Appendix F

Heybridge social assessment

MARINUS LINK

Marinus Link

Heybridge Social Impact Assessment

May 2024

MARINUS LINK

QUALITY INFORMATION

Revision history

Revision	Description	Date	Author	Reviewer	Approver
0	Final	16/05/2024	TP	KW	KW

Restriction on Disclosure and Use of Data

The front cover image depicts Tasmania's north west coastline, north-west of Heybridge.

Source: Community Update – Tasmania Marinus Link

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EXECUTIVE SUMMARY

Background

Marinus Link Pty Ltd (MLPL) proposes to construct and operate a second electricity interconnector between Tasmania and Victoria, known as Marinus Link. The main components of Marinus Link are a converter station at Heybridge Tasmania, a subsea cable under Bass Strait that leads to a transition station at Waratah Bay in Victoria before continuing underground to a converter station located in the Latrobe Valley.

This report presents the social impact assessment (SIA) of the Tasmania terrestrial and marine components of the Marinus Link. The social impacts of the project are considered for the populations that live in the local study area (Heybridge State) and the regional study areas (Burnie City and Central Coast local government areas).

Impact assessment methodology

A significance assessment approach was applied to assess the impacts on social values, determined by the sensitivity of the value itself and the magnitude of the change it experiences.

Sensitivity is determined by assessing uniqueness or rarity, importance, resilience to change and replacement potential. Key sources for determining the sensitivity of a value include community consultation feedback and the social baseline outcomes.

Whilst magnitude is determined based on the criteria of severity, affected population and duration. Technical reports and project activities have determined the magnitude ratings.

Social baseline

A social baseline was established for the local and regional study areas using data from the Australian Bureau of Statistics 2021 census, government reports and academic publications. More than 100 stakeholders were invited to participate in the SIA, including local government, service providers, community groups and residents. A small number provided their feedback and views during one-on-one interviews with independent consultants. Data from the SIA consultation and ongoing project engagement informed the identification of the social impacts of the project and associated management measures to mitigate the identified impacts and a range of initiatives to enhance the range of benefits from the project.

The social baseline highlighted the following:

- The median household income in the local and regional study areas is lower than the median in Tasmania.
- Unemployment rates in the Central Coast LGA have generally been under that of the state; however, Tasmania has historically had unemployment rates above that of mainland Australia. The exception is the Burnie LGA, where unemployment rates have consistently been above that of the state.
- Youth unemployment is an issue in the region. As of August 2022, the youth unemployment rate for males was 10 %, for females was 8.5 % in the west and north-west region, with youth unemployment at 12 % in Tasmania.

The key social values and sensitivity ratings are detailed below:

Social value	Attributes and indicators	Sensitivity
Community identity	Amenity and landscape	Very sensitive
	Natural resources and ecology	Very sensitive
Economy and livelihood	Employment and workforce	Very sensitive
	Industry and business	Very sensitive
	Housing affordability and availability	Extremely sensitive
	Socio-economic dis/advantage	Very sensitive
Infrastructure and services	Community infrastructure and services – health and wellbeing	Sensitive
	Community infrastructure – childcare	Very sensitive
	Physical infrastructure – connectivity	Very sensitive
	Physical infrastructure – safety and capacity	Very sensitive
People's productive capacities	Health – physical and mental	Very sensitive
	Education, training, and skills	Sensitive
	Health – physical and mental	Very sensitive

Impact assessment pre-mitigation

The impact assessment, before mitigation and enhancement measures, identified:

- Eight impacts of major negative impacts, seven during construction and one during operation.
- Eight negative impacts of high significance, with six during construction and two in the operation phase.
- Two positive impacts of high significance, during the operational phase.
- Ten impacts of moderate significance, of which four are positive impacts.
- Five impacts of low significance, of which four are positive impacts.

Environmental Performance Requirements (EPRs)

The technical assessments that have informed this evaluation have identified a range of EPRs aimed at mitigating potential adverse impacts and maximising the realisation of benefits. The purpose of adhering to these EPRs is to minimise the project's impacts and the risk of harm to environmental, social, and cultural values within reasonable limits, taking into account contextual factors and the practical execution of the project. By following the prescribed EPRs, the project strives to strike a balance between minimising negative effects and ensuring the practical and responsible delivery of the project while safeguarding the relevant environmental, social, and cultural considerations.

A key EPR is the development of a SIMP (EPR S01 Tas), an overarching plan to monitor and manage social impacts. The SIMP will be developed before construction, in consultation with agencies, stakeholders and the affected community to be specific to locations along the alignment. The SIMP will draw on the supporting engagement, management and action plans that detail specific mitigation measures and management strategies; these include the workforce and accommodation strategy (EPR S02 Tas) and the community and stakeholder engagement framework (EPR S03 Tas).

Residual impacts

The residual impact assessment determined no major impacts remained and eleven high residual impacts were identified; of which three are positive. These are summarised below and in the following table.

Negative

- After-hours construction works may concern neighbouring residents, including the new residential development that consists of six hamlets for residential subdivision, being constructed at Devonshire Drive Hamlet in the Heybridge Residential Nature Reserve.
- The converter station will be visible from the southern edge of the Bass Highway. It will also be a dominant view from the exit of the tioxide beach foreshore reserve, the only visitor access point and informal parking area, and this may impact the community's strong values linked to character and amenity.
- The project's construction may contribute to the demand for construction workers and attract employees away from local businesses. This may reduce the availability of these workers for other industries, and result in increased lead times for other types of construction or workforce shortages for local businesses.
- The project's workforce may contribute to the demand for rental housing in the regional study area and exacerbate existing rental availability and affordability issues, disproportionally affecting very low- and low-income households.
- The project's construction workforce may increase demand for childcare providers, compromising service provision to the existing local and regional community.
- Construction fatigue, given night works are expected to occur seven days a week for up to 12 months, are expected to exceed average noise levels that result in sleep disturbance.
- Community members may experience impacts to physical and mental health due to construction fatigue and ongoing after hours works. The community members in the study area may experience stress, anxiety or frustration due to a lack of understanding of the project's scope, the cumulative impacts of projects in the area and the lack of perceived local benefits.
- Concern about the project's potential impacts (e.g. EMF, operational noise) may result in feelings of stress, anxiety and frustration for surrounding residents and communities.

