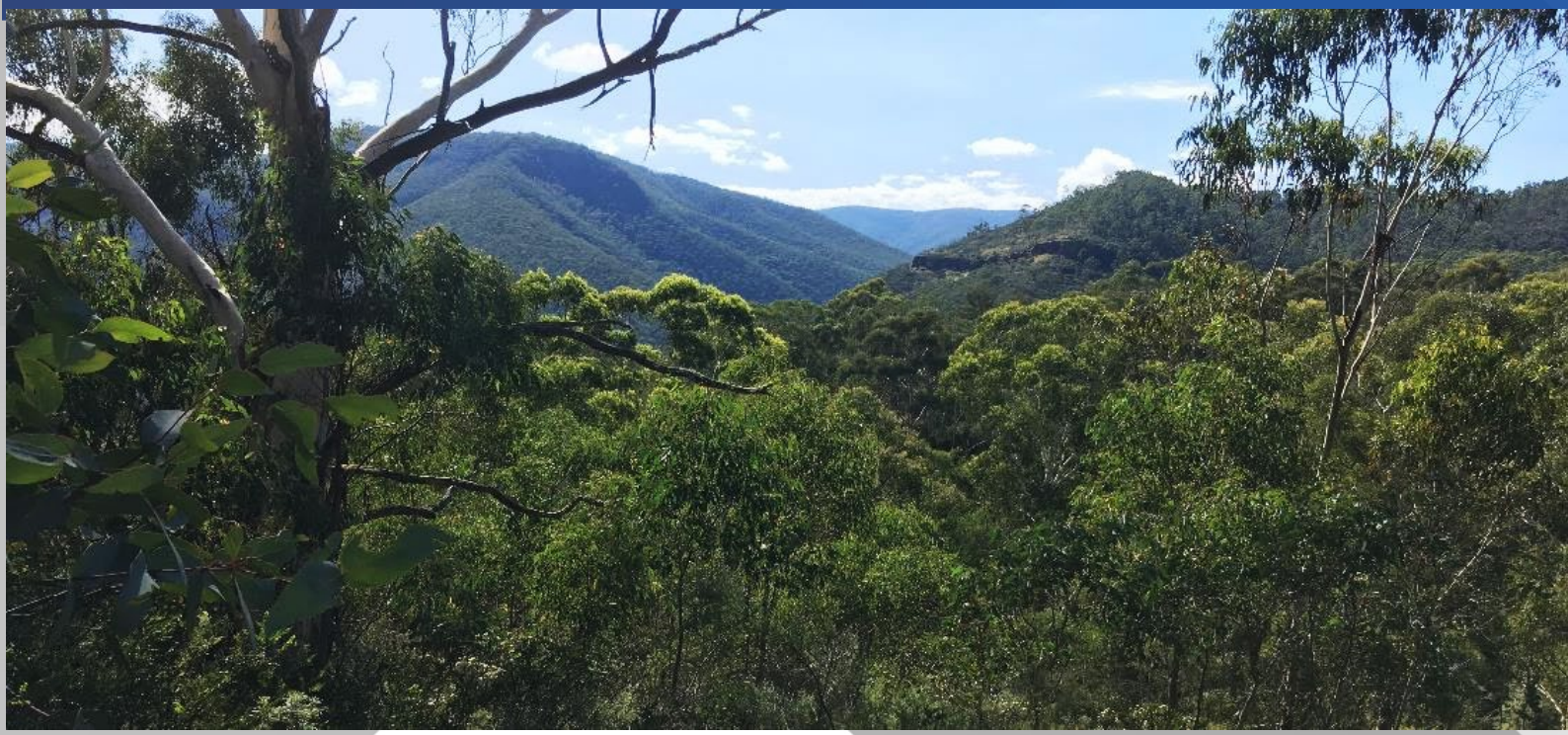


Appendix E Socio-economic impact assessment

Snowy 2.0 Transmission Connection Project
Environmental Impact Assessment

(February 2021)





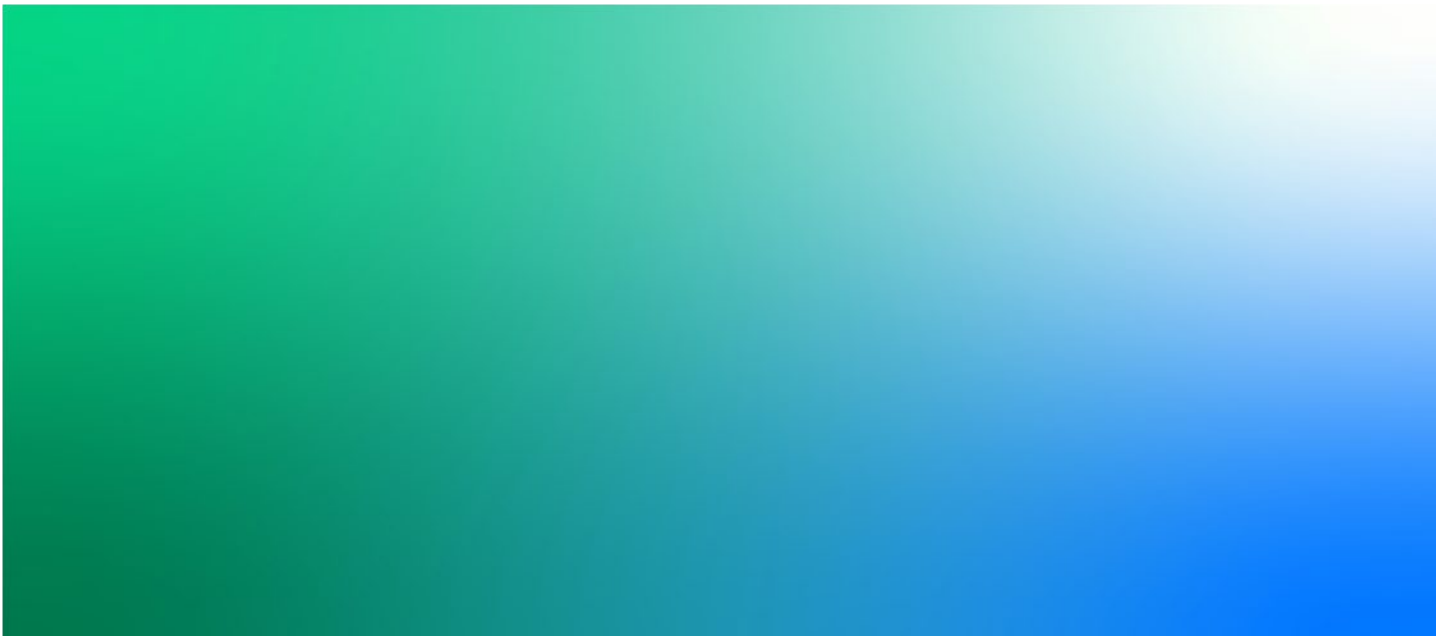
Snowy 2.0 Transmission Connection Project

Socio-economic Impact Assessment

Rev 4

December 2020

Prepared for TransGrid



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Executive summary

The pumped hydro-electric expansion of the existing Snowy Mountains Hydro-electric Scheme (Snowy Scheme), called 'Snowy 2.0', is a critical project for the National Electricity Market (NEM) as it moves to a low-emissions future. Snowy 2.0 will serve the market and consumers by providing dispatchable generation to address supply volatility, as well as fast-start capability and large-scale storage to address intermittency issues. As the transition to renewables accelerates, reliable supply cannot be achieved without massive energy storage.

TransGrid is seeking approval under Part 5 Division 5.2 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the construction and operation of a new overhead transmission connection and substation to enable the grid connection of Snowy 2.0 (the project).

The project is located approximately 20 kilometres south of Talbingo within Kosciuszko National Park (KNP), with the western portion of the project traversing Bago State Forest. The project is located wholly within Snowy Valleys local government area (LGA). The project comprises the construction and operation of two new overhead transmission lines and a substation to the west of the Talbingo Reservoir to connect Snowy 2.0 to the existing electricity transmission network at Nurenmerenmong, east of Tumbarumba.

The key elements of the project include:

- A new 500/330 kilovolt (kV) substation located within Bago State Forest and adjacent to TransGrid's existing Line 64, which forms a 330 kV connection between Upper Tumut and Lower Tumut switching stations. The substation would occupy a footprint of approximately 300 metres (m) wide by 600 metres long inclusive of an approximate 25 metres to 45 metres wide cleared asset protection zone (APZ) surrounding the switchyard
- Upgrade and widening of an existing access road off Elliott Way to the new substation including the construction of new driveways into the 330 kV and 500 kV switchyards
- Two new 330 kV overhead double-circuit transmission lines from the Snowy 2.0 cable yard to the new substation:
 - Total length of each line is approximately nine kilometres
 - Located in a corridor ranging in width from approximately 120 metres to 200 metres
 - Each line would comprise approximately 21 steel lattice structures up to 75 metres in height
- Short overhead 330 kV transmission line connection (approximately 300 metres in length) comprising both steel lattice structures and pole structures as required between the substation and Line 64
- Construction of approximately 10 kilometres of new access track (Option A) or eight kilometres (Option B) to the transmission structures and upgrade to existing access tracks where required. Option A minimises disturbance within a mapped high risk naturally occurring asbestos zone. The access tracks would remain following the completion of construction to service ongoing maintenance activities along the transmission lines
- Establishment of a helipad (approximately 30 metres wide by 30 metres long) to support the transmission line construction activities carried out at higher elevations and steep terrain along Sheep Station Ridge
- Ancillary activities, including the establishment of tensioning and pulling sites for conductor and earth wire stringing, crane pads, site compounds, and equipment laydown areas.

This report provides an assessment of the potential socio-economic impacts associated with the construction and operation of the project which involves:

- Scoping of the potential socio-economic issues for the project and identifying communities likely to be affected by the project's construction and operation

- Reviewing background information relevant the project and socio-economic environment of the study area, and preparing a social baseline describing existing social characteristics, values and conditions within the local and regional communities
- Identifying and assessing socio-economic impacts of the project's construction and operation, including potential impacts on property, local amenity, social infrastructure, local business and industry, community values and access and connectivity
- Identifying measures to mitigate identified socio-economic impacts.

The study area for this assessment includes the project area and the Australian Bureau of Statistics (ABS) defined State Suburbs (SSC) of Tumbarumba and Talbingo. This assessment also considers potential impacts on regional communities, businesses and industry defined by the Snowy Valleys LGA.

Features of the socio-economic environment relevant to the study area and region include:

- The project area is located within KNP, which holds a high level of importance for communities at local, state and national levels and is a key tourist attractor for the region
- KNP management trails are located in vicinity to the project area
- The project area intersects the Talbingo Reservoir, Elliott Way and Lobs Hole Ravine Road
- There are no local communities within the project area, with the nearest communities located about 15 kilometres from the project
- Local communities in the study area value the natural environment of the region
- The nearest towns offering day-to-day amenities are Talbingo and Tumbarumba, with Tumut being the closest local activity centre.

Impacts of the project on the social and economic environment of the study area and wider region would mainly be associated with the construction phase. Potential impacts include:

Construction

- Economic benefits for accommodation owners, associated with increased demand for short-term accommodation for construction workers, particularly in Tumbarumba
- Impact on the availability of accommodation for tourists, visitors and seasonal workers during peak tourist and picking periods due to use of short-term accommodation by construction workers, potentially deterring tourists and seasonal workers from visiting the area during and following construction and resulting in potential impacts on tourism operators and primary producers
- Increased business for local shops, food outlets and industries supplying goods and services to the construction workforce and construction activities
- Potential for increased pressure on community services and facilities (eg health and medical services) and impacts on the ability of residents to access some services when required, due to increased demand by construction workers
- Possible temporary changes to boating access on parts of Talbingo Reservoir near to construction works, although general access and use of the reservoir for recreational boating and fishing would be maintained
- Clearing of vegetation, impacting on community values relating to scenic and landscape amenity and the environment
- Increased noise, dust and construction traffic impacting on amenity close to the project for recreation users of KNP and Bago State Forests

- Temporary changes to access and road conditions near construction works and increased traffic through smaller towns such as Tumbarumba, Batlow and Adelong and on local roads such as Elliott Way, resulting in possible delays, disruptions and impacts of road safety for residents, visitors and National Parks and Wildlife Services.

Operation

- Changes in land use associated with the operation of the new substation and surrounding buffer, including loss of this land for recreation and forestry uses
- Impacts on views and scenic and landscape amenity due to the clearing of vegetation along the transmission corridor and access tracks and the physical presence of project infrastructure, including the transmission lines and substation.

The implementation of management measures, including consultation and communication with local businesses, NPWS and recreational users are recommended to assist in managing potential negative impacts and maximise positive impacts, particularly for local business and employment. A community and stakeholder engagement plan would also be implemented for the project. This will outline strategies for communicating and engaging with key stakeholders and the wider community to manage the social and economic impacts of the project and maximise positive impacts.

1. Introduction

This chapter provides an overview and background to the Snowy 2.0 Transmission Connection Project (the project), details the project objectives, provides a summary of the need and objectives considered and outlines the location of the project. This chapter also provides the purpose and structure of this report.

1.1 Overview

TransGrid is the manager and operator of the major high-voltage electricity transmission network in New South Wales (NSW) and the Australian Capital Territory (ACT).

TransGrid is seeking approval under Part 5 Division 5.2 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the construction and operation of an overhead transmission connection and substation (the project) to enable the grid connection of Snowy 2.0 pumped hydro generation project (Snowy 2.0).

The Snowy 2.0 Transmission Connection Project (the project) has been declared critical State Significant Infrastructure (SSI) under the *State Environmental Planning Policy (State and Regional Development) 2011*, and is subject to assessment and determination by the Minister for Planning and Public Spaces. This socio-economic impact assessment has been developed in support of the Environmental Impact Statement (EIS) for the project.

1.2 Purpose of this technical report

This technical report has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued for the project on 1 November 2019 by the Planning Secretary of the NSW Department of Planning, Industry and Environment (DPIE).

The SEARs to social and economic impacts are outlined in **Table 1-1**, along with a reference to where these requirements are addressed in this report.

Table 1-1: Secretary's environmental assessment requirements – social and economic

Requirement	Location in EIS
Social: an assessment of the social impacts of the project on: <ul style="list-style-type: none">the demand for infrastructure and services in the Snowy Valleys local government area; andusers of the Kosciuszko National Park, including recreational fishing, bushwalking, camping and boating;	Section 6.5 Section 6.4 and Section 6.6
Economic: an assessment of the economic impacts of the project on the locality and NSW.	Section 6.3

2. Description of the project

2.1 Project components

The project would involve the construction and operation of an overhead transmission line connection and substation to connect Snowy 2.0 to the National Electricity Market.

