities and the time required for landholders to engage with the Project may increase requirements for property management and reduce property productivity.	Medium	Low
The Project's construction may reduce the amenity and privacy of landholders.	Low	Low
Regional study area		
Economy		
The Project's construction and operation would result in an increase in economic output and real income.	Medium	Medium
The Project's construction would increase the availability of local and regional employment opportunities.	Low	Low
The Project's construction would increase the availability of local and regional business opportunities.	Low	Low
Increased business opportunities for short term accommodation providers	Low	Low
The use of short-term accommodation by the Project may displace other users.	Negligible	Negligible
Community health, safety, and connectivity		
The Project's construction vehicles presence on the road network results in a perceived decrease in road safety.	Medium	Low
The Project's workforce's presence in communities may result in a decrease in perceived safety.	Low	Low
Community infrastructure		
The Project's workforce's use of health and emergency services may compromise capacity to service the existing community.	Low	Low
The Project's use of non-residential workforce practices may reduce wellbeing for the workforce.	High	Medium
The Project's establishment may reduce the community use and enjoyment of nearby recreational areas.	Negligible	Negligible
Cumulative impacts		
The Project's workforce requirements may contribute to a cumulative demand for labour in the regional study area.	Low	Low



Table 14-4 Residual risks during operation

Potential impact	Pre-mitigated risk	Residual risk
Local study area		
The Project's establishment would restrict landholder activities within the corridor selection and may increase the cost of property operation and maintenance.	Medium	Low
The Project's establishment and operational activities may reduce the amenity and privacy of landholders.	Low	Low
Regional study area		
Economy		
The Project's operation would increase the availability of local and regional employment opportunities.	Low	Low
The Project's construction would increase the availability of local and regional business opportunities.	Negligible	Low
Community infrastructure		
The Project's establishment may reduce the community use and enjoyment of nearby recreational areas.	Negligible	Negligible
Cumulative		
The Project's workforce requirements may contribute to a cumulative demand for labour in the regional study area.	Negligible	Negligible