Positive

- A residual positive high impact rating has been determined for the support of local businesses through the purchase of goods and services required to support the project's development.
- The project is expected to result in large taxation receipts ($762 million in total from 2025 to 2050) from the economic activity generated by the project, which will flow to local, state and the Australian Government.
- Another positive impact is that the project may add to the health and wellbeing of residents in the study area through investments in community infrastructure, the potential for downward pressure to be placed on the market regarding energy prices, as well as greater telecommunication security through expansion of the supply-side infrastructure.

Potential impact	Pre-mitigated impact assessment			Residual impact assessment	
	Sensitivity	Magnitude	Significance	Magnitude	Significance
: Construction activity undertaken outside of regular working hours to complete shore crossing works with noise levels exceeding sleep disturbance measure.	**Very sensitive**	**Major**	Major	**Moderate**	High
Negative: Visual amenity: View of the converter stations from the southern edge of the Bass Highway and the converter stations will be a dominant view from the exit of the tioxide beach foreshore reserve, the only visitor access point and informal parking area.	Very sensitive	Major	Major	Moderate	High
Negative: The project's construction will generate demand for construction workers, potentially drawing employees from other construction projects, industry sectors and local businesses. Due to this potential constraint on the workforce, there may be longer lead times for other construction projects and possible workforce shortages in the study area.	Very sensitive	Moderate	High	Unchanged	High
Negative: The project's workforce may contribute to the demand for rental housing in the regional study area and exacerbate existing rental availability and affordability issues, disproportionally affecting very low- and low-income households.	Very sensitive	Major	Major	Moderate	High
Negative: The project's construction workforce may increase demand for childcare providers, compromising service provision to the existing local and regional community	Very sensitive	Moderate	High	Unchanged	High
Negative: Construction fatigue, given night works are expected to occur seven days a week for up to 12 months, are expected to exceed average noise levels that result in sleep disturbance at the Devonshire Drive Hamlet.	Very sensitive	Major	Major		High
Negative: Lack of understanding of the project's scope, cumulative impacts of projects in the areas and not seeing local benefit.	Very sensitive	Major	Major	Moderate	High
Negative: Concern about the project's potential impacts (e.g. EMF, operational noise) may result in feelings of stress, anxiety and frustration for surrounding residents and communities	Very sensitive	Moderate	High	Unchanged	High
Positive: The project's construction will support local businesses through the goods and services required to support the project's development.	Very sensitive	Minor	Moderate	Moderate	High

Potential impact	Pre-mitigated impact assessment			Residual impact assessment	
	Sensitivity	Magnitude	Significance	Magnitude	Significance
Positive: The project is expected to result in large taxation receipts ($762 million in total from 2025 to 2050) from the economic activity generated by Marinus Link, which will flow to local, state and the Australian Government.	Very sensitive	Moderate	High	Unchanged	High
Positive: The project may add to the health and wellbeing of residents in the study area through investments in community infrastructure, the potential for downward pressure to be placed on the market regarding energy prices, as well as greater telecommunication security through expansion of the supply-side infrastructure.	Very Sensitive	Moderate	High	Unchanged	High

Cumulative impacts

Fourteen projects were considered for the cumulative assessment; these projects are in the environs of the proposed Heybridge converter station. The approach to cumulative impact assessment is an adaptive environmental management approach, adopting ongoing proactive use of management plans involving monitoring, evaluation, and mitigation.

The cumulative assessment highlighted the need for a collaborative approach between the government and industry to manage accommodation requirements, availability of the construction workforce and impacts on local services and infrastructure.

GLOSSARY AND ABBREVIATIONS

Term	Descriptions
ABS	Australian Bureau of Statistics
DCCEEW	Australian Department of Climate Change, Energy, Environment and Water
DTP	Victorian Department of Transport and Planning
EE Act	Environment Effects Act 1978 (Vic)
EES	Environment effects statement
EIS	Environmental impact statement
EMPCA	Environmental Management and Pollution Control Act 1994 (Tas)
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)
HVAC	High voltage alternating current
HVDC	High voltage direct current
MLPL	Marinus Link Pty Ltd
MW	Megawatt
NEM	National Electricity Market
SIMP	Social impact management plan
SIA	Social Impact Assessment
Tas Networks	Tasmanian Networks Pty Ltd
Tasmanian EPA	Tasmanian Environment Protection Authority

1. INTRODUCTION

The proposed Marinus Link (the project) comprises a high voltage direct current (HVDC) electricity interconnector between Tasmania and Victoria, to allow for the continued trading and distribution of electricity within the National Electricity Market (NEM).

The project was referred to the Australian Minister for the Environment 5 October 2021. On 4 November 2021, a delegate of the Minister for the Environment determined that the proposed action is a controlled action as it has the potential to have a significant impact on the environment and requires assessment and approval under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) before it can proceed. The delegate determined that the appropriate level of assessment under the EPBC Act is an environmental impact statement (EIS).

In July 2022 a delegate of the Director of the Environment Protection Authority Tasmania determined that the project be subject to environmental impact assessment by the Board of the Environment Protection Authority (the Board) under the *Environmental Management and Pollution Control Act 1994* (Tas) (EMPCA).

On 12 December 2021, the former Victorian Minister for Planning under the Environment Effects Act 1978 (Vic) (EE Act) determined that the project requires an environment effects statement (EES) under the EE Act, to describe the project's effects on the environment to inform statutory decision making.

As the project is proposed to be located within three jurisdictions, the Tasmanian Environment Protection Authority (Tasmanian EPA), Victorian Department of Transport and Planning (DTP), and Australian Department of Climate Change, Energy, Environment and Water (DCCEEW) have agreed to coordinate the administration and documentation of the three assessment processes. Two EISs are being prepared to address the Tasmanian EPA requirements for the Heybridge converter station and shore crossing. A separate EIS/EES is being prepared to address the requirements of DTP and DCCEEW.

This report has been prepared by RPS and Tetra Tech Coffey for the Tasmanian jurisdiction as part of the two EISs being prepared for the project.

1.1 PURPOSE OF THIS REPORT

This report has been prepared to inform the environmental impact assessment of the components of the project within Tasmania, addressing the EMPCA and EPBC Act assessment guidelines described in Section 2. The social impact assessment (SIA) considers potential socio-economic impacts and benefits to people's community identity; economy and livelihoods; infrastructure and services; and people's productive capacity. For the purposes of this assessment, 'people' refers to individuals, households, groups, communities or organisations.

This report aims to assess the potential social impacts and benefits of constructing and operating the project. The report:

- describes the existing social baseline conditions of potentially affected communities and groups in the project study area.
- uses an integrated approach to assess potential social impacts and benefits of constructing and operating the project; and
- considers cumulative impacts that may occur as a result of concurrent projects.
- The methodology for the assessment is described in Section 5.