The key elements of the project include:

- A new 500/3300 kilovolt (kV) substation located within Bago State Forest and adjacent to TransGrid's existing Line 64, which forms a 330 kV connection between Upper Tumut and Lower Tumut switching stations. The substation would occupy a footprint of approximately 300 metres wide by 600 metres long inclusive of an approximate 25 metres to 45 metres wide cleared asset protection zone (APZ) surrounding the switchyard
- Upgrade and widening of an existing access road off Elliott Way to the new substation including the construction of a new driveway into the 330 kV and 500 kV switchyards
- Two new 330 kV overhead double-circuit transmission lines from the Snowy 2.0 cable yard to the new substation:
 - Total length of each line is approximately nine kilometres
 - Located in a corridor ranging in width from approximately 120 metres to 200 metres
 - Each line would comprise approximately 21 steel lattice structures up to 75 metres in height.
- Short overhead 330 kV transmission line connection (approximately 300 metres in length) comprising both steel lattice structures and pole structures as required between the substation and Line 64
- Construction of approximately 10 kilometres of new access tracks (Option A) or eight kilometres (Option B) to the transmission structures and upgrade to existing access tracks where required. Option A minimises disturbance within a mapped high risk naturally occurring asbestos zone. The access tracks would remain following the completion of construction to service ongoing maintenance activities along the transmission lines
- Establishment of a helipad (approximately 30 metres wide by 30 metres long) to support the transmission line construction activities carried out at higher elevations and steep terrain along Sheep Station Ridge
- Ancillary activities, including the establishment of tensioning and pulling sites for conductor and earth wire stringing, crane pads, site compounds, and equipment laydown areas.

The project location and key components of the project are shown **Figure 2-1** and in **Figure 2-2** respectively.

A complete project description, which includes a consolidated summary and discussion of the construction and operation of the project, is provided in Chapter 5 of the EIS.

2.2 Project location

The eastern extent of the project is defined by the location of the proposed Snowy 2.0 cable yard at Lobs Hole in Kosciuszko National Park (KNP). The cable yard serves as the transition point between the underground cables carrying electricity generated by Snowy 2.0 to the overhead transmission connection. The cable yard forms part of Snowy 2.0.

From the cable yard, the transmission connection extends west through KNP and up Sheep Station Ridge, which is characterised by steep, mountainous terrain before traversing Talbingo Reservoir. The transmission connection then continues west, passing over Elliott Way at three locations before entering Bago State Forest to the proposed substation site. The location of the project is shown in **Figure 2-2**.

The nearest large towns to the project are Tumut, which is located approximately 55 kilometres to the north-west or an approximate 1.5-hour drive. Other townships near the project include Talbingo, Tumbarumba, Batlow, Cabramurra, Adaminaby, and Providence Portal. Talbingo and Cabramurra were built to provide accommodation for the original Snowy Scheme workers and their families, while Adaminaby was relocated in 1957 to make way for the establishment of Lake Eucumbene.

2.3 Project area

For the purposes of predicting environmental impacts of the project, a disturbance area has been defined. The disturbance area encompasses the extent of physical disturbance likely to be required to accommodate construction activities and infrastructure needed to build the overhead transmission line, the permanent substation and access roads and vegetation clearing along the transmission corridor.

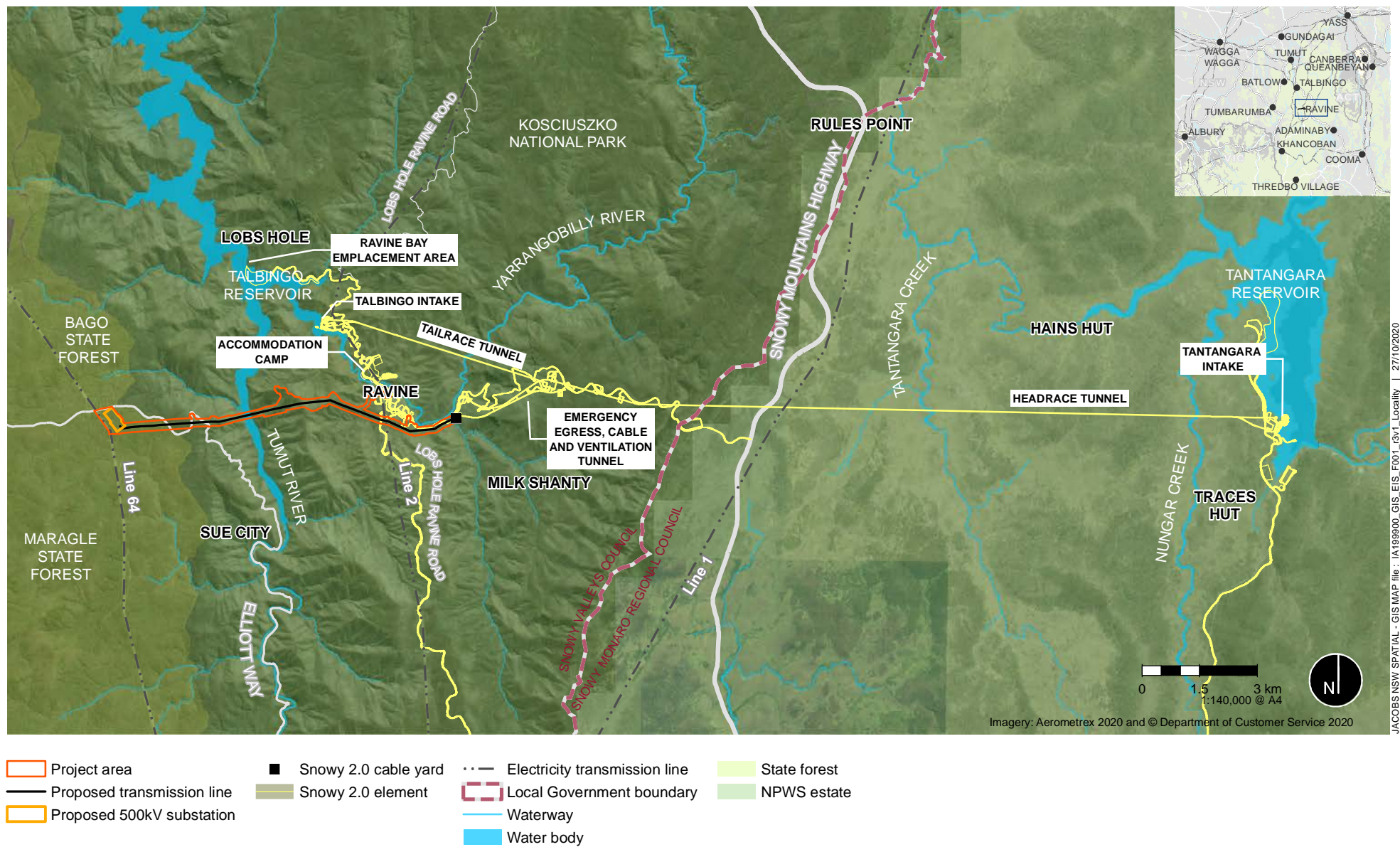
A broader project area has also been defined. The project area represents the limits of where disturbance may occur during construction to allow for flexibility for the final siting of project infrastructure. Final siting of the infrastructure (i.e. the disturbance area) can move within the assessed project area subject to recommended environmental management measures and provided it does not exceed the limits defined by the project area.

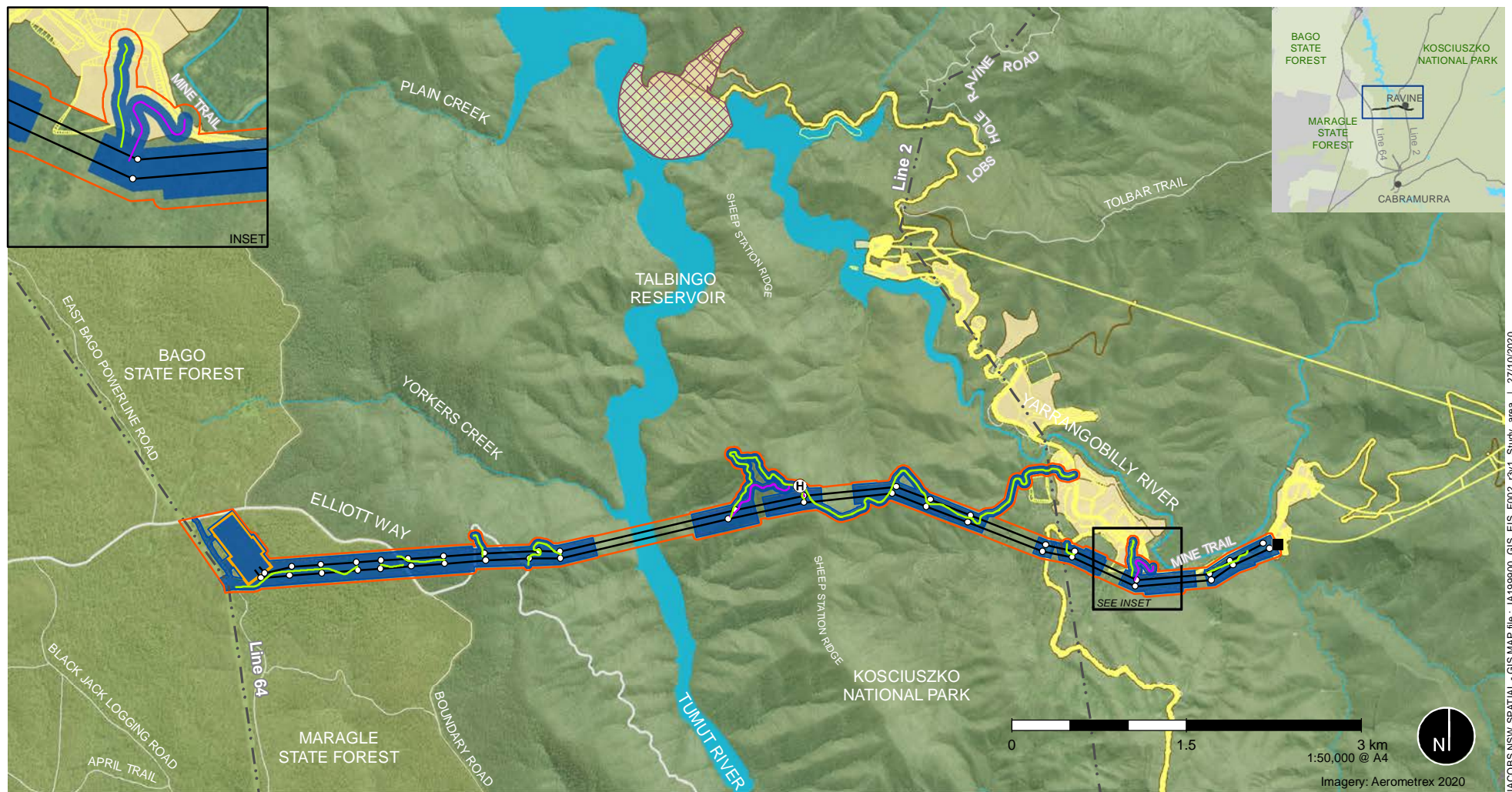
The project traverses Talbingo Reservoir, which naturally splits the project area into two. When defining the area of works, the terms 'project area east' and 'project area west' have been used where required for the purpose of the EIS. These are defined as follows:

- **Project area east:** includes the project area and existing surrounding access roads in the area east of Talbingo Reservoir
- **Project area west:** includes the project area and existing surrounding access roads in the area west of Talbingo Reservoir

The existing landscape character of much of the project area consists of undisturbed and mountainous terrain, forested valleys, and is the only true alpine environment in NSW (NPWS 2003). This landscape contains limited human disturbance, however existing transmission line easements, minor access tracks, and infrastructure associated with the Talbingo Reservoir are located within and surrounding the project area.

The project area disturbance area is shown in **Figure 2-2**.





- | | | |
|--|---|--|
| Project area | Snowy 2.0 cable yard | Electricity transmission line |
| Disturbance area | Snowy 2.0 element | Waterway |
| Proposed 500kV substation | Ravine Bay Emplacement Area | Water body |
| H Potential helipad location | Snowy 2.0 Disturbance footprint | State forest |
| Proposed structure | | NPWS estate |
| Proposed transmission line | | |
| Proposed access track - Option A | | |
| Proposed access track - Option B | | |

Figure 2-2 | Project overview

2.4 Construction activities

The construction works would commence with the construction of the access tracks to the substation and transmission structure locations. Construction of the helipad is also expected to commence in the initial stages. Once suitable access has been established, construction of the substation and transmission line would commence and occur concurrently. A summary of the construction activities is provided in **Table 2-1**.