1.2 PROJECT OVERVIEW

The project is a proposed 1500 megawatt (MW) HVDC electricity interconnector between Heybridge in North West Tasmania and the Latrobe Valley in Victoria (Figure 1-1). The project is proposed to provide a second link between the Tasmanian renewable energy resources and the Victorian electricity grids enabling efficient energy trade, transmission and distribution from a diverse range of generation sources to where it is most needed, and will increase energy capacity and security across the NEM.

Marinus Link Pty Ltd (MLPL) is the proponent for the project and is a wholly owned subsidiary of Tasmanian Networks Pty Ltd (TasNetworks). TasNetworks is owned by the State of Tasmania and owns, operates and maintains the electricity transmission and distribution network in Tasmania.

Tasmania has significant renewable energy resource potential, particularly hydroelectric power and wind energy. The potential size of the resource exceeds both the Tasmanian demand and the capacity of the existing Basslink interconnector between Tasmania and Victoria. The growth in renewable energy generation in mainland states and territories participating in the NEM, coupled with the retiring of baseload coal-fired generators, is reducing the availability of dispatchable generation that is available on demand.

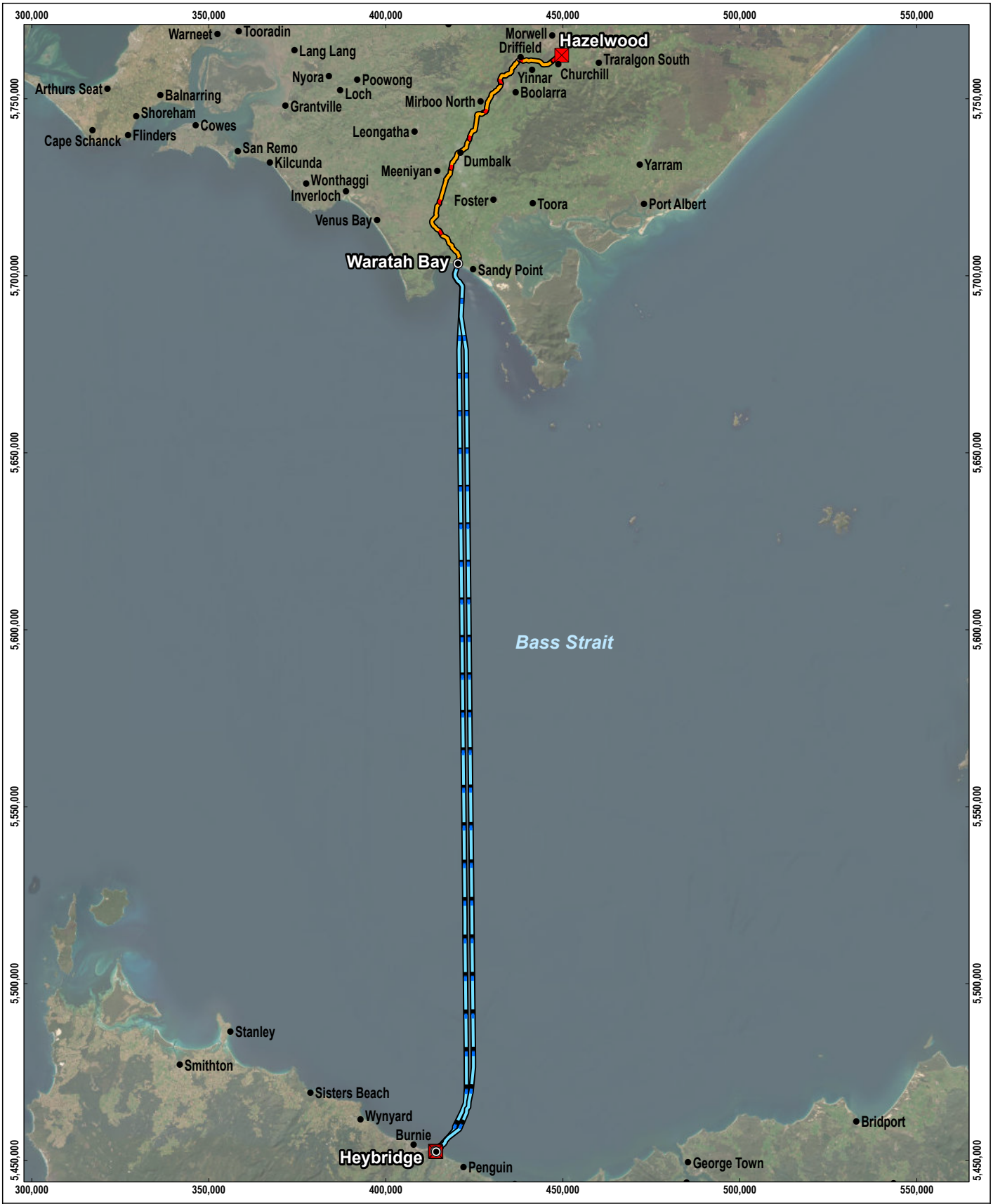
Tasmania's existing and potential renewable resources are a valuable source of dispatchable generation that could benefit electricity supply in the NEM. The project will allow for the continued trading, transmission and distribution of electricity within the NEM. It will also manage the risk to Tasmania of a single interconnector across the Bass Strait and complement existing and future interconnectors on mainland Australia. Marinus Link is expected to facilitate the reduction in greenhouse gas emissions at a state and national level.

Interconnectors are a key feature of the future energy landscape. They allow power to flow between different regions to enable the efficient transfer of electricity from renewable energy zones to where the electricity is needed. Interconnectors can increase the resilience of the NEM and make energy more secure, affordable and sustainable for customers. Interconnectors are common around the world including in Australia. They play a critical role in supporting Australia's transition to a clean energy future.

1.3 ASSESSMENT CONTEXT

A social impact is defined as a change that impacts upon the social values, wellbeing and way of life that the residents and stakeholders highly value within a potentially affected community. Examples of social impacts include changes to the local and regional economy from a project that could lead to positive outcomes such as more employment opportunities or negative outcomes such as reduced viability of industries such as manufacturing.

A SIA is the process of identifying the intended and unintended social consequences of a project. The results of consultation with potentially affected stakeholders informs the development of each SIA. All potential issues and benefits affecting people within the study areas, either directly or indirectly, are pertinent to SIAs.



LEGEND

- Landfall
- Converter station
- HVDC subsea cable
- Underground HVDC cable
- Cable option not progressing

MARINUS LINK

0 15 30 km

SCALE **1:1,500,000**
PAGE SIZE: **A4**
PROJECTION: **GDA2020 MGA Zone 55**

SOURCE
Proposed route from Tetra Tech Coffey.
Imagery from ESRI Online.

MARINUS LINK PTY LTD
MARINUS LINK

FIGURE 1-1

Project overview

TETRA TECH COFFEY

DATE: **16.05.24** PROJECT:**754-MELEN215878ML** FILE: **215878ML**

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2. ASSESSMENT GUIDELINES

This section outlines the assessment guidelines relevant to social impacts and the linkages to other technical assessments completed for the project. Two separate EISs are being prepared to address the EIS guidelines published by EPA Tasmania for the Heybridge converter station and shore crossing.

DCCEEW have published the following guidelines for the EIS: '*Guidelines for the Content of a Draft Environmental Impact Statement – Environment Protection and Biodiversity Conservation Act 1999 – Marinus Link underground and subsea electricity interconnector cable (EPBC 2021/9053)*' (EIS guidelines).

The relevant sections of the Commonwealth EIS guidelines addressed in this report are outlined in Table 2-1.

Table 2-1 Commonwealth EIS guidelines relevant to SIA

Aspects to be assessed	EIS guidelines section	Scoping Requirement	SIA Section
Description of the existing environment	Section 4.2	The EIS must include a description of the environment of the proposed site and the surrounding areas that may be impacted by the action. The description should also include information on the importance and value of potentially impacted environmental features at the local and regional scale. The description must be sufficiently detailed to inform the assessment of impacts with greater detail provided for the species, habitats, and environmental features with the greatest potential impact. At a minimum, this section must include detail of: Cultural heritage values (Indigenous and non-Indigenous); people and communities and other relevant social considerations.	Section 7
Cumulative impacts	Section 5.11	The EIS should identify and address cumulative impacts, where potential project impacts are in addition to the existing impact of other activities. Cumulative impacts must be considered in terms of the potential overall consequence or magnitude of impact on each of the MNES. The assessment of cumulative impacts must include the following: • review and analysis of residual impacts of the proposed development and of other known proposals where there may be a spatial or temporal overlap. • consideration of the potential for cumulative impacts on the resilience of any important population of listed marine species, migratory species, threatened species and ecological communities and on overall habitat quality and availability; and • discussion of the potential for existing pressures and threats to be exacerbated by the proposed development.	Section 10
Economic impacts	Section 9	The economic and social impacts of the proposed action, both positive and negative, must be analysed and provided in the EIS. Matters of interest may include: • details of any public consultation activities undertaken, or that will be undertaken, and their outcomes (including identification of affected parties and their views); • overview of the economic costs and benefits of the project; and • employment opportunities expected to be generated by the project (including construction and operational phases); and • details of the relevant cost and benefits of alternative options to the proposed action.	Section 9

Aspects to be assessed	EIS guidelines section	Scoping Requirement	SIA Section
Consultation	Section 10.1	Any consultation about the action, including: consultation that has taken place; • proposed consultation about relevant impacts of the action; • if there has been consultation about the proposed action, any documented response to, or the result of, the consultation; and • identification of affected parties, including a statement mentioning any communities that may be affected and describing their views.	Section 6

2.1 EPA TASMANIA GUIDELINES

EPA Tasmania has published two sets of guidelines (September 2022) for the preparation of an EIS for the Marinus Link converter station and shore crossing. A separate set of guidelines have been prepared for each of these project components:

- *Environmental Impact Statement Guidelines Marinus Link Pty Ltd Converter Station for Marinus Link*, September 2022, Environment Protection Authority Tasmania (Tasmanian converter station EIS guidelines); and
- *Environmental Impact Statement Guidelines Marinus Link Pty Ltd Shore Crossing for Marinus Link*, September 2022, Environment Protection Authority Tasmania (Tasmanian shore crossing EIS guidelines).

The sections relevant to the social impact assessment are provided in Table 2-2.

Table 2-2 EIS scoping requirements relevant to SIA

Aspects to be assessed	EPA (Converter station/shore crossing)	Scoping Requirement	SIA Section
Socio-economic aspects	Section 5.3 and Section 9.3	A summary of the social or demographic characteristics of the population living in the vicinity of the proposal site, identifying any special characteristics which may make people more sensitive to impacts from the proposal than might otherwise be expected.	Section 7
		A summary of the characteristics of the local and regional economy.	Section 7.3
		Human uses of the area may be impacted by or interact with the proposal.	Sections 9.2.1.4 and 9.2.1.5
Potential impacts	Section 6 and Section 10	Outline the potential environmental, social and economic impacts of the proposal (positive and negative) through all stages, including construction, operation and closure, in the absence of special control measures. Any foreseeable variations in impacts during the start-up and operational phases should be identified. Include an analysis of the significance of the relevant impacts.	Section 9
		Identify the environmental performance requirements to be achieved for each environmental impact and provide evidence to demonstrate that these can be complied with. These may be standards or requirements specified in legislation, codes of practice, state policies, national guidelines (including relevant recovery plans or	Section 9.7

Aspects to be assessed	EPA (Converter station/shore crossing)	Scoping Requirement	SIA Section
		conservation advice) or as determined by agreement with the assessing agencies.	
Socio-economic issues	Section 6.11/ Section 6.12	The impacts on local and State labour markets for both the construction and operational phases of the proposal. The number and nature of direct and indirect jobs arising from the proposal must be detailed. Skills and training opportunities should also be discussed.	Section 9.3
		The impacts on upstream/downstream industries, both locally and for the State.	Section 9.3
		A qualitative assessment of impacts on local social amenity and community infrastructure, including recreational, cultural, health and sporting facilities and services. Any proposals to enhance or provide additional community services or facilities should be described.	Section 9.4
		Impacts on land values and demand for land and housing.	Section 9.3.1.4
		Impacts on the local, regional, state, and national economies.	Section 9.3
		Human uses of the area may be impacted by or interact with the proposal.	Section 9.2
Mitigation measures	Section 6 and Section 10	Describe the measures proposed to avoid or mitigate potential adverse impacts (having regard to best practice environmental management as defined in the EMPC Act) in order to achieve the environmental performance requirements (such as through pollution control technology or management practices).	Section 9,
Residual impacts		Describe the measures proposed to avoid or mitigate potential adverse impacts in order to achieve the environmental performance requirements.	Section 9.7
Cumulative impacts	Section 6.16 and Section 10.16	Provide an assessment of the potential cumulative impacts of the proposal in the context of existing and approved projects in the region.	Section 10

2.1.1 EIS Objective

The Tasmania EPA guidelines set out the objectives of the EIS relevant and the section relevant to the SIA are, as follows:

- Information for individuals and groups to gain an understanding of the proposal, the need for the proposal, the alternatives, the environment that it could affect, the positive and negative environmental impacts that may occur and the measures that will be taken to maximise positive outcomes, and minimise any adverse environmental impacts, including specific management measures.
- A basis for public consultation and informed comment on the proposal.
- A framework against which decision makers, particularly the Board, and sometimes the relevant Planning Authority, can consider the proposal and determine the conditions under which any approval might be given.