Table 2-1: Summary of construction activities

Construction activity	Description
Pre-construction and site establishment	<ul style="list-style-type: none"> Site mobilisation once relevant approvals have been granted, property acquisitions have been finalised with Forestry Corporation of NSW (FCNSW) and National Parks and Wildlife Service (NPWS) and agreements with construction contractors has been achieved Surveying and marking out the approved disturbance area and any environmental avoidance areas Installation of appropriate stormwater and diversion drainage and erosion and sedimentation control works prior to ground disturbance and vegetation clearing Inform recreational users of KNP, Bago State Forest and Talbingo Reservoir of the construction activities, the extent of work areas and the locations of environmental exclusion areas with project notifications, including warning signs of construction activities and notifications of access restrictions Establishment of the construction compound and equipment laydown areas at the substation site and at Lobs Hole*.
Access tracks	<ul style="list-style-type: none"> Vegetation clearing within the approved corridor. This is expected to be carried out both manually in the areas of steeper slopes and machine clearing where access can be safely achieved Grubbing and bulk earthworks (cut and fill) using an excavator Installation of suitable drainage structures and sediment retention basins where required Laying and compaction of a suitable rock aggregate/road base Grading and/or reshaping of existing tracks where required, within the existing access track width (no road widening) Minor excavations followed by laying and compaction of crushed rock or gravel, to improve the existing track surface and drainage.
Substation	<ul style="list-style-type: none"> Vegetation clearing across the substation site and surrounding APZ. This would involve the stripping and stockpiling of topsoil for later use. Vegetation clearing is expected to be carried out utilising a bulldozer equipment with a tree pusher, however would be confirmed in consultation with FCNSW Establishment of a site compound and laydown area within the cleared APZ. The site compound would be in placed throughout the construction period and is expected to contain a demountable office, meal room, and toilet/shower facilities, equipment laydown areas, vehicle and equipment storage, maintenance sheds, chemical/fuel stores and stockpile areas Minor earthworks to establish the site amenities; which would include cut and fill to establish a level area for the site facilities and temporary storage areas and establishment of the permanent site access road

Construction activity	Description
	<ul style="list-style-type: none"> ▪ Earthworks: <ul style="list-style-type: none"> - Excavation works to remove excess material, provide a level surface, and create the required trenches for drainage, earthing, and electrical conduits. Some spoil from the excavation may be reused on site for filling and compaction (including benching areas of the site where required). Excavation works would be carried out using equipment such as excavators, dozers and crushing plant. Furthermore, depending on the underlying geology, blasting may be required to facilitate the break-up of rock, should it be present - Bulk earthworks to establish the level surface for the substation bench - Approximately 11,300 cubic metres of excess spoil would be generated from the levelling of the substation site and construction of the access road. Any soil which cannot be reused onsite as fill material, landscaping or other means would be disposed of off-site at a suitably licenced facility and/or at a location(s) as agreed with FCNSW - Where excavated spoil is not appropriate for reuse on site, additional spoil would be imported to site. ▪ Civil and building works: <ul style="list-style-type: none"> - Civil works involving the establishment of concrete footings for the high voltage equipment and buildings, construction of stormwater drainage and oil containment infrastructure and cable trenches and subsurface cables <p>Construction of onsite buildings (e.g. control room) and services installed including general lighting, power and ventilation.</p>
Transmission corridor	<ul style="list-style-type: none"> ▪ Vegetation clearing within the approved transmission corridor where the overhead conductors would not meet safe clearance heights above the underlying vegetation ▪ Grading and/or reshaping of existing access tracks where required ▪ Vegetation clearing and bulk earthworks to establish the level helipad ▪ Establishment of the transmission structure work sites involving: <ul style="list-style-type: none"> - Clearing of an approximate 40 metres by 60 metres area around each transmission structure location to allow for the laydown of materials and equipment and facilitate access for vehicles, plant and machinery during structure construction - Bulk earthworks (cut and fill) to establish level construction benches within the worksite to allow for the safe operation of plant and equipment (namely elevated works platforms and cranes) during structure construction - Geotechnical investigation works using a mobile drill rig at each structure location to determine the most appropriate footing design - Bulk earthworks and excavations to establish the structure footings involving the installation of steel framework and backfilling with concrete or pile type footings involving boring four boreholes at each structure leg location and backfilling with concrete - Steel lattice structures would be transported to each structure location via heavy vehicle in parts and assembled on site using mobile cranes ▪ Stringing of conductor and overhead earth wire which would involve: <ul style="list-style-type: none"> - Establishment of level tensioning and pulling sites within the approximate 40 metres by 60 metres structure worksite or at suitable locations within the transmission corridor

Construction activity	Description
	<ul style="list-style-type: none"> - Attachment of sheaves (or pulleys) to the top of the structures in readiness for stringing work using an elevated work platform - Pulling out a lightweight draw wire across the section of line being strung using a drone or vehicle/machine (such as dozer), followed by the placement of the draw wire through the sheaves - Attachment of the draw wire to the earth wire or conductor drum (depending on which is being strung) and pulling it through the sheaves under tension using specialised tensioning and pulling equipment - Termination of the conductor/earth wire at each end clipping it into position followed by the removal of the sheaves.
Commissioning	<ul style="list-style-type: none"> ▪ Testing of all high voltage equipment at the substation and ensuring all protection, control and metering equipment is operating correctly ▪ Completion of all necessary cut-in works to Line 64 and relevant testing undertaken ▪ Placement of the new transmission lines and substation into standby in readiness for Snowy 2.0 to be completed ▪ Once Snowy 2.0 becomes operational, energisation of the high voltage equipment and the project placed into service.
Rehabilitation and demobilisation	<ul style="list-style-type: none"> ▪ Removal of all non-permanent infrastructure and equipment from the work sites and site compounds ▪ Decommissioning and dismantling of the site compounds at the substation and Lobs Hole ▪ Site stabilisation and landscaping involving: <ul style="list-style-type: none"> - Stabilisation of exposed areas and slopes - Installation and maintenance of erosion and sediment controls at the work sites to manage impacts post-construction - Seeding soil slopes to assist stabilisation - Planting vegetation on any higher risk slopes - Mulching of stabilised and revegetated areas where required.

*The site compound at Lobs Hole would be located within the approved disturbance footprint of Snowy 2.0.

2.4.1 Construction staging and timing

Construction of the project is anticipated to commence in early 2022 and take approximately 39 months to complete. Estimated timing for the main construction activities is set out in **Figure 2-3**. Further details on the estimated timing and staging of the main project activities is described in Section 5.3 of the EIS.

Construction works	2022				2023				2024				2025
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Access tracks, roads and helipad													
330 kV Switchyard													
500 kV Substation													
Transmission connection													

Figure 2-3: Indicative timing for the construction of key project components

2.4.2 Construction working hours

Given the isolated location and the construction of Snowy 2.0 occurring in parallel, construction works are expected to be carried out 12 hours per day, seven days per week between the hours of 6 am and 6 pm.

2.5 Operation and maintenance

The substation and transmission connection would be inspected by field staff on a regular basis. Key activities undertaken during operation would include:

- Regular inspection and maintenance of electrical equipment at the substation including structural integrity of all footings and support structures
- General inspection and maintenance of other components within the substation including the stormwater management system, fire detection system, onsite buildings and drainage infrastructure
- Regular inspection and maintenance of the transmission structures, footings, fittings, conductors and overhead earth wires
- Vegetation removal and trimming along the transmission easement and APZ surrounding the substation to maintain appropriate clearances between ground vegetation and the overhead transmission lines and around the substation to manage bushfire risk
- Removal of trees which have the potential to strike the overhead conductors if they were to fall (referred to as hazard trees) as required.

It is expected that only light vehicles and small to medium plant would need to access the substation site and the transmission corridor for these activities. The substation would not accommodate full-time staff or contractors, and the regular collection of waste would not be required. Any waste generated during operation of the substation would be minimal and disposed of on an 'as need' basis.

2.6 Other relevant technical information

2.6.1 Workforce accommodation

The travel distance by motor vehicle between the proposed substation site and the eastern extent of the project area at Lobs Hole is approximately 50 kilometres with a travel time of about one hour. To avoid excessive travel time and manage worker safety (particularly fatigue), up to 20 construction personnel working in project area east are expected to be housed in Snowy Hydro's accommodation camp at Lobs Hole (Snowy 2.0 works accommodation). These workers are expected to be transported to the accommodation by bus at the commencement of their working roster. The balance of construction personnel (approximately 30 people during the peak periods of construction) are anticipated to access the project area each day from surrounding townships such as Talbingo, Tumut, Adaminaby, Providence Portal and Cooma.

Up to 90 construction personnel working in project area west are expected to be accommodated in Tumbarumba, which is located approximately 40 kilometres (approximately 30 minutes' drive) from the proposed substation site. Consultation undertaken with Snowy Valleys Council has confirmed that Tumbarumba has sufficient capacity to support the workforce in project area west.

3. Assessment methodology

This section provides an overview of the methodology for this assessment along with the study area identified for the purposes of this assessment.

3.1 Study methodology

Socio-economic assessment involves the process of analysing, monitoring and managing the intended and unintended social and economic consequences, both positive and negative, of a development. It involves identifying and evaluating changes to or impacts on communities, business and industry that are likely to occur as a result of a proposed development, in order to mitigate or manage impacts and maximise benefits.

Preparation of this socio-economic assessment involved:

- Scoping of the potential socio-economic issues for the project and identifying communities likely to be affected by the project's construction and operation
- Reviewing background information relevant the project and socio-economic environment of the study area, and preparing a social baseline describing existing social characteristics, values and conditions within the study area
- Identifying and assessing socio-economic impacts of the project's construction and operation, including potential impacts on property, local amenity, social infrastructure, local business and industry, community values and access and connectivity
- Identifying measures to mitigate identified socio-economic impacts.

A matrix was used to evaluate the potential significance of socio-economic impacts as outlined in the *Social impact assessment guideline for State significant mining, petroleum production, and extractive industry development, September 2017* (refer to **Figure 3-1**). This was based on consideration of the expected consequences of a potential impact and likelihood of the impact occurring as defined in **Table 3.2**.

			Consequence Level				
			1	2	3	4	5
			Minimal	Minor	Moderate	Major	Catastrophic
Likelihood Level	A	Almost certain	A1	A2	A3	A4	A5
	B	Likely	B1	B2	B3	B4	B5
	C	Possible	C1	C2	C3	C4	C5
	D	Unlikely	D1	D2	D3	D4	D5
	E	Rare	E1	E2	E3	E4	E5
Social Risk Rating							
	Low		Moderate		High		Extreme

Source: Department of Planning and Environment (2017)

Figure 3-1: Social risk matrix

Table 3-1: Consequence and likelihood definitions

Category		Description
Likelihood criteria		
A	Almost certain	Is expected to occur as a result of the project under most circumstances.
B	Likely	Will probably occur as a result of the project in most circumstances.
C	Possible	Could occur and has occurred in similar circumstances.
D	Unlikely	Could occur as a result of the project but is not expected.
E	Rare	Could occur only in exceptional circumstances.
Consequence level		
1	Minimal	Small scale, reversible impacts. Minor or short-term impacts (less than one month) to stakeholder(s).
2	Minor	Mostly local impacts that are relatively short-term (between one and three months). Positive impacts provide some value to society. Negative impacts may require minor remedial actions but can be easily adapted to by society.
3	Moderate	Medium-term impacts (between three and six months). Impacts may require considerable remediation. Positive impacts can be enhanced to provide substantial value to society. Society has capacity to adapt and cope with the negative impacts.
4	Major	Long-term (between six and 12 months) and potentially far-reaching impacts that result in severe disruptions for stakeholder(s) and customers. Extensive remediation is required. Positive impacts will provide substantial value to society. Society has limited capacity to adapt and cope with the negative impacts.
5	Catastrophic	Long-term (greater than 12 months), high-magnitude, irreversible and far-reaching impacts that result in extended substantial disruptions and impacts on stakeholder(s) and customers. Positive impacts will provide enormous value both locally and regionally. Society has no capacity to cope with significant negative impacts.

Socio-economic data presented in this assessment principally draws on information from the Australian Bureau of Statistics (ABS) 2016 Census of Population and Housing, supplemented with information and data from:

- Government agencies such as DPIE
- Snowy Valleys Council publications, reports, guidelines and websites
- Existing literature and project information including the *Snowy 2.0 Exploratory Works EIS* (EMM, 2017), *Snowy 2.0 Main Works EIS* (Elton Consulting, 2019), and *Snowy 2.0 Main Works Recreational Users Study* (TRC, 2019).

3.2 Study area

The project area is located south of Talbingo within KNP and Bago State Forests. During construction, workers are expected to be accommodated at the Snowy 2.0 works accommodation and in Tumbarumba, which is located about 45 kilometres by road south of Talbingo.

The primary study area for this assessment is shown on **Figure 3-2** and is based on those Australian Bureau of Statistics (ABS) localities surrounding the project area and the town of Tumbarumba which is proposed to accommodate construction workers for the project.

The primary study area includes:

- Pinbeyan state suburb (SSC), located at the project area east
- Cabramurra SSC, which is traversed by the central part of the project area
- Nurenmerenmong SSC, located at project area west
- Talbingo SSC, located north-west of the project area, which is a popular location for tourists and provides access to Talbingo Reservoir for recreational users
- Tumbarumba SCC, located west of the project area, which is proposed to accommodate part of the construction workforce.

The primary study area incorporates a broader area than the project area identified for the EIS and recognises that potential socio-economic benefits and impacts due to such things as the influx of workers, construction haulage and local spending, would be experienced by communities beyond the project area to nearby towns and villages.

It is also recognised that socio-economic benefits and impacts of the project are also likely to be experienced by regional communities, for example due to increased construction traffic and increased local expenditure associated with the project. As such, this assessment also considers potential impacts on a secondary study area comprising the wider Snowy Valleys LGA, which includes the main regional centre of Tumut located about 55 kilometres north-west of the project area (about 1.5 hours by car) as well as smaller towns such as Batlow and Adelong.



- | | | | | |
|--------------|----------------------|---------------------------|-------------|--------------|
| Study area | Snowy 2.0 cable yard | Local Government boundary | Waterway | State forest |
| Project area | State suburb (SSC) | Water body | NPWS estate | |

Figure 3-2 | Socio-economic impact assessment study area

4. Legislative and policy framework

This section provides an overview of the broader legislation, policies and strategies relevant to the socio-economic environment of the study area. A detailed discussion of strategic planning and policy documents relevant to the project are described in **Chapter 3** of the EIS.

4.1 Regional frameworks

The project is located in the Snowy Valleys LGA which forms part of the Riverina Murray Region in southern NSW and is located within KNP and Bago State Forest.

4.1.1 Riverina Murray Regional Plan 2036

The *Riverina Murray Regional Plan 2036* (Regional Plan) (NSW DPE, 2017) provides the NSW government's long term vision and planning priorities for the Riverina Murray region. The overall vision for the region is to become *"a diversified economy founded on Australia's food bowl, iconic waterways and a network of vibrant connected communities"*. Goals to achieve this vision which are relevant to the project include:

- Growing a diverse economy by protecting and growing agribusiness, supporting the forestry industry and promoting tourism and renewable energy generation
- Maintaining a healthy environment with pristine waterways by protecting and managing the region's water resources and environmental assets
- Having efficient transport and infrastructure networks including the alignment and protection of utility infrastructure investment
- Promoting strong, connected and healthy communities through the growth of local centres.

The Regional Plan recognises that the region is reliant upon high quality utility infrastructure (including electricity) to service agricultural and manufacturing industries and to propel the future economic competitiveness of the area.

The Regional Plan identifies forestry, agribusiness and tourism as important industries in the Snowy Valleys LGA with key employers including Snowy Hydro Limited (Snowy Hydro) and the NPWS. Priorities for the Snowy Valleys LGA relevant to the project include:

- Expanding, capitalising and maintaining the natural commercial advantage associated with the area's abundance of plantation softwood
- The continued development of a visitor experience that celebrates and protects the culture, heritage and outstanding natural environment of the area
- The provision of utilities to maintain the competitiveness of existing industries.

4.1.2 Snowy Valleys 2018-2022 Regional Economic Development Strategy

The *Snowy Valley 2018-2022 Regional Economic Development Strategy* (Regional Economic Development Strategy) (Snowy Valleys Council, 2018a) outlines the NSW government's long-term economic vision for the Snowy Valleys LGA which is *"The Snowy Valleys will work towards a sustainable path to economic prosperity and quality of life through building on its economic strengths in forestry and timber, agriculture and tourism"*. Economic strengths of the LGA relevant to the project include:

- Natural resources
- Forestry and timber processing sector
- Snowy Hydro infrastructure
- Location and the Snowy Mountains Highway.

The Regional Economic Development Strategy outlines a number of strategic priorities to facilitate economic development in the Snowy Valleys LGA. Those relevant to the project include:

- Supporting the growth of forestry and timber processing and agriculture industries through the improvement of access to, and reliability of infrastructure and utilities
- Continuing to develop and grow the tourism sector to diversify the region's economy.

4.1.3 REDS Impact Review – Snowy Valleys REDS fire impact addendum

Following the 2019-2020 bushfires, the Department of Regional NSW undertook a review of the regional economic development strategies (REDS) for regions affected by the bushfires. The *REDS Impact Review Snowy Valleys REDS fire impact addendum (May 2020)* (Bushfire Addendum) (Regional NSW 2020) identifies the economic impacts of the bushfires, how strategic priorities for the regional economic development strategy have been affected and key levers and focus areas for economic recovery. Together the Regional Economic Development Strategy and the Bushfire Addendum guide funding for local economic recovery (<https://www.nsw.gov.au/regional-economic-development-strategies/reds-bushfire-addenda>).

The bushfires resulted in loss and damage to property and industry in the Snowy Valleys LGA, including forestry, horticulture, viticulture, and tourism. This includes loss of accommodation used by seasonal workers for the horticulture industry.

The Bushfire Addendum identifies short, medium and long-term priorities and initiatives to support economic recovery. Key priorities relevant to the project include:

- Continue to develop and grow the tourism sector to diversify the region's economy, including supporting tourism operators to continue to operate
- Support ongoing workforce transition to maximise benefit from state infrastructure (e.g. Snowy 2.0, of which the project is a critical component).

4.1.4 2006 Plan of Management Kosciuszko National Park

The *2006 Plan of Management Kosciuszko National Park* (KNP PoM) (Department of Environment and Conservation, 2006) is a framework made under the *National Parks and Wildlife Act 1974*. It outlines objectives, principles and policies to guide the long-term management of KNP.

The KNP PoM aims to maintain and improve the condition of the park's natural, cultural and recreational values. The KNP PoM identifies five management zones to guide the management and use of the national park. The project is located within KNP back country, minor road corridor and major road corridor management zones. The objectives of these zones are:

- Back Country Zone – to manage it as relatively unmodified country
- Minor Road Corridor Zone – to provide a range of day and overnight recreational opportunities
- Major Road Corridor Zone – to provide a range of high quality interlinked recreational facilities.

There are a number of KNP management trails, visitor facilities and roads located within or near to the project area that have potential to be directly or indirectly impacted by the project. Further information on these facilities is provided in **Section 5.5.4**, while potential impacts are described in **Section 6.5**.

4.2 Local frameworks

4.2.1 Snowy Valleys 2028 Our Vision Our Future

Snowy Valleys 2028 Our Vision Our Future, Community Strategic Plan 2028 (Community Strategic Plan) (Snowy Valleys Council, 2018b) identifies the long-term desired community outcomes for the LGA. Council's vision for the LGA is "[t]o be a thriving and inclusive region of unique towns and villages who enjoy the clean, natural beauty of our environment, and experience sustainable growth and opportunities for our future generations".

The Community Strategic Plan identifies priorities for towns near the project, including:

- Tumbarumba:
 - Improving the quality and maintenance of roads to improve access (including tourist access) and community connectivity
 - Support the growth and economic development of local businesses
 - Preserving environmental values such as the pristine nature of the area to continue to attract tourism
- Talbingo
 - Survival of the town by supporting local businesses and families
 - Preservation of the beauty of the area, lifestyle and mountain and dam access.

Promoting, supporting and attracting local small businesses; and protecting and managing local air quality, waterways, rivers and streams are identified as strategies in the Community Strategic Plan.

4.2.2 Preparing for Prosperity

Preparing for Prosperity Snowy Valleys Council Region Economic Development Strategy, 2018-2020 (Economic Development Strategy) (Snowy Valleys Council, undated) aims to influence the economy and liveability of the LGA by enhancing its vibrancy, diversity and sustainability. This plan details how council will facilitate, support and promote business activity to progress its vision of leading engaging and supporting strong and vibrant communities.

Forestry and timber processing, horticulture and agriculture, tourism, and specialist technical, professional and creative services are identified as current and emerging economic drivers for the LGA. The plan identifies access to electricity as a key constraint to industry in the LGA.

This plan also identifies a shortage of affordable rental accommodation in the LGA limiting the availability of housing for seasonal workers at Tumbarumba and notes community concerns regarding potential impacts of Snowy Hydro 2.0 on housing and infrastructure demands.

5. Existing environment

This section describes the existing socio-economic environment and features of the study area to provide a baseline against which the project's impacts can be assessed. This includes information on population and demographic characteristics, social infrastructure, local business and industry, and community values.

Population and demographic data from the ABS Census of Population and Housing is presented for the Talbingo and Tumbarumba SSCs and the Snowy Valleys LGA. Data for regional NSW is also provided as a comparison. While the project area is located within the Nurenmerenmong, Pinbeyan and Cabramurra SSCs, limited ABS population and demographic data is available for these areas due to their relatively low population base. Information on other social values and features in these areas is presented where relevant.

Further population and demographic information is provided in **Appendix A**.

5.1 Regional context

The project area is located in the Snowy Valleys LGA, within the Riverina Murray region of southern NSW. The Riverina Murray region is a large agriculture producer and is well known for its environmental assets including the Murray River and KNP. The Riverina Murray region includes three regional cities, being Wagga Wagga (NSW's largest regional inland town), Griffith, and Albury; and 23 local centres (Department of Planning and Environment, 2017). The nearest local centres to the project are Tumbarumba and Tumut, with Tumut being the largest town in the Snowy Valleys LGA. Cooma is located at the junction of the Monaro Highway and Snowy Mountains Highways about 80 kilometres south east of the project (approximately about two hours by road) and is one of three major towns in the adjoining Snowy Monaro LGA.

Key economic opportunities for the region are:

- Community and social services, including health services and aged care
- Information communication technology
- Primary industries, including forestry and agribusiness
- Value-add manufacturing
- Tourism
- Transport and logistics
- Renewable energy and mining.

Forestry, agribusiness and tourism are key contributors to the region's economy, with a large portion of the LGA covered by state forest or national park.

The Snowy Valleys LGA and surrounding areas were affected by bushfires in December 2019 – January 2020. About 48 per cent of the LGA, including land within and surrounding the project area, was directly impacted by bushfires resulting in extensive impact to property and industry within the LGA (Regional NSW, 2020). Rebuilding of affected infrastructure and attractions is ongoing.

5.2 Local towns and villages

Local towns and villages near the project include Talbingo, Cabramurra, Tumbarumba in the Snowy Valleys LGA and Providence Portal and Adaminaby in the adjoining Snowy Monaro Regional LGA. The original Snowy Scheme played a role in the development of the local area, with Talbingo and Cabramurra originally established to house Snowy Scheme workers and their families (Snowy Hydro Limited, July 2017; Tumut Shire Council, 2019).

5.2.1 Talbingo

Talbingo is located north of the Talbingo Reservoir and was originally developed to house workers and their families during the original Snowy Scheme (Snowy Hydro Limited, July 2017). Talbingo is located approximately 40-45 kilometres by road north of the project area and is adjacent to KNP. The main access into the town is via the Snowy Mountains Highway.

Talbingo had a population of about 239 people at the 2016 Census. Talbingo generally had an older population with a median age of 59 years, compared to 45 years and 43 years for the Snowy Valleys LGA and regional NSW respectively. At the 2016 Census, 13.6 per cent of the population were aged 14 years or under compared to 18.4 per cent in regional NSW. Working aged people (i.e. people aged 15 to 64 years) comprised about 49.8 per cent of the population, compared to 61.1 per cent in regional NSW, while 36.6 per cent were aged 65 years or over, which was above the regional NSW average of 20.5 per cent. The older population and lower proportion of working aged people is consistent with other regional communities and is likely to reflect reduced education or employment opportunities and slower economic development in the town, with younger people leaving to pursue education and employment opportunities elsewhere as well as a number of workers from the original Snowy Scheme who have retired in Talbingo (ABS, 2016; Snowy Hydro Limited, 2017).

In 2016, Talbingo had an unemployment rate of 4.5 per cent (ABS, 2016). Hydro-electricity generation was the top industry of employment with 24.4 per cent of workers employed in this industry. Other main industries of employment included accommodation at 15.6 per cent and building and other industrial cleaning services at 11.1 per cent (ABS, 2016).

Talbingo has a community health centre, one public primary school and no secondary school.

Talbingo and its surrounds are known as being a location for group outings and activities, and for being a place to 'get away from it all for peace and quiet' (Snowy Valleys Council, 2018). Tourism is an important industry for the town, with the number of visitors regularly increasing the town's population and accommodation being a key industry of employment for local residents.

5.2.2 Tumbarumba

Tumbarumba is located approximately 40 kilometres by road west of the project area. The town is a major centre for the Snowy Valleys LGA and at the 2016 Census it had a population of about 1,862 people. The town had a similar age profile to regional NSW, with 17.5 per cent of the population aged 14 years or under, 59.1 per cent aged between 15 and 64 years, and 23.4 per cent aged 65 years or over (ABS, 2016).

Tumbarumba had a relatively low unemployment rate at the 2016 Census (5.1 per cent) compared to regional NSW. This is partly attributed to the presence of the Hyne & Son timber mill, which is the largest softwood processing mill in the southern hemisphere. Log saw-milling was the top industry of employment at the 2016 Census (Snowy Valleys Council, 2018; ABS, 2016).

Medical services in Tumbarumba comprise a local public hospital and two local medical practices. The hospital includes an emergency department and provides about 50 beds. The closest regional airports including Wagga Wagga Airport and Albury Airport, which are located approximately a one hour and 20-minute drive (Snowy Hydro Limited, July 2017).

Tumbarumba is serviced by one public primary school, one catholic primary school and one public secondary school.

Tumbarumba has a vibrant and strong sense of community, which has been driven by its distance from regional centres. The town is developing a reputation for being one of Australia's premium cool climate wine growing regions with a growing food and wine tourism sector. Other attractions include community-based art gallery, cafes, gift and antique shops and the main street (Snowy Valleys Council, 2018). The town hosts several annual events, particularly during the warmer months, including Tumbarumba Tastebuds (October), Tumbarumba Rodeo (January), Tumbafest (February), Tumbarumba Show (March) and cycling festivals (March).

5.2.3 Adaminaby

Adaminaby is located in the adjoining Snowy Monaro LGA approximately 60 kilometres by road south-east of the project and is accessed via the Snowy Mountains Highway. The town had a population of about 301 people at the 2016 Census (ABS, 2016). The median age at the 2016 Census was 56 years (Snowy Hydro Limited, July 2017). The main employment industries at Adaminaby are accommodation and food services, and retail trade (Snowy Hydro Limited, July 2017).

Adaminaby has one public primary school and no secondary school. There are no medical services provided within the town. The town is known for bushwalking, skiing and snowboarding activities as well as for its high county lifestyle and mountain scenery (Lake Eucumbene Chamber of Commerce, 2019).

5.2.4 Batlow

Batlow is located approximately 75 kilometres by road north-west of the project and is predominantly accessed via the Snowy Mountains Highway (Snowy Hydro Limited, July 2017). Batlow had a population of about 1,313 people at the 2016 Census (Snowy Valleys Council, 2018; ABS, 2016). The main industries of employment in Batlow are agriculture and forestry and fishing (Snowy Hydro Limited, July 2017).

Medical services at Batlow include the Batlow/Adelong multi-purpose service, which is a local public hospital with no emergency department and fewer than 50 beds, and at least one local medical practice. Batlow is serviced by one public technology school, which provides primary and secondary education, and one catholic primary school.

The town is well known for its apple production with this, along with its natural environment setting being the key attractors of business and tourism (Snowy Valleys Council, 2018).

5.2.5 Adelong

Adelong is located on the Snowy Mountains Highway about 100 kilometres by road north of the project. At the 2016 Census, Adelong had a population of about 943 people. The main industries of employment in 2016 were manufacturing (paperboard manufacturing); agriculture, forestry and fishing; and transport, postal and warehousing (ABS, 2016).

Adelong services the heritage listed Adelong Falls Gold Mill Ruins and the main street of Adelong is classified by the National Heritage Trust of Australia (NSW) ([Tumut](#) Shire Council, 2019). The town also provides access for tourists to surrounding attractions such as wineries and natural features such as lakes, rivers, forests and snowfields. A number of services and facilities are located at Adelong to service the day-to-day needs of local residents and visitors, including local retail, sporting and recreation uses, primary schools, and doctors.

5.2.6 Cabramurra

Cabramurra is a small alpine township located within KNP, approximately 30 kilometres by road south of the project. Access to Cabramurra is from the Snowy Mountains Highway via Link Road and Goat Ridge Road. The town was built to house workers and families associated with the Snowy Mountains Scheme and is still used to accommodate Snowy Hydro workers (Snowy Hydro Limited, 2017). The population of Cabramurra was 37 people at the 2016 Census, with a median age of 40 years (ABS, 2016; Snowy Hydro Limited, 2017).

Cabramurra has one public primary school and no secondary school. There are no medical services provided within the town. As at August 2020, Cabramurra is closed to the public due to damage caused in the bushfires in December 2019 and January 2020 (<https://visitsnowyvalleys.com.au/locations/cabramurra/>).

5.2.7 Providence Portal

Providence Portal is located in the adjoining Snowy Monaro Regional LGA approximately 45 kilometres by road south-east of the project and is accessed via the Snowy Mountains Highway. There is no census data available for Providence Portal. Providence Portal offers tourist accommodation in the form of a holiday park and mountain lodge. There are no medical or education services provided at Providence Portal.

5.2.8 Tumut

Tumut is a regional hub within the Snowy Valleys LGA located at the foothills of the Snowy Mountains (Snowy Valleys Council, 2018). Access to Tumut is via the Hume Highway from Sydney or Albury and then via the Snowy Mountains Highway. Tumut is approximately a 30-minute drive north of Talbingo (Snowy Hydro Limited, 2017).