2.2 LINKAGES TO OTHER REPORTS

As noted by Vanclay (2003), the social, economic, and biophysical domains of an environment are inherently interrelated and “change to any of these domains leads to changes in the other domains”.

This report is informed by or informs the technical assessments outlined in Table 2-3.

Table 2-3 Connections to other technical assessments

Technical assessment	Relevance to this SIA
Heybridge terrestrial ecology assessment (Entura, 2023)	The findings and recommendations of the ecological impact assessment have informed the assessment of concerns about potential impacts on significant fauna species.
Air quality assessment (Katestone, 2023)	The findings and recommendations of the air quality assessment have informed the assessment of potential changes to amenity and character.
Noise and vibration assessment (Marshall Day, 2023)	The findings and recommendations of the noise impact assessment have informed the assessment of potential changes to amenity and character.
Landscape and visual impact assessment (Landform Architects, 2023)	The findings and recommendations of the landscape and visual impact assessment have informed the assessment of potential changes to amenity and character.
Traffic and transport assessment (Stantec, 2023)	The findings and recommendations of the traffic risk assessment have informed the assessment of potential changes to the transport network.
Contaminated land assessment (Tetra Tech Coffey, 2023)	The findings and recommendations of the contaminated land assessment have informed the assessment of potential risks due to potential contamination at the former industrial site where the converter station will be constructed.
Electromagnetic field and EMI Assessment (JMME, 2023)	The findings and recommendations of the EMI assessment have informed the assessment of potential impacts on human health because of EMI and EMF generated by the project.
Marine ecology and resource assessment (EnviroGulf, 2023)	The findings and recommendations of marine ecology and resource use assessment have informed the assessment of potential impacts on the marine environment.
Economics assessment (SGS, 2023)	The findings economic impact assessment has informed the assessment of potential changes to employment, workforce availability, and economic contribution to the study area.
Summary Community and stakeholder engagement report (July 2018 – December 2022)	The report provides a summary of community consultation activities and themes/areas of interest raised by stakeholders. These outcomes are important in understanding community values, concerns and opportunities.

3. LEGISLATION, POLICY AND GUIDELINES

The content or methods for completing an SIA are not prescribed in Tasmanian legislation or guidelines. The International Association for Impact Assessment (IAIA) published a guideline for SIA (Vanclay, Esteves, Aucamp, Franks 2015) which informed the content and process adopted in the development of this SIA.

The cumulative assessment was undertaken in line with the International Finance Corporation's *Good Practice Handbook on Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets (2013).*

The SIA also had regard for the following guidelines:

- Social Impact Assessment Guideline (NSW DPIE February, 2023);
- Technical Supplement - Social Impact Assessment Guideline for State Significant Projects (NSW DPIE February, 2023);
- International Finance Corporation Environmental and Social Performance Standards (IFC, 2012); and
- Coordinator-General's Social Impact Assessment Guideline (QLD DSDILGP, 2018).

4. PROJECT DESCRIPTION

4.1 OVERVIEW

The project is proposed to be implemented as two 750 MW circuits to meet transmission network operation requirements in Tasmania and Victoria. Each 750 MW circuit will comprise two power cables and a fibre-optic communications cable bundled together in Bass Strait and laid in a horizontal arrangement on land. The two 750 MW circuits will be installed in two stages with the western circuit being laid first as part of stage one, and the eastern cable in stage two.

The key project components for each 750 MW circuit are, from south to north are:

- HVAC switching station and HVAC-HVDC converter station at Heybridge in Tasmania. This is where the project will connect to the North West Tasmania transmission network being augmented and upgraded by the North West Transmission Developments (NWTD).
- Shore crossing in Tasmania adjacent to the converter station.
- Subsea cable across Bass Strait from Heybridge in Tasmania to Waratah Bay in Victoria.

In Tasmania, a converter station is proposed to be located at Heybridge near Burnie. The converter station will facilitate the connection of the project to the Tasmanian transmission network. There will be two subsea cable landfalls at Heybridge with the cables extending from the converter station across Bass Strait to Waratah Bay in Victoria. The preferred option for shore crossings is horizontal directional drilling (HDD) to about 10 m water depth where the cables will then be trenched, where geotechnical conditions permit.

Approximately 255 kilometres (km) of subsea HVDC cable will be laid across Bass Strait. The preferred technology for the project is two 750 megawatt (MW) symmetrical monopoles using ±320 kV, cross-linked polyethylene insulated cables and voltage source converter technology. Each symmetrical monopole is proposed to comprise two identical size power cables and a fibre-optic communications cable bundled together. The cable bundles for each circuit will transition from approximately 300 m apart at the HDD (offshore) exit to 2 km apart in offshore waters.

This assessment is focused on the Tasmanian terrestrial and shore crossing section of the project. This report will inform the two EISs being prepared to assess the project's potential environmental effects in accordance with the legislative requirements of the Tasmanian government (Figure 4-1).