Tumut had a population of 6,230 people at the 2016 Census and a median age of 43 years (ABS, 2016; Snowy Hydro Limited, 2017). The main industries of employment in Tumut include manufacturing, health care and social assistance and retail trade (Snowy Hydro Limited, July 2017). Tumut provides a wider range of services for residents of the town and surrounding area. Key community services and facilities include a district hospital, numerous medical practices, one pre-school, three primary schools, a secondary school and catholic school, as well as a technical adult further education (TAFE) campus.

The town and surrounding area comprise rolling valleys, mountain streams, the Tumut State Forest, the Yarrangobilly Caves and alpine mountain ranges. Tumut's tourism industry is tied to its varied activities offering including bushwalking, water skiing, fishing, boating, horse riding and mountain biking (Snowy Valleys Council, 2018). Tumut provides a range of visitor accommodation options including caravan parks, motels, hotels, and bed and breakfast style accommodation.

5.3 Kosciuszko National Park

KNP is the largest national park in NSW, and one of the largest conservation reserves in Australia (NSW NPWS, 2006). The park covers an area of about 673,542 hectares, and comprises a range of natural values, including snow-covered mountains, woodlands, grasslands and forests. The Park is valued by communities for its scenic amenity, environmental and recreational values and is considered by many people as a special place that needs to be protected (NSW NPWS, 2006). KNP is also an important contributor to tourism and employment in local towns, with many visitors to KNP staying in nearby towns.

KNP is a well-known recreational destination attracting around 2.2 million visitors in 2016 (NPWS, 2017). Key recreational activities include vehicle-based sightseeing, bushwalking, fishing, canoeing, horse riding, cycling and caving; however the seasonal presence of snow is the main drawcard for many visitors (NSW NPWS, 2006). Key tourist attractions near the project are shown on **Figure 5-1** and include Lobs Hole and Talbingo Reservoir.

Primary research conducted for the Snowy 2.0 Exploratory Works EIS found that Lobs Hole is an important destination for people from the local area. Visitors to this area value the scenery, remoteness and unspoiled nature of the site (Snowy Hydro Limited, July 2017). The research also identified that Talbingo Reservoir receives a high level of repeat visitation and is popular for fishing, swimming and water skiing. The attributes that visitors most highly valued were the scenery and the range of activities available (Snowy Hydro Limited, July 2017).

Areas within KNP were affected by the bushfires in December 2019-January 2020 impacting on the park's environmental, landscape and recreational values. As at November 2020, many visitor facilities and attractions within KNP are closed or have restricted access, including roads, campgrounds and accommodation, trails and attractions, to allow habitat to recover and/or repairs to park infrastructure (<https://www.nationalparks.nsw.gov.au/visit-a-park/parks/kosciuszko-national-park/local-alerts>).

Social infrastructure and community values associated with KNP are further discussed in **Sections 5.5** and **Section 5.6** respectively.

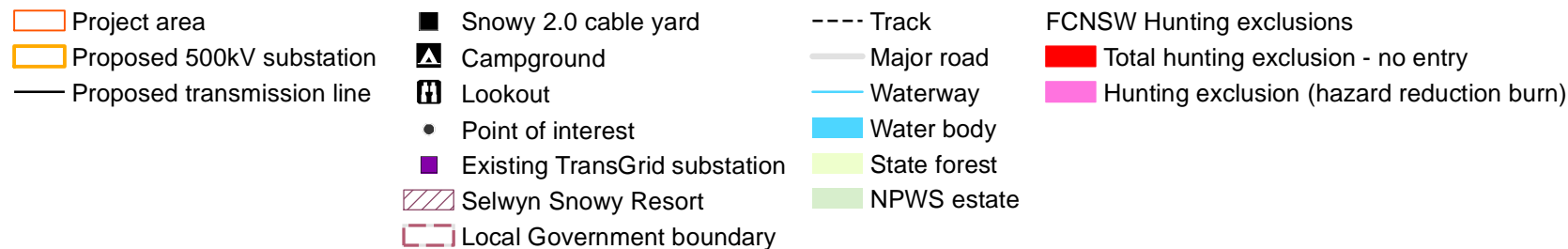
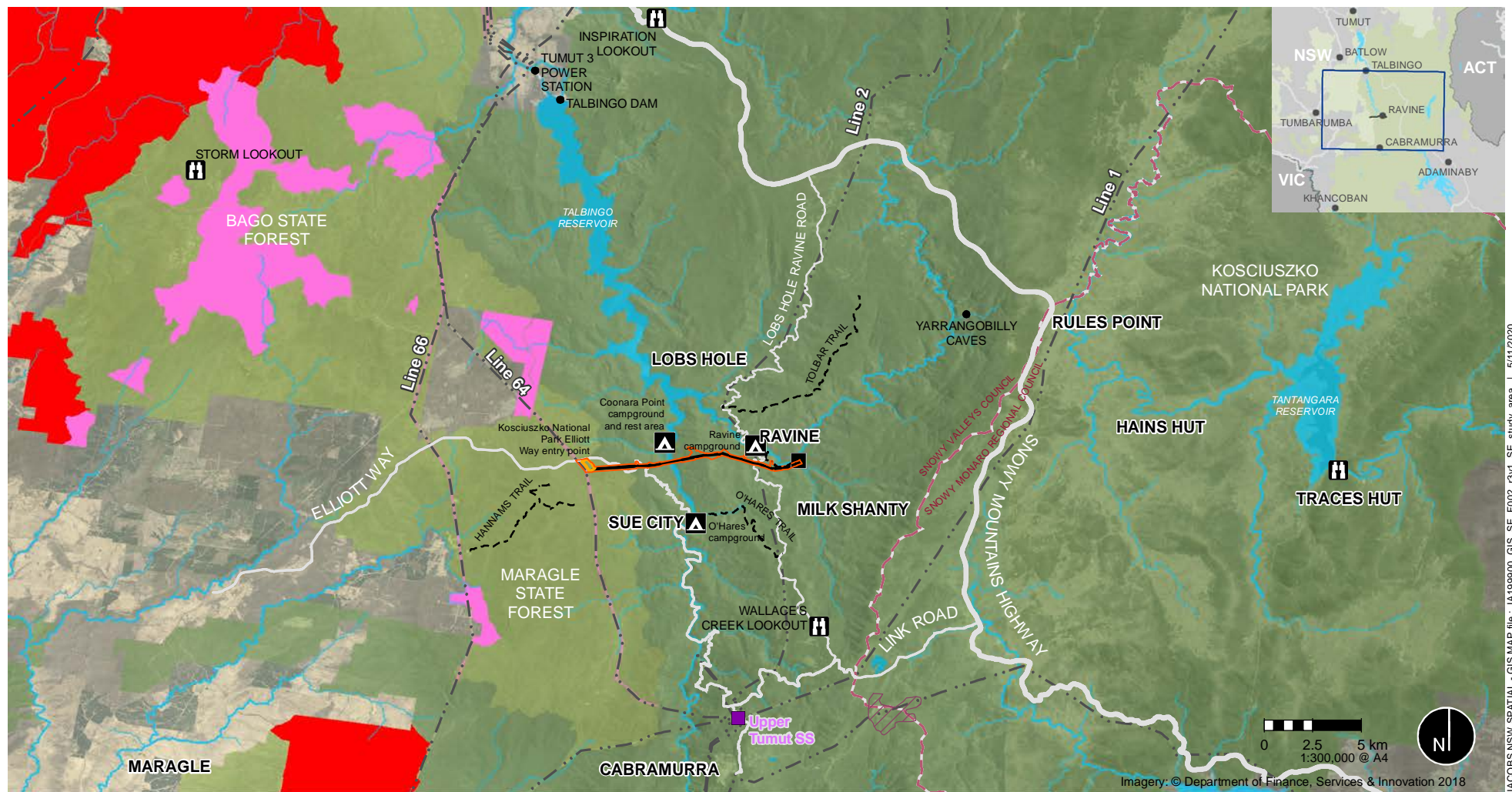


Figure 5-1 | Recreational key features

5.4 Business and industry

Businesses near the project area are predominantly directed to supporting the day-to-day needs of local communities and local tourism. A small supermarket, service station, post office, snow sports equipment hire store and visitor accommodation businesses are located in Talbingo, while Cabramurra has a general store and café. Service stations, tourist accommodation, a bakery, cafes, a post office and the Snowy Scheme Museum are located in Adaminaby. Other businesses near the project area, but outside of local towns include:

- McPhersons Plains Alpine Caravan Park (currently closed until further notice), located north-west of the project area
- Selwyn Snow Resort, located south of the project area
- Yarrangobilly Caves facilities located north-east of the project area.

Tumbarumba and Tumut offer a broad range of local businesses and services, including timber mill, police station, visitors centre, churches, cafes, local grocer, bank, and swimming pool. Forestry is a key industry in Tumbarumba with the Hyne Tumbarumba Mill employing around 200 people as well as providing significant indirect employment (ABS, 2016; Hyne Timber, 2019).

The western extent of the project area is located within Bago State Forest and falls within the general management (zone 4) forest management zone. The purpose of this zone is to manage the native forest through silvicultural options for timber production (Forestry Corporation NSW, n.d.). Consultation undertaken with FCNSW by TransGrid indicated that forestry activities are not currently carried out, or anticipated to commence in the near future within those sections of the State Forests located in the project area given its limited commercial viability compared with other parts of Bago State Forest.

In addition to the services provided at Tumbarumba, Tumut also has supermarkets, department stores, car dealerships and various restaurants.

Business and industry in the study area has been affected by events such as the bushfires in December 2019 – January 2020 and the COVID-19 pandemic. The bushfires resulted in impact on plantation forests, and damage or loss of horticulture, tourist attractions, facilities and accommodation, including Selwyn Snow Resort. Effects of the bushfire on industry and business in the study area are expected to be experienced for many years. Rebuilding of affected infrastructure and attractions has commenced to allow business and industry to continue and recover. Restrictions on local businesses and travel associated with the COVID-19 pandemic are also likely to have impacted on tourism related businesses in the study area.

5.4.1 Tourist accommodation

As indicated in Section 2.6.1, construction personnel are expected to be accommodated in tourist accommodation in towns such as Tumbarumba, Talbingo, Tumut, Adaminaby, Providence Portal and Cooma. Information on tourist accommodation within or near to the study area is available for the former local government areas of Tumbarumba, Cooma-Monaro and Snowy Rivers (refer to **Table 5-1**).

For the year ending June 2016, there were:

- three hotels, motels or serviced apartments with 15 rooms or more in the former Tumbarumba local government area, offering a total of about 83 rooms (Destination NSW, 2016)
- 13 hotels, motels or serviced apartments with 15 rooms or more in the former Cooma-Monaro local government area, offering a total of about 312 rooms (Destination NSW, 2016a).

Adaminaby and Providence Portal are within the former Snowy Rivers local government area, which had a total of 44 hotels, motels or serviced apartments with 15 rooms or more for the year ending June 2016 (Destination NSW, 2016b). However, most of this accommodation is in Jindabyne, which is located about 2.5 hours from the project area.

A review of accommodation websites various other accommodation options in Tumbarumba, Talbingo, Adaminaby, and Providence Portal including smaller bed and breakfast type accommodation, self-contained cottages, holiday houses and caravan parks that offer cabins, powered sites and camp sites. An internet search in December 2020 identified:

- two houses available for rent in Tumbarumba, one with three bedrooms and the other with four bedrooms
- two properties available for rent in Batlow, including a three-bedroom house and one bedroom unit
- five houses for rent in Cooma, with between one and five bedrooms.
- 10 properties for rent in Tumut, including two and three bedroom houses and units (<https://www.domain.com.au/rent>).

Room occupancy rates in Tumbarumba and Cooma-Monaro for the period between the September quarter 2015 and June quarter 2016 are shown in **Error! Reference source not found.** Average room occupancy rate for the 12 months was 46 per cent in Tumbarumba, which was above the average for the wider Snowy Mountains tourism region, but below the regional NSW average. The average room occupancy rate in Cooma-Monaro was 35.6 per cent between the September quarter 2015 and June quarter 2016. Room occupancy rates in Tumbarumba and Cooma-Monaro varied across the year. In Tumbarumba, the highest room occupancy rates occurred in the December and March quarters with just over half of rooms occupied, and lowest occupancy rates in September and June quarters. In Cooma-Monaro, September had the highest room occupancy rate with about half of the rooms occupied, with occupancy rates at other times of the year ranging from between 27.2 per cent in March to nearly 34 per cent in December.

Table 5-1: Tourist accommodation

Period	Tumbarumba	Cooma-Monaro
Number of establishments	3	13
Number of rooms	83	312
Number of room nights available	30,000	112,000
September quarter 2015	33.1%	50.7%
December quarter 2015	56.0%	33.9%
March quarter 2016	56.4%	27.2%
June quarter 2016	38.6%	30.5%
Year ending June 2016	46.0%	35.6%
Snowy Mountains Tourism Region (Year ending June 2016)	37.3%	
Regional NSW (Year ending June 2016)	54.3%	

Source: Destination NSW, June 2016, and Destination NSW, June 2016a

5.5 Social infrastructure

The study area and wider region accommodates a range of social infrastructure and community facilities that cater for the needs of both local and regional communities. These include education facilities; health, medical and emergency services; sport, recreation and leisure facilities; and community and cultural facilities.

Social infrastructure and community facilities within the study area and surrounds are outlined in **Table 5-2**.

Table 5-2: Local and regional social infrastructure

Location	District hospital	Health service	General practice	Police station	Ambulance station	NSW Fire and Rescue	Primary school	Secondary school	Tertiary education facility
Talbingo		X					X		
Tumbarumba		X	X	X	X	X	X	X	
Tumut	X		X	X		X	X	X	X
Adaminaby				X			X		
Batlow		X	X	X	X	X	X	X	
Adelong			X	X			X		
Adaminaby				X			X		
Cabramurra								X	
Providence Portal									

5.5.1 Education

The wider region provides a range of education facilities with each local centre and most townships having at least one primary school, and secondary schools located at Tumbarumba and Tumut. There is also a TAFE campus located at Tumut.

5.5.2 Health and medical facilities

The closest medical facilities to the project area west are located at Tumbarumba and include a multi-purpose health service including an emergency department, and two medical practices. A multi-purpose health service is also located at Batlow. Services at the multi-purpose health centres are delivered by an alcohol and drug unit, domiciliary care unit, emergency department and nursing home care unit (Snowy Hydro Limited, July 2017). On the eastern side, the closest medical facilities are located at Tumut and include a district hospital along with a number of medical practices. Between 2016 and 2017, 5,922 patients presented to the Tumut Hospital, down from 6,766 patients between 2015 and 2016 (Snowy Hydro Limited, July 2017).

There are no medical facilities provided in the smaller townships of Adaminaby, Batlow, Cabramurra, and Providence Portal.

Residents in the study area generally access hospital services in Tumut or travel to Wagga Wagga, Canberra and Sydney for more extensive treatment. The NSW Government is planning future upgrades to the Tumut Hospital, which are due to be operational in late 2021.

The social impact assessment for the Snowy 2.0 Main Works EIS identified that similar to many regional areas across Australia, communities in the study area currently experience problems in relation to access to health and medical services, due to difficulties attracting and retaining doctors and a high dependency on visiting or outreach models of service delivery (Elton Consulting, 2019).

5.5.3 Emergency services

The wider region features a range of emergency services, including fire, ambulance and police services. Locally, emergency services near the project include:

- NSW Ambulance stations at Batlow and Tumbarumba
- NSW Fire and Rescue Services at Tumbarumba, Batlow and Tumut
- Police services at Tumbarumba, Batlow, Adelong, Adaminaby and Tumut.

5.5.4 Recreation and tourism

Recreation and tourist activities within or near the project area are mainly nature based recreation activities within KNP and Bago State Forest, such as camping, picnicking, bushwalking, fishing, canoeing, horse riding, cycling, caving, and four-wheel driving and trail bike riding (FCNSW, undated, NSW NPWS, 2006). Recreational hunting is also permitted by eligible licence holders in parts of the Bago and Maragle State Forests, including within the western end of the project area. Hunting is excluded within the easement for the existing 330 kV transmission line (Line 64) at the western end of the project area (FCNSW, 2019a).

Recreation and tourist attractions and facilities located within or near to the project are shown on **Figure 5-1** and include:

- Lobs Hole Ravine Road, which runs in north/south direction to the east of the Talbingo Reservoir (this is currently closed for the Snowy 2.0 works)
- Various management trails that are closed to motorists but used by walkers and cyclists, including:
 - Mine Trail, which is wholly located within the project area
 - Flying Fox Trail, which is intersected by the eastern side of the project area
 - Maragle State Forest trails, including Hannams, March and April trails about one kilometre west of the project area
 - Trails at Lobs Hole including O'Hares Trail south of the project area and Tolbar Trail north of the project area.
- Talbingo Reservoir, which is used for activities such as fishing, boating and water skiing and is partly within the project area
- O'Hares campground/rest area, which is an unpowered campground and destination for boating, fishing and water skiing and includes picnic tables, barbecue facilities and a boat ramp
- Coonara point campground/rest area, located on the western side of the project
- Lobs Hole Ravine campground, located on the eastern side of the project (this is currently closed for the Snowy 2.0 works)
- Tumut 3 power station and Talbingo Reservoir, located near Talbingo
- Selwyn Snow Resort, located approximately 15 kilometres south of the project
- Yarrangobilly Caves, located approximately 10 kilometres north-east of the project.

There are no formal walking trails in the project area, although management trails are regularly used by walkers and cyclists within the KNP. The nearest formal walking trails are at Yarrangobilly Caves, approximately eight kilometres north-east of the project. A number of trails are also in the Maragle State Forest about one kilometre west of the project area including Hannams, March and April trails that are likely to be used for bushwalking and cycling. The existing transmission line easement (Line 64) to the west of project area is also used by cyclists.

Infrastructure associated with the Snowy Mountains Scheme such as the Tumut 3 Power Station and Talbingo Reservoir, are also local tourist attractions.

As indicated in **Section 5.3**, as at August 2020 many visitor facilities and attractions within KNP are closed or have restricted access, including roads, campgrounds and accommodation, trails and attractions, to allow habitat to recover and/or repairs to park infrastructure (<https://www.nationalparks.nsw.gov.au/visit-a-park/parks/kosciuszko-national-park/local-alerts>).

5.6 Community values

Community values are those things held as important to communities for quality of life and wellbeing. They include physical elements that contribute to such things as amenity and character, and intangible qualities such as sense of place and community cohesion.

The study area is valued for its scenic amenity, natural beauty, lifestyle, and mountain and dam access provided by the local area. The amenity and character of the study area is characterised by KNP, which is recognised for its 'pristine environment', and state forests, which provide a range of environmental, recreational and scenic amenity values. Key recreation activities, such as bushwalking, water skiing, fishing and boating are also associated with the natural values. Campgrounds and rest areas located near the project are also important for their recreation and environmental features. Consultation undertaken for the Snowy 2.0 Main Works EIS recognised the importance of these activities, with concerns about potential access restrictions during construction identified by some community members. Potential impacts on the amenity and recreational facilities within KNP were also raised by stakeholders (EMM, 2019). Maintaining community access to KNP for leisure and recreational sport and ensuring fish stocks are not harmed was also identified in consultation for this project.

Supporting and growing local businesses and preserving and enjoying the local natural environment both for resident recreation as well as for tourism is important for local communities and is identified as a priority in the Community Strategic Plan (Snowy Valleys Council, 2018). The survival of the Talbingo town, provision of children's and health services and improving roads for tourist access are also important local values for residents in Talbingo and Tumbarumba (Snowy Valleys Council, 2018). The importance of maximising economic benefits for local communities, including opportunities for local employment, training and business were also raised during consultation with local communities on the Snowy 2.0 Main Works EIS (EMM, 2019). Opportunities for work and business was also identified as a high priority during consultation for the project, particularly for Tumbarumba and Batlow. This is likely to have of increased importance given the effects of the bushfires and COVID-19 on businesses and communities in the study area. Maximising employment and economic benefits of state infrastructure such as Snowy 2.0 in supporting economic growth and redevelopment of the study area is identified in the Bushfire Addendum to the Snowy Valleys Regional Economic Development Strategy (NSW Regions, 2020).

The Snowy Scheme and associated infrastructure, such as the Tumut 3 power station, contribute to the area's history and heritage and the operation and maintenance of energy infrastructure continues to provide employment for the local community.

Consultation undertaken for the project and the Snowy 2.0 (Snowy Hydro Limited, July 2017; EMM, 2019) identified a number of matters important to communities in the study area, including:

- The Talbingo Reservoir and KNP, with the need to maintain access to and water levels within the reservoir
- Potential to generate economic stimulus, including local employment and business opportunities
- Tourism, local environment, and natural and cultural heritage values
- The condition and use of local roads, including heavy vehicle traffic through local townships.

Protection of environmental and heritage values of KNP and minimising bushfire risk and visual impact on the natural beauty of KNP was also identified through consultation for the project.

The protection and management of the region's national parks is important to local and regional communities for economic, lifestyle and environmental reasons. Environmental assets relevant to the project include waterways, national parks and reserves and state forests. Specifically, KNP and Bago Forest are located within the project area. Feedback from consultation on the Snowy 2.0 Main Works EIS identified the flora and fauna of KNP as 'important or extremely important' to community members (EMM, 2019).

5.7 Access and connectivity

The study area and wider region is serviced by a number of local and regional roads. These include:

- The Snowy Mountains Highway located to the east of the project, which traverses KNP and runs through the townships of Adelong, Tumut, Adaminaby, Cooma, Nimmitabel and Bemboka, and is an approved B-double route
- Lobs Hole Ravine Road, which connects to the Snowy Mountains Highway approximately 15 kilometres north of the project area and Link Road approximately 10 kilometres south of the project area, and links Bogong Peaks Wilderness, Pinbayan and Cabramurra
- Link Road, which connects to the Snowy Mountains Highway and provides access to the Selwyn Snow Resort and Cabramurra as well as access roads including Lobs Hole Ravine Road
- Elliott Way and Tooma Road which provide access to Tumbarumba from the project area. Elliott Way is a sealed road which also provides western access into KNP, to Cabramurra (via Goat Ridge Road) and to the Selwyn Snow Resort (via Goat Ridge Road and Link Road)
- Batlow Road which runs north-south between the Snowy Mountains Highway, Gilmore and Tumbarumba and is an approved oversize overmass load carrying vehicle road.

As at August 2020, a number of roads within the KNP are currently closed due to damage from the December 2019 and January 2020 bushfires, including Elliott Way and Link Road.

Lobs Hole Ravine Road can be affected by wet weather, although this has been upgraded as part of the Snowy 2.0 Exploratory Works project to facilitate movement of large vehicles and all-weather access. Management trails are also located near the western end of the project within KNP, which provide access for the management and protection of KNP. Public vehicular access is prohibited on the management trails, although they are used for walking and cycling. They include:

- O'Hares Trail which is located south of the project area
- Tolbar Trail which is located just north of the project area.

5.8 Summary of socio-economic values

Features of the socio-economic environment relevant to the study area and region include:

- The project area is located within KNP, which holds a high level of local, state and national importance for its natural environment, scenic amenity, recreational and tourism values
- Local communities' value the natural environment of the region and protection of the area's flora and fauna are important to community members
- Recreation and tourist activities near the project are mainly associated with KNP and the Bago and Maragle state forests, including recreational hunting areas of the Bago and Maragle State Forest
- KNP management trails are located in the vicinity to the project area, which are closed to public vehicles but are used for recreational walking and cycling activities

- The western extent of the project area is located in the general forest management zone of the Bago State Forests, although forestry activities are not current undertaken or planned in the near future in those sections of the State Forest in the project area
- The project area intersects the Talbingo Reservoir, Elliott Way and Lobs Hole Ravine Road.

There are no local communities within the project area, although some communities are located near the project that have potential to experience changes from the project such as Talbingo and Tumbarumba, which serve the day-to-day needs of local residents and tourists, and Tumut, which is the main centre for the Snowy Valleys LGA.

6. Impact assessment

This section assesses potential socio-economic impacts from the construction and operation of the project.

6.1 Property acquisition

The project would not require the acquisition of privately owned land, however would involve the acquisition of land from FCNSW and NPWS. The substation site is expected to be acquired from FCNSW as freehold land while the land subject to transmission connection corridor would be acquired in the form of easements with NPWS and FCNSW. The easements would provide TransGrid the necessary access rights to operate and maintain the transmission lines and to ensure that the necessary development setbacks are in place.

The acquisition of land associated with the project:

- Is not expected to affect forestry operations carried out by FCNSW as the area is not actively forested given its low commercial value
- Would not restrict pedestrian access by recreational users of KNP and Bago State Forest, however would restrict future developments along the transmission corridor. This includes any development associated with potential future recreational activities such as future camping provisions at Lobs Hole, which may encroach on the final surveyed easement.

Further discussion about potential impacts on recreational uses is provided in **Section 6.5**, while **Section 6.3** provides an overview of potential impacts on forestry uses.

6.2 Employment

The project would impact positively on employment through the creation of direct employment opportunities through the construction phase. The project would generate employment for an average of around 75 people over the 39-month construction program, with this growing to around 140 workers during peak periods. The project is also likely to generate indirect jobs in local, regional and national businesses and industries from increased economic activity and spending at businesses providing goods and services to support construction activities.

The creation of employment opportunities, either directly or indirectly, would benefit local and regional workers and have potential to support improved social and economic outcomes through incomes for individuals and skills development. In addition, maximising the number of local workers employed on the project would also help to manage potential socio-economic impacts of construction associated with such things as demand for accommodation and social infrastructure, and local community values.

6.3 Business and industry

6.3.1 Construction

During construction, impacts may occur for some businesses in the study area and wider Snowy Valleys LGA due to increased demand for goods and services, particularly in Tumbarumba. This includes:

- Local shops and food outlets in towns in the study area, that may benefit from increased business in response to day-to-day needs of construction workers and possible increased expenditure by residents employed on the project
- Accommodation providers in Tumbarumba and other local towns, due to increased demand for accommodation for construction workers
- Businesses and industries supplying goods and services to construction, which are likely to experience benefits from increased construction activities locally.

Increased expenditure associated with purchases by construction workers is expected to have a positive impact on some local businesses. These benefits are likely to predominantly occur for businesses in Tumbarumba due to the presence of up to 90 construction personnel servicing the western side of the project, although potential benefits would also occur for businesses in other towns that accommodate smaller numbers of workers servicing the eastern side of the project. The potential for construction to increase the local population and bring economic stimulus and income for the area was identified during consultation for the Snowy 2.0 (Snowy Hydro Limited, July 2017; EMM 2019). The potential for construction of Snowy 2.0 (of which this project is a part) to support employment and economic growth is also identified in the Bushfire Addendum to the *Snowy Valleys Regional Economic Development Strategy* (NSW Regions, 2020).

While specialist materials and equipment are expected to be sourced from elsewhere, maximising the use of local suppliers in the provision of construction related goods and services, where possible, would have beneficial impacts for local businesses. These benefits will be particularly important in helping local businesses respond to economic impacts of the bushfires and COVID-19 pandemic.

It is proposed that about 20 construction personnel servicing the eastern side of the project would use the Snowy 2.0 works accommodation, while other construction personnel from outside of the study area are proposed to be accommodated in short-term accommodation at Tumbarumba, Talbingo, Tumut, Aaminaby, Providence Portal, and Cooma. Use of short-term accommodation by the construction workforce would increase demand for tourist accommodation such as hotel, motels, cabins or caravans. The project would require an average construction workforce of about 75 workers, with this growing to about 140 workers during peak periods. Assuming about 20 people would stay at the Snowy 2.0 works accommodation the number of construction personnel staying in temporary accommodation is anticipated to be between 55 and 120 people, over the 39-month construction program.

As indicated in **Section 5.2.2**, in 2016 there were about 83 rooms in short-term accommodation facilities offering 15 rooms or more in Tumbarumba and 312 rooms in Cooma-Monaro as well as several other smaller accommodation providers such as bed and breakfasts, self-contained cottages and caravan parks in Tumbarumba and other towns across the study area. Average occupancy rates of tourist accommodation suggests that there would be some capacity in the existing tourist accommodation to accommodate construction workers. The use of some available, under-utilised tourist accommodation for the construction workforce would provide economic benefits for accommodation owners, particularly during the off-peak tourist periods. During peak tourist periods, picking seasons and annual events, the demand for accommodation by construction workers has potential to impact on the availability of accommodation for tourists and other visitors. This may impact on the ability of the tourism sector to meet peak tourist demand and deter some visitors from visiting the area during the construction phase and post-construction, potentially impacting some tourist related businesses. Reduced availability of short-term accommodation may also deter some seasonal workers from taking up employment with primary producers in the study area and surrounding region. This would particularly impact primary producers that are not able to provide on-site accommodation for seasonal workers and may affect their ability to harvest their produce if they are not able to source local workers. Concerns about the availability of tourist accommodation, particularly during the winter months, was identified during consultation with business owners for the Snowy 2.0 Exploratory Works EIS (Snowy Hydro Limited, July 2017). Concerns about potential impacts on accommodation during tourist and picking seasons were also raised during consultation for the project.