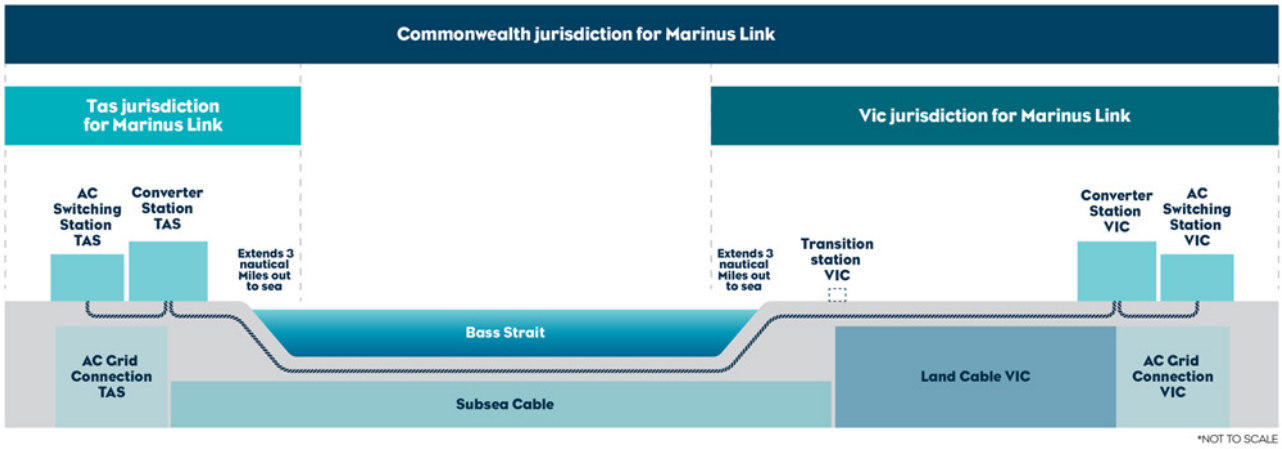


Figure 4-1 Project components considered under applicable jurisdictions (Marinus Link Pty Ltd 2022)

The project is proposed to be constructed in two stages over approximately five years following the award of works contracts to construct the project. On this basis, stage 1 of the project is expected to be operational by

2030, with Stage 2 to follow, with final timing to be determined by market demand. The project will be designed for an operational life of at least 40 years.

4.2 CONSTRUCTION

Activities that are relevant for assessing the impacts on the potentially affected parties and social values include the construction of the Heybridge converter station and shore crossing construction using HDD.

4.3 HEYBRIDGE CONVERTER STATION

The Heybridge converter station will connect the subsea cables to the Tasmanian 220 kV HVAC network. The overhead steel lattice gantries will terminate at the site and connect to a switching station which is connected to the converter stations. Internal roads will be constructed within the converter station site to provide access between buildings.

The construction of the converter station will also include the delivery of transformers to the site. The transport arrangements for this piece of equipment are significant in size, consisting of a vehicle approximately 130 m long and 650 tonnes.

It is expected the Heybridge Converter Station construction will take to be up to 36 months. Construction activities will occur six days per week, from 7:00 am to 4:00 pm.

Converter station construction involves the following activities:

- Site preparation, surveying and vegetation clearing as needed.
- Establishing construction site offices and amenities, and laydown areas.
- Bulk earthworks to construct the converter station bench. Remediation or disposal of contaminated soils disturbed during bulk earthworks.
- Civil works including station access and internal roads, stormwater drainage system, converter hall (comprising phase reactor, valve and HVDC reactor halls), control and auxiliaries building.
- GIS building foundations, cable trenches and foundations for electrical apparatus and transformer bays.
- Installation of the fire water tank, if required.
- Structural steelwork for buildings and electrical apparatus and infrastructure.
- Installation of HVDC converter equipment and associated apparatus.
- Delivery and installation of HVAC switchgear and auxiliary transformers.
- Installation of electrical, mechanical and firefighting systems.
- Testing of electrical, mechanical and firefighting systems.
- Commissioning the converter station and switching station.
- Installation of automated security lighting.

It is the aim to source all civil works materials for the Heybridge converter station from Tasmania. No air or sea transportation will be required. It is assumed the HVDC converter station components will be shipped to Port of Burnie and trucked to the site. Seven oversized loads are expected to be required for the delivery of seven transformers for two converter stations.

4.4 SHORE CROSSING

In Tasmania, the shore crossing will be in Heybridge, approximately 6 km east of Burnie. The shore crossing will be constructed using HDD and will extend approximately 900 m offshore into a 10 m water depth. The subsea cables and land cables will be connected close to the Tasmanian coast. The land-sea cable joint will be installed at the shoring crossing drill pad location in Heybridge.

The site will be accessible via Minna Road, at the same access point as the converter station. The shore crossing construction process will be a continuous 24-hour, 7-day-per-week operation, to ensure borehole stability.

4.5 OPERATION

The project will operate 24 hours a day, every day of the year, for the expected 40 year operational life span. The converter stations will not be manned 24/7 and will only be attended during normal working hours (Monday to Saturday, 7:00 am to 4:00 pm).

4.6 DECOMMISSIONING

The operational lifespan of the project is a minimum 40 years. At this time the project will be either decommissioned or upgraded to extend its operational lifespan.

Decommissioning will be planned and carried out in accordance with regulatory requirements at the time. A decommissioning plan in accordance with approvals conditions will be prepared prior to planned end of service and decommissioning of the project.

Requirements at the time will determine the scope of decommissioning activities and impacts. The key objective of decommissioning is to leave a safe, stable and non-polluting environment.

In the event that the project is decommissioned, all above-ground infrastructure will be removed, the site rehabilitated.

Decommissioning activities required to meet the objective will include, as a minimum, removal of above ground buildings and structures. Remediation of any contamination and reinstatement and rehabilitation of the site will be undertaken to provide a self-supporting landform suitable for the end land use.

Decommissioning and demolition of project infrastructure will implement the waste management hierarchy principles being avoid, minimise, reuse, recycle and appropriately dispose. Waste management will accord with applicable legislation at the time.

Decommissioning activities may include recovery of land and subsea cables. The conduits and shore crossing ducts would be left in-situ as removal may cause significant environmental impact. Subsea cables would be recovered by water jetting or removal of rock mattresses or armouring to free the cables from the seabed.

A decommissioning plan will be prepared to outline how activities would be undertaken and potential impacts managed.

5. ASSESSMENT METHOD

This section describes the method that has been used to identify the values and assess the potential impacts on social values and wellbeing from the project's construction and operational activities.

5.1 THE PROCESS

SIA is the process of analysing and managing the intended and unintended social consequences of a project (Vanclay 2003). The methods used to complete this SIA are shown in Figure 5-1 and are explained further in the following sections.

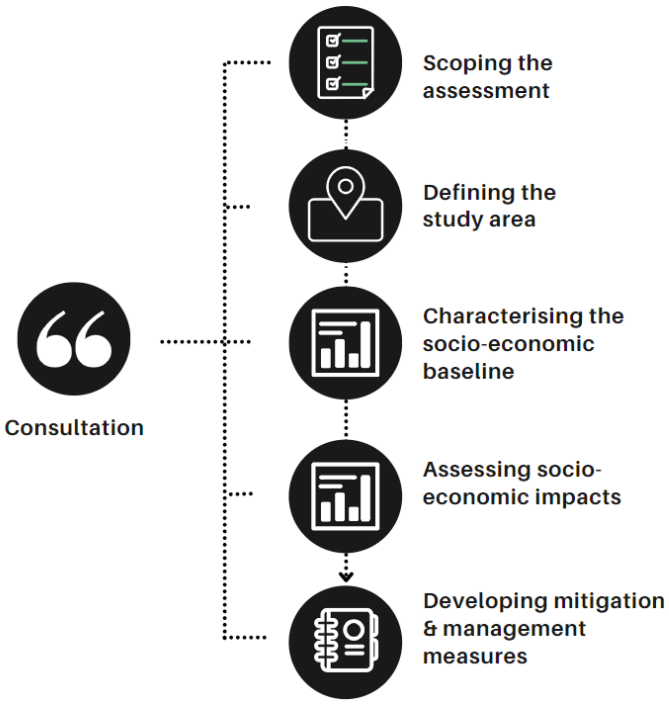


Figure 5-1 SIA procedure

5.2 SCOPING THE ASSESSMENT

The scoping phase of the SIA involved the preliminary identification of the project's potential socio-economic issues, impacts and opportunities. The scoping phase provides a basis for identifying the issues that will need to be investigated by the SIA. Specifically, the scoping phase provided a framework for the definition of the study area, which included:

- Identifying socio-economic values that may be affected by the project.
- identifying key stakeholders for inclusion in SIA consultation.
- The scoping of issues was informed by:
- A review of literature relating to the social context of the study area and the social impacts of linear infrastructure.
- The description of the project.
- The outcomes of stakeholder and community engagement.

5.3 DEFINING THE STUDY AREA

Study areas delineate areas potentially affected by a project. The SIA study area encompasses the communities that may experience the effects of the project's construction, operation, and decommission in Tasmania. In line with the social wellbeing framework (see Table 5-2), this SIA considers the areas most affected by the impacts of the project to include:

- The local study area; Heybridge State Suburb, the area for the converter station.
- The regional study area: includes the two local government areas intersected by the project. State and national impacts are considered where relevant.

The study areas are based on the Australian Bureau of Statistics (ABS) Census Statistical Areas to enable the compilation of data on baseline socio-economic indicators. The ABS State Suburb (SSC) are an ABS approximation of the locality gazetted by the Geographical Place Name authority in each state and territory. The Heybridge (SSC) is the study area, and it is highlighted yellow in .

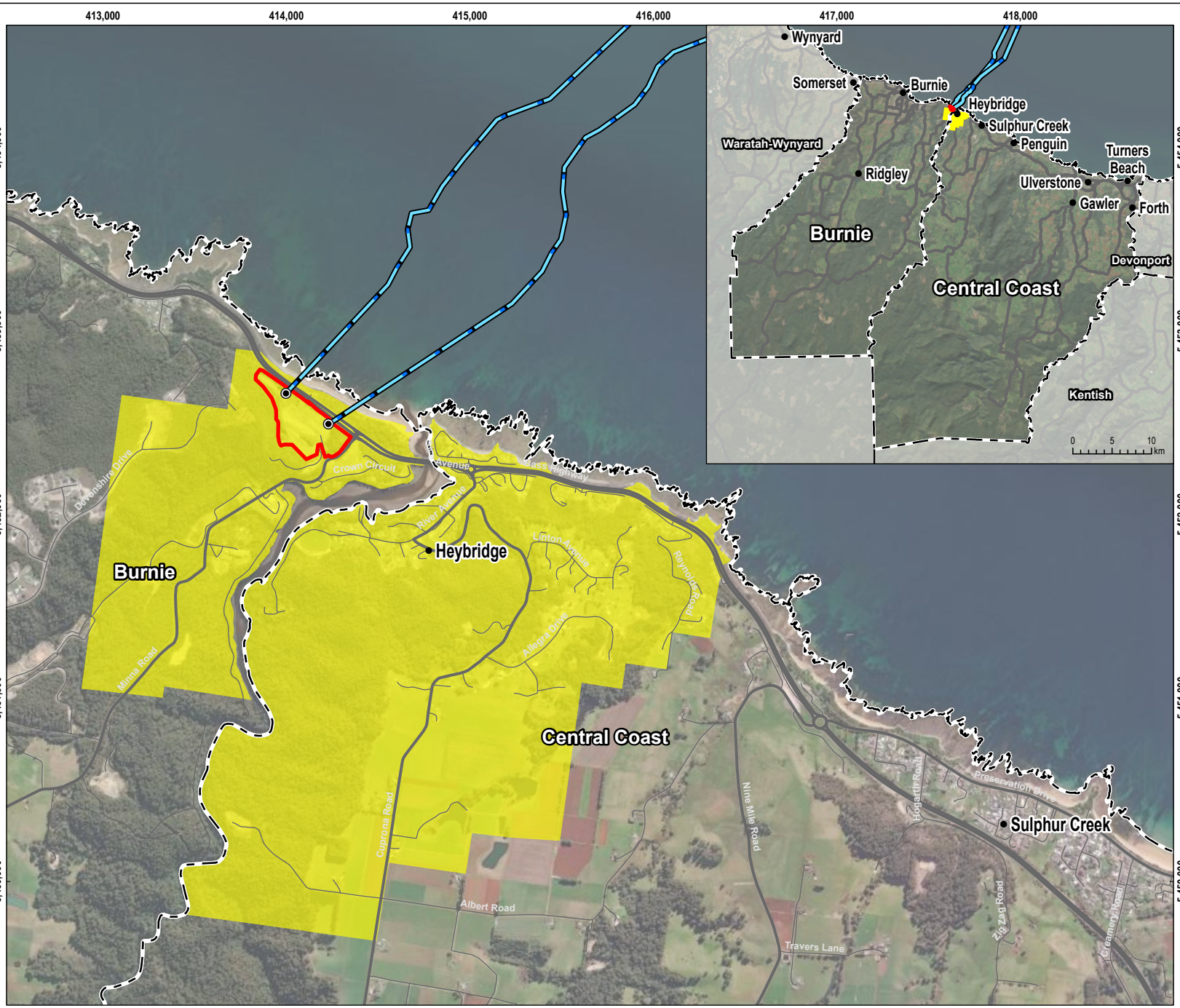
The state of Tasmania is used as a benchmark or external point of comparison for the data present, in line with the guidance provided by IAIA (Vanclay, Esteves, and Franks 2015).