A worker accommodation strategy would be prepared for the project to manage demand for tourist accommodation from the construction workforce during the construction phase and post-construction. This would include consultation with accommodation providers and tourist representatives. The need for consultation with accommodation providers was identified during consultation with business owners for the Snowy 2.0, with some tourist accommodation operators indicating that they have repeat visitors during peak time and require ample notice regarding workers needing to use their accommodation (Snowy Hydro Limited, July 2017; EMM, 2019). The preparation of a worker accommodation strategy for the project will be particularly important given potential effects of the bushfires on visitor accommodation in the study area, including through loss or damage to existing accommodation or increased demand by workers associated with the recovery and redevelopment.

Consultation with Snowy Hydro Limited about the use of the Snowy 2.0 works accommodation is also ongoing. Maximising the use of the Snowy 2.0 works accommodation for construction workers would help to minimise impacts on tourist accommodation due to increased demand by construction workers. Maximising the number of workers employed on the project who currently live within the study area, would also help to reduce demand for short-term accommodation during the construction phase and subsequent impacts on other industries.

State forest land required for the substation at the western side of the project would be cleared and no longer be available for use by the FCNSW. As indicated in **Section 5.4**, consultation by TransGrid with FCNSW has indicated that commercial forestry activities are not currently undertaken, or anticipated to commence in the near future within the parts of Bago Forests in the project area given its limited commercial viability compared with other parts of Bago State Forest. Potential impacts on forestry operations would be managed through discussions with the FCNSW.

6.3.2 Operation

Snowy 2.0 is critical for energy security and reliability in NSW and would maximise the use of the existing Snowy Scheme. The project is linked with the need for Snowy 2.0 and would provide a direct connection from Snowy 2.0 to the NSW transmission system. The project would also enable a supply of renewable energy to charge the Snowy 2.0 'battery' during periods of low demand. This would have significant economic benefits for business and industry across the Snowy Mountains region, NSW and other states by providing improved security and reliability of the energy market, and lower energy costs for customers, including businesses.

Locally, land within the Bago State Forest used for the substation would no longer be available for use by the FCNSW. It is anticipated that any potential economic loss would be addressed as part of the land acquisition process. Potential impacts on forestry operations would be managed through discussions with the FCNSW.

During operation, impacts on local businesses in the study area are expected to be minimal and would mainly be associated with demand for goods and services by operation and maintenance workers during inspections of the transmission infrastructure.

6.4 Community values

6.4.1 Construction

Potential impacts on community values from the construction of the project would generally be associated with:

- Clearing of vegetation, impacting on community values relating to scenic and landscape amenity and the environment
- Increased noise and construction traffic impacting on amenity close to the project for recreation users of KNP and Bago State Forests
- The influx of construction workers to local towns closest to the project, potentially impacting on community cohesion and sense of community.

Clearing of vegetation and the construction of transmission infrastructure within KNP and Bago State Forest would impact on the natural environment and landscape values of these areas. As indicated in **Section 5.6**, the protection and management of the study area's national parks are important to local and regional communities and impact on flora and fauna from the construction of the project is likely to be a key concern for community members. The importance of this is likely to increase as flora and fauna recovers from the bushfires. Minimising the amount of vegetation clearing for construction activities will be important in managing potential impacts.

During construction, users of recreational facilities near the project may experience impacts on amenity due to noise from construction works, helicopter use and construction traffic. Changes to amenity have potential to impact on the use and enjoyment of these facilities by visitors and local communities or deter some people from using these facilities. Environmental management measures would be implemented to help manage potential

impacts on recreational users and visitors. Consultation would also be undertaken with NPWS and tourist representatives to minimise impacts on local facilities.

Changes to access and increased traffic near to construction works may disrupt access and perceptions of road safety for local communities and visitors. In particular, an increase in the use of local roads and access tracks by heavy vehicles may impact on safety for other road users, particularly for tourists who are unfamiliar with local driving conditions. Traffic management measures would be implemented to manage potential safety risks and disruptions due to construction traffic and local access changes.

An influx of construction workers to towns in the study area has potential to impact on sense of community, particularly where towns have smaller population levels and where the increase in population affects access to services and facilities. Communities in the study area regularly experience temporary increases in population associated with tourism or seasonal workers. Feedback from consultation undertaken for the Snowy 2.0 suggests that local towns such as Tumbarumba are readily able to absorb demands produced by an influx of individuals. Previous consultation identified that potential impacts on social cohesion and neighbourhood safety were generally considered neutral, although some concerns were identified about potential for impacts due to poor worker behaviour (Snowy Hydro Limited, 2017; Elton, 2019). Protocols relating to worker conduct within the local area would be implemented, which would assist in managing any potential impacts on sense of community.

6.4.2 Operation

The project would allow the efficient and reliable transmission of additional renewable energy from Snowy 2.0, providing improved security and reliability of the energy market and lower energy costs for customers. This would have beneficial impacts for communities across NSW and other states.

Locally, potential impacts on community values due to the project operation may be associated with:

- The presence of infrastructure assets in an environment that is considered to be pristine
- Changes to access during maintenance activities which may be temporarily required for short periods.

Whilst the study area currently accommodates a range of infrastructure assets, the addition of new infrastructure and associated cleared easements, access tracks and vegetation clearing has potential to impact on community values relating to landscape and scenic amenity and the environmental values of KNP.

6.5 Social infrastructure

6.5.1 Construction

Where possible, construction infrastructure has generally been sited away from facilities such as campgrounds, helping to minimise impacts on recreational users.

During construction, the siting of construction facilities such as laydown areas and construction compounds may temporarily disrupt access to and use of some recreational facilities and activities near the project, particularly areas within Bago State Forests used for recreational hunting, areas of Talbingo Reservoir used for boating and fishing, and management tracks within KNP used by walkers and cyclists. Changes to amenity at recreational facilities near the project also has potential to impact on the use and enjoyment for users of these and other facilities near the project.

A hunting exclusion area would be established near the project within the Bago State Forest. While this would impact on the use of this area for recreational hunting, other sections of Bago and Maragle State Forest would continue to be available for hunting, helping to minimise potential impacts on recreational hunting. Ongoing consultation with FCNSW would also be undertaken to assist in minimising potential impacts on recreational hunters near the project area.

A temporary exclusion area for aquatic activities would also be established during the overhead stringing of conductors and overhead earth wires across Talbingo Reservoir. These works are expected to occur over about four to eight-week period. This has potential to temporarily impact on water-based recreational activities such as boating and fishing in this area during the stringing process, although general access and use of other sections of Talbingo Reservoir would be maintained for recreational boating and fishing, including areas south of Coonara Point used for water skiing.

The project area is not located near any formal walking tracks, with the nearest walking track being approximately eight kilometres away, although management tracks in KNP are used by walkers and cyclists. Measures would be implemented near to construction works to minimise impacts on users of these tracks (refer to the mitigation measures in Section 5.6 (Transport) of the EIS).

There are no campgrounds located within the project area. The Ravine campground located north of the project area at Lobs Hole Ravine Road would be temporarily closed during construction of Snowy 2.0 and would also be used to accommodate workers associated with Snowy 2.0 and this project. The temporary closure of the campground would impact on users of this area and require them to use alternative campground facilities. A survey of recreational users previously undertaken for the Snowy 2.0 Exploratory Works suggest that this would directly impact relatively low numbers of recreational users and that there would be capacity at alternate campgrounds during construction (TRC, 2019). The nearest publicly accessible campground to the project area during construction would be O'Hares campground located approximately three kilometres south of the project. Construction of the project is not expected to impact on the use of this facility.

Other impacts of construction on social infrastructure would generally be associated with:

- Increased demand by construction workers of some community services and facilities, such as medical and emergency services
- Impacts on amenity of recreational uses associated with clearing of vegetation, and increased construction noise, dust and traffic.

Medical facilities and staff would be provided by Snowy Hydro Limited at the Snowy 2.0 works accommodation to cater for the majority of likely medical incidents and in the unlikely event of a major health or safety incident that cannot be dealt with on site, workers would be transferred by helicopter evacuation, most likely to Canberra or Wagga Wagga hospitals. Increased demand by construction workers for general medical services has potential to increase the pressure on these services potentially impacting on the ability of residents to access these services when required. The nearest medical facilities to the project are located at Tumbarumba and Tumut, with general practices and emergency hospital units located in each of these locations. As indicated in **Section 5.5.2**, medical facilities in the study area are generally limited and a number of non-project related issues currently impact on people's access to health and medical services. Concerns about increased demand for health and emergency services was raised during consultation for the project with Snowy Valleys Council. Consultation undertaken for the Snowy 2.0 Main Works EIS also identified community concerns about potential for increased demand for health and medical services to impact on the availability and 'wait times' of general practitioner services (Elton Consulting, 2019). A workforce health and safety plan would be prepared for the project that includes measures for responding to health, medical and safety incidents during the construction phase.

During construction, impacts on emergency services in the study area may be associated with increased demand associated with potential construction related safety incidents. Specifically, demand for these services may impact on the availability of emergency services to respond to other local incidents that occur at the same time. This was identified as a concern by community members during consultation for the Snowy 2.0 Main Works EIS (Elton Consulting, 2019). Before construction, consultation would be undertaken with emergency services providers and local hospitals during the preparation of emergency response procedures.

Environmental and traffic management measures, for both road and aquatic traffic, would be implemented to help manage potential impacts on recreational users and visitors. This would include ongoing communication with recreational users, local and regional communities, and visitors about temporary closure and changes to

recreational facilities. Consultation would also be undertaken with NPWS and tourist representatives to minimise potential impacts on local facilities.

6.5.2 Operation

Potential impacts on social infrastructure due to the operation of the project may be associated with:

- The presence of the transmission lines and substation affecting views and scenic amenity from some surrounding public roads including Elliott Way and future recreational and camping facilities at Lobs Hole
- Access and use of recreational facilities in the vicinity of the project including future recreational use and Lobs Hole
- Recreational hunting exclusion zones in the vicinity of the proposed substation and transmission corridor.

As discussed in **Section 6.4**, the addition of new infrastructure and associated easements, access tracks and vegetation clearing has potential to impact on community values relating to landscape and scenic amenity and the environmental values of KNP and Bago State Forest. This is likely to have the greatest impact on users of recreational facilities closest to the project, including O'Hares campground, the southern reach of the Talbingo Reservoir and Elliott Way and Lobs Hole Ravine Road.

During operation, a hunting exclusion zone would be established within the Bago State Forest in the vicinity of the transmission line easement and proposed substation. This would impact on the use of this area for recreational hunting, although other sections of Bago and Maragle State Forest would continue to be available for hunting. Consultation would be undertaken with FCNSW to minimise potential impacts on recreational hunting. During the operation of the transmission infrastructure, light vehicles and small to medium plant would need to access the substation and transmission line easements to undertake maintenance activities. These activities are not expected to impact on the uses of or access to recreational facilities near the project.

6.6 Access and connectivity

6.6.1 Construction

During construction, temporary impacts on access and connectivity may be experienced due to:

- Temporary changes to access and road conditions near to construction works
- Increased traffic along local roads from construction equipment and workforce movements, including heavy vehicles.

During construction, increased construction traffic using local roads and access tracks has potential to cause temporary delays and disruptions for other road users and impacts on road safety. This includes construction workers using Tooma Road and Elliott Way to commute between accommodation at Tumbarumba and construction worksites and heavy haulage vehicles transporting materials, equipment and spoil. Concerns about the increase in traffic during construction on local and main roads, were raised during consultation for the project and Snowy 2.0 (Snowy Hydro Limited, July 2017; EMM, 2019). In particular, concerns were raised during consultation with the Snowy Valleys Council in September 2020 about the increase in traffic of heavy vehicles through smaller towns such as Batlow and Adelong and potential impacts of increased heavy vehicle use of local roads. Safety measures and protocols, including driver induction and training would be implemented to minimise impacts of additional construction vehicles. These would be outlined in the Construction Traffic Management Plan prepared for the project. Further discussion about potential construction traffic impacts is provided in the EIS.

Potential changes to local access and connectivity may also be associated with changes to local roads near construction works, temporarily impacting road conditions (e.g. reduced speed limits) and access for local communities, visitors and NPWS. Potential impacts would mainly be associated with works near Lobs Hole Ravine Road at the eastern end of the project, and Elliott Way and Boundary Road at the western end of the project and may result in delays and disruptions for NPWS and residents and visitors accessing recreational facilities within

KNP. Roads providing access for the project include sections that are narrow and winding and are generally not designed for high volumes of heavy vehicle traffic. An increase in the use of local roads by heavy vehicles and construction workers may impact on safety for other road users, particularly tourists who are unfamiliar with local driving conditions.

As indicated in **Section 6.5**, access and use of the Talbingo Reservoir for recreational boat users and fishers would be maintained during construction, although temporary changes to boating access may be required on parts of the reservoir near to construction works, including the establishment of temporary marine exclusion areas for the overhead stringing of conductors and overhead earth wires across Talbingo Reservoir.

Traffic management measures would be implemented to minimise potential impacts and maintain safety for road and boat users. This would include ongoing communication with local and regional communities and visitors about changes to road access and potential increases in heavy vehicles through towns in the primary study area and wider region and changes to boating access.

6.6.2 Operation

During operation, potential impacts on access and connectivity from the use of roads and trails for maintenance activities, and temporary access restrictions for road and boat users from the maintenance of conductors and overhead earth wires are generally expected to be minor. New access tracks in the project area would potentially provide improved access for emergency vehicles responding to incidents within KNP and Bago State Forest.

6.7 Evaluation of significance

Table 6-1 presents a summary of the socio-economic impacts of the project's construction and operation, along with the outcomes of the evaluation of significance. The evaluation of significance is based on the social risk matrix presented in **Section 3.1**.

Table 6-1: Summary of socio-economic impacts and evaluation of significance

Impact	Phase	Nature	Without mitigation			Mitigation	With mitigation		
			Likelihood	Consequence/ benefit	Ranking		Likelihood	Consequence/ benefit	Ranking
Property acquisition									
Impact on forestry operations from property acquisition	Operation	Negative	Unlikely	Minor	Low	Compensation in accordance with relevant legislation	Unlikely	Minimal	Low
Employment									
Creation of direct local employment opportunities	Construction	Positive	Likely	Moderate	High	No mitigation required	Likely	Mod	High
Creation of indirect local employment opportunities	Construction	Positive	Possible	Minor	Mod	Identify opportunities to maximise use of local suppliers	Likely	Minor	High
Business and industry									
Opportunities for/ increased spending at local businesses	Construction	Positive	Likely	Moderate	High	Identify opportunities to maximise use of local suppliers	Almost certain	Mod	High
Use of available, under-utilised tourist accommodation by construction workers	Construction	Positive	Likely	Major	Extreme	No mitigation required	Likely	Major	Extreme

Impact	Phase	Nature	Without mitigation			Mitigation	With mitigation		
			Likelihood	Consequence/ benefit	Ranking		Likelihood	Consequence/ benefit	Ranking
Reduced availability of tourist accommodation	Construction	Negative	Possible	Moderate	High	Maximise use of accommodation in the Snowy 2.0 works accommodation Preparation of worker accommodation strategy and engagement with local accommodation providers Maximise use of local workers	Unlikely	Mod	Mod
Improved security and reliability of the energy market and lower energy costs	Operation	Positive	Possible	Major	Extreme	No mitigation required	Possible	Major	Extreme
Demand for goods and services to support operation and maintenance	Operation	Positive	Possible	Minor	Mod	No mitigation required	Possible	Minor	Mod
Community values									
Impacts on community environmental values due to clearing	Construction	Negative	Possible	Major	Extreme	Minimise amount of vegetation to be cleared	Possible	Mod	High
Amenity impacts for recreational users	Construction	Negative	Possible	Minor	Mod	Implementation of environmental management measures	Unlikely	Minor	Low

Impact	Phase	Nature	Without mitigation			Mitigation	With mitigation		
			Likelihood	Consequence/ benefit	Ranking		Likelihood	Consequence/ benefit	Ranking
Impact on sense of community due to influx of construction workers	Construction	Negative	Possible	Minor	Mod	Implementation of worker conduct protocols	Unlikely	Minor	Low
Presence of infrastructure assets impacting community values	Construction / Operation	Negative	Possible	Major	Extreme	Minimise visual impacts through design and siting of infrastructure	Possible	Mod	High
Social infrastructure									
Disruption to use of some recreational facilities / activities	Construction	Negative	Likely	Minor	High	Minimise duration of disruptions Notification of affected stakeholders	Likely	Minimal	Mod
Demand for social infrastructure (for example, medical services)	Construction	Negative	Possible	Moderate	High	Implementation of worker health and safety plan Provision of health services within Snowy 2.0 works accommodation Engagement with infrastructure providers	Unlikely	Mod	Mod
Demand for emergency services	Construction	Negative	Possible	Moderate	High	Preparation and implementation of emergency response procedures in consultation	Possible	Minor	Mod

Impact	Phase	Nature	Without mitigation			Mitigation	With mitigation		
			Likelihood	Consequence/ benefit	Ranking		Likelihood	Consequence/ benefit	Ranking
						with emergency service providers			
Implementation of exclusion zones	Operation	Negative	Almost certain	Minimal	High	Minimise area subject to exclusion zone	Almost certain	Minimal	High
Access and connectivity									
Delays and disruptions for road users	Construction	Negative	Possible	Minor	Mod	Implementation of traffic management measures	Unlikely	Minor	Low
Change in perceptions of road safety	Construction	Negative	Possible	Minor	Mod	Implementation of traffic management measures	Unlikely	Minor	Low
Impact on access for water-based recreation users	Construction	Negative	Likely	Minor	High	Notification of affected stakeholders	Likely	Minimal	Mod
Impacts on access and connectivity	Operation	Negative	Unlikely	Minor	Low	No mitigation required	Unlikely	Minor	Low

6.8 Summary of impacts

Impacts of the project on the social and economic environment of the study area and wider region would mainly be associated with the construction phase. Potential impacts would include:

- Construction:
 - Temporary economic benefits for accommodation owners, associated with increased demand for short-term accommodation for construction workers, particularly in Tumbarumba
 - Impact on the availability of accommodation for tourists, visitors and seasonal workers during peak tourist and picking periods due to use of short-term accommodation by construction workers, potentially deterring tourists and seasonal workers from visiting the area during and following construction and resulting in potential impacts on tourism operators and primary producers
 - Increased business for local shops, food outlets and industries supplying goods and services to the construction workforce and construction activities
 - Potential for increased pressure on community services and facilities (eg health and medical services) and impacts on the ability of residents to access some services when required, due to increased demand by construction workers
 - Possible temporary changes to boating access on parts of Talbingo Reservoir near construction works, although general access and use of the reservoir for recreational boating and fishing would be maintained
 - Clearing of vegetation, impacting on community values relating to scenic and landscape amenity and the environment
 - Increased noise, and construction traffic impacting on amenity close to the project works for recreation users of KNP and Bago State Forests
 - Temporary changes to access and road conditions near construction works and increased traffic through smaller towns such as Tumbarumba, Batlow and Adelong and on local roads such as Elliott Way, resulting in possible delays, disruptions and impacts of road safety for residents, visitors and NPWS.
- Operation:
 - Changes in land use within the substation site and surrounding buffer, including loss of this land for recreation and forestry uses
 - Impacts on views and scenic and landscape amenity due to the clearing of vegetation and the presence of project infrastructure, such as transmission lines (and their structures) and substation
 - Positive impacts for business, industry and communities across NSW and other states by supporting improved security and reliability of the energy market and lower energy costs for customers.

7. Mitigation measures

This section provides an overview of the measures to manage the social and economic impacts of the project's construction and operation. It provides an overview of the broad objectives for management of social and economic impacts, as well actions taken during the design process to avoid and minimise impacts, as well as key strategies for addressing various issues.

Recommended safeguards and mitigation measures to manage social and economic impacts of the project's construction and operation are summarised in **Table 7-1**. Additional measures relevant to the management of socio-economic impacts are also outlined in other chapters of the environmental impact statement, including:

- Biodiversity (Section 7.1 of the EIS)
- Landscape character and visual amenity (Section 7.7 of the EIS)
- Noise and vibration (Section 7.8 of the EIS)
- Traffic and transport (Section 7.6 of the EIS)
- Air quality (Section 7.9 of the EIS).

Table 7-1: Summary of environmental management measures

Ref	Impacts	Mitigation measures
Construction		
1	General	<p>A Community and Stakeholder Engagement Plan will be prepared and implemented to help provide timely and accurate information to the community during construction. The plan will include (as a minimum):</p> <ul style="list-style-type: none"> ▪ Mechanisms to provide details and timing of proposed activities to residents, business owners, NPWS, visitors, recreational users and motorists including changed traffic and access conditions and amenity impacts ▪ Process for receiving and responding to queries and complaints regarding the project's construction.
2	Business and industry	<ul style="list-style-type: none"> ▪ A worker accommodation strategy will be prepared for the project to manage demand for tourist accommodation from the construction workforce during the construction phase and post-construction ▪ Consultation will be carried out with local businesses in accordance with the Community and Stakeholder Engagement Plan about the timing and duration of construction activities ▪ Maximise the use of the Snowy 2.0 works accommodation where possible for construction workers to minimise demand for local accommodation ▪ Consultation will be carried out with accommodation providers and annual event organisers at Tumbarumba in accordance with the Community and Stakeholder Engagement Plan about workforce numbers and timing ▪ A commitment to consider local business opportunities in project procurement practices, including encouraging contractors to source local goods and services, where possible ▪ Identify and communicate to local communities (prior to and during construction) opportunities and requirements for work on the construction phase.

Ref	Impacts	Mitigation measures
3	Social infrastructure	<ul style="list-style-type: none"> ▪ Communication with the wider community in accordance with the Community and Stakeholder Engagement Plan, about the timing and duration of potential disruptions to recreational activities and facilities ▪ Consultation with NPWS and FCNSW regarding the timing, duration and likely impacts of construction activities on access and use of recreational areas and facilities within KNP and Bago State Forest, including water-based recreational activities on Talbingo Reservoir ▪ Development, monitoring and review of project incident response plans, including ongoing consultation with emergency service providers about changes to local access and potential delays and disruptions ▪ Preparation and implementation of workforce health and safety plan that includes measures for responding to health, medical and safety incidents during the construction phase ▪ Communicate with managers of social infrastructure (e.g. health and medical facilities) about the timing and duration of project activities, including timing of peak construction workforce.
Operation		
5	General	The operation and maintenance of the portion of the project in KNP will be carried out in accordance with any access and operational protocols established between TransGrid and NPWS
6	Access and connectivity	Communication with NPWS i and FCNSW about the timing and duration of maintenance activities that may result in disruptions to local access and connectivity.

8. Conclusion

This report provides an assessment of the potential socio-economic impacts associated with the project located south of Talbingo within KNP, Bago State Forest and the Snowy Valleys LGA.

This assessment focused on the impacts associated with the construction and operation of the transmission connection and substation, with impacts on the socio-economic environment addressed in **Section 6**. The assessment of socio-economic impacts involved:

- Scoping of the potential socio-economic issues for the project and identifying communities likely to be most affected by the project's construction and operation
- Reviewing background information relevant the project and socio-economic environment of the study area, and preparing a social baseline describing existing social characteristics, values and conditions within the local and regional communities
- Identifying and assessing socio-economic impacts of the project's construction and operation, including potential impacts on property, local amenity, social infrastructure, local business and industry, community values and access and connectivity
- Identifying measures to mitigate identified socio-economic impacts.

Impacts of the project on the social and economic environment of the study area and wider region, including the project area, KNP and Bago State Forests, would mainly be associated with the construction phase. Economic benefits are anticipated for local businesses and accommodation owners due to increased demand for goods and services. There are however potential impacts anticipated in relation to the availability of accommodation for tourists and visitors during peak tourist periods and picking seasons, and increased pressure on community services and facilities from the construction workforce. Near the project area, potential impacts include possible temporary changes to boating access on Talbingo Reservoir and impacts to community values relating to scenic and landscape amenity as a result of vegetation clearing. Impacts are also anticipated as a result of construction work including increased noise, and construction traffic impacting on amenity close to the project including recreational users of KNP and Bago State Forests.

During operation, the project would support the efficient and reliable transmission of additional renewable energy from Snowy 2.0 and would support improved security and reliability of the energy market and lower energy costs for consumers. Locally, impacts would mainly be associated with changes in land use within the substation site and surrounding buffer, including loss of this land for recreation and any potential long term future forestry uses, and impacts on views and scenic and landscape amenity due to the clearing of vegetation and the presence of project infrastructure, such as the transmission connection and the substation.

The implementation of environmental and traffic management measures, including consultation and communication with local businesses, NPWS, FCNSW and recreational users would assist in managing potential impacts. Communication with the wider community in accordance with the Community and Stakeholder Engagement Plan about the timing and duration of potential impacts on local access and possible disruptions to recreational uses are also included as measures to manage the social and economic impacts of the project.

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Appendix A. Key population and demographic characteristics

Table A-1: Key population and demographic characteristics, 2016

Characteristic	Talbingo	Tumbarumba	Snowy Valleys LGA	Regional NSW
Population				
Population	239	1,862	14,395	2,643,536
Male (%)	52.1	49.2	50.6	49.2
Female (%)	47.9	50.8	49.4	50.8
Age profile				
Median age (years)	59	46	45	43
0-14 years (%)	13.6	17.5	18.1	18.4
15-64 years (%)	49.8	59.1	60.0	61.1
65+ years (%)	36.6	23.4	22.2	20.6
Cultural diversity				
Aboriginal and/or Torres Strait Islander people (%)	3.7	5.7	4.4	5.5
Born in Australia (%)	70.2	84.0	81.4	80.9
Households where a non-English language is spoken (%)	2.3	3.3	4.6	7.4
Families and households				
Couple family without children (%)	66.7	50.3	47.0	42.3
Couple family with children (%)	26.3	33.7	36.6	38.9
One parent family (%)	7.0	14.7	15.1	17.4
Total families	54	491	3,762	693,180
Housing				
Total private dwellings	291	904	6,928	1,203,865
Separate houses (%)	96.7	94.7	93.4	82.2
Owned outright (%)	67.0	41.1	42.2	37.4
Owned with a mortgage (%)	9.1	28.1	29.1	30.6
Rented (%)	23.9	27.0	24.8	27.9
Median monthly mortgage repayments (\$)	1,049	1,170	1,300	1,590

Characteristic	Talbingo	Tumbarumba	Snowy Valleys LGA	Regional NSW
Median weekly rental costs (\$)	130	180	180	270
Transport				
Average motor vehicles per dwelling	1.6	1.8	1.9	1.8
Travel to work by car (as driver or passenger) (%)	65.5	73.1	72.5	74.4
Worked at home (%)	6.9	5.4	8.0	5.8
Income				
Median weekly personal income (\$)	541	564	577	584
Median weekly household income (\$)	909	1,102	1,120	1,168
Households with gross weekly income less than \$650 (%)	31.3	27.0	27.0	24.7
Households with gross weekly income more than \$3,000 (%)	0.0	4.9	7.0	10.5
Employment				
Total labour force	66	824	6,331	1,182,573
Labour force participation (%)	31.4	53.7	53.7	54.8
Unemployment (%)	4.5	5.1	5.4	6.6
Top five industries of employment	Hydro-electricity generation (24.4%) Accommodation (15.6%) Building and other industrial cleaning services (11.1%) Electrical services (8.9%) Supermarket and grocery stores (8.9%)	Log sawmilling (14.1%) Local government administration (8.2%) Supermarket and grocery stores (3.4%) Correctional and detention services (3.1%) Road freight transport (3.0%)	Beef cattle farming (specialised) (5.7%) Log sawmilling (3.4%) Supermarket and grocery stores (3.1%) Corrugated paperboard and paperboard container manufacturing (2.8%) Local government administration (2.8%)	Hospitals (except psychiatric hospitals) (3.9%) Aged care residential services (2.7%) Supermarket and grocery stores (2.6%) Primary education (2.4%) Other social assistance services (2.2%)

Source: Based on 2016 Population of Census and Housing, Quikstats data for Talbingo SSC (SSC13730), Tumbarumba SSC (SSC13730), Snowy Valleys LGA (LGA17080), and Rest of NSW (GCCSA 1RNSW)



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