For various demographic indicators, the data collected by the ABS at the state suburb level was subject to high levels of fluctuation, primarily due to the size of populations present within each suburb. To account for the variation, data for the local study area is shown as an aggregated whole. However, data at the regional study area is shown at a local government level, to allow for the identification and discussion of any localised trends. Data is benchmarked against the state of Tasmania.

Table 5-1 ABS statistical areas used in this report

Geographic area	ABS Statistical Area
Local Study Area	Heybridge State Suburb (SSC)
Regional Study Area: Local government areas (LGA)	Burnie City LGA
	Central Coast LGA
State	Tasmania

Figure 5-2 shows the spatial extent of the social study area.



LEGEND

- Landfall
- Proposed route
- HVDC subsea cable
- Heybridge converter and switching station site boundary
- Major road
- Minor road
- Heybridge (SSC)
- Local Government Area

Source:
Routes from Tetra Tech Coffey.
Heybridge SSC from ABS.
Place names, roads, and LGAs from DPIPWE.
Imagery from NearMap (8 March 2022).

0 300 600 m

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PROJECTION: **GDA2020 MGA Zone 55**

MARINUS LINK PTY LTD

MARINUS LINK
EIS/EES

FIGURE 5-2

Social study area

TETRA TECH COFFEY

DATE: **04.10.23** PROJECT: **754-MELEN215878ML** FILE: **215878ML_R06_F213_GIS**

DOC REFERENCE: \\TT.LOCAL\COP\ST72\SIG\GIS\215878_MELEN_TASNETWORKS_PROJECT\MARINUS\TASNETWORKSPROJECTMARINUSGISMXD_APRX\215878ML_R06_EIS\215878ML_R06_F211_F220.APRX LAYOUT:215878ML_R06_F213_GIS_1 SAVED BY: GEORGE.YOUNG 04.10.23 2:58 PM

5.4 DEVELOPING THE BASELINE

The baseline describes the existing social environment of the study area, including key socio-economic characteristics of the people within it and their living conditions. The baseline is used to form the basis for predicting and assessing the potential social benefits and impacts of the project (Duarte and Sanchez 2020), in line with the social value framework described in Table 5-2. Baseline information was collected from stakeholder engagement (see Table 6-3) and a range of secondary sources, including:

- Demographic information provided by the ABS;
- Selected Commonwealth Government websites (e.g., My School; Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES);
- Commonwealth and Tasmanian government agencies, including the Department of Police, Fire and Emergency Services, Tasmania Health Service, Department of Natural Resources and Environment Tasmania;
- Regional and local government plans and strategies;
- Grey literature, including industry and news reports; and
- Academic literature.

An important requirement of SIA is to have an organising framework that allows for the identification of potential community issues and concerns, as well as conveying the outcomes of the SIA. This SIA uses an approach based on four identified social values: community identity, economy and livelihoods, infrastructure and services, and people's productive capacities to describe social wellbeing. Table 5-2 details these values and the attributes and indicators used to understand these within the project's social context. Wellbeing, according to Rowan (2009), refers to a person's financial, physical, and emotional condition. The social wellbeing framework examines determinants of wellbeing and provides the basis for collecting baseline data and identifying and assessing the potential social impacts of the project.

Table 5-2 Social wellbeing framework

Social value	Attributes and indicators
Community identity Describes how a community defines itself in terms of civic participation, resilience, feelings of trust and safety and a sense of belonging and place	• Social capital and community cohesion • Cultural diversity and heritage • Character, amenity, and sense of place • Community safety.
Economy and livelihood Describes how people make a living and the economic structure of the affected community.	• Employment and workforce • Income • Industry and business • Housing affordability and availability • Socio-economic dis/advantage • Land use and natural resources.
Infrastructure and services Describes the infrastructure and services that meet the needs and priorities of the affected community including municipal and social infrastructure and associated services.	• Governance (local, state, and national) • Community infrastructure and services (open space, health, education, daycare, aged care, religious) • Physical infrastructure (e.g. transport and municipal) • Housing (social).

Social value	Attributes and indicators
People's productive capacities Describes the skills, knowledge, and experience that are vital to survival and participation in society and its economy.	• Health – physical and mental • Education, training, and skills • Food security.

Source: Smyth & Vanclay (2017)

5.5 IDENTIFYING THOSE POTENTIALLY VULNERABLE TO CHANGES FROM THE PROJECT

A critical component of developing the baseline is identifying groups that may be vulnerable to changes in the social environment as a consequence of the project's activities (Vanclay, Esteves, and Franks 2015; Vanclay 2003). Vulnerability is commonly defined as the characteristics of a group that influences their 'capacity to anticipate, cope with, resist, and recover' (Blaikie et al. 2014) from the social impacts of a project. Some groups in the community can make use of the opportunities arising from the project, while others are less able and will be more vulnerable to the negative consequences of change. Therefore, this baseline is designed to identify the social attributes and resources that may support vulnerable groups to reach their desired levels of wellbeing and cope with, resist and recover from the impacts of the project as well as where these groups may lack these attributes and resources (Climent-Gil, Aledo, and Vallejos-Romero 2018).

Groups that experience greater impacts due to changes in the social environment may be attributed to a range of social characteristics, including limited access to resources such as capital (i.e., income), or other characteristics, such as poorer health or lower mobility.

As this SIA undertakes an analysis of social context at a group or aggregate level, identifying individuals that may be vulnerable to the project's potential impacts is beyond the SIA method and we consider beyond a method required to address the EIS guidelines. Consequently, vulnerable groups and areas that have higher levels of socio-economic vulnerability have been identified through demographic analysis.

Vulnerable groups at the regional study area level were defined as those who are:

- Within very low and low incomes households (Section 7.3.3).
- Relatively socio-economically disadvantaged as defined by the ABS' Index of Relative Socio-economic Advantage and Disadvantage (SEIFA) (Section 7.3.6).
- Reliant on the affordability of rental housing (Section 7.3.5).
- At risk of exclusion based on cultural identity (), age - youth and seniors (7.2.4), ability (Section 7.5.2) and Indigenous status (Section 7.2.3).

5.6 IDENTIFYING AND PROFILING COMMUNITY INFRASTRUCTURE

Community infrastructure is described as the range of facilities and services that support the creation and development of human and social capital within settlements. Community infrastructure is essential to creating liveable, sustainable, and resilient communities and is comprised of health, education, open space, sport and recreation, emergency services and social housing. In developing the community infrastructure audit for this study, health and emergency infrastructure, transport connectivity and infrastructure and childcare services have been considered for the study area, based on their contribution to community wellbeing. In particular, traffic impacts and childcare availability were also raised during the consultation for the SIA.

5.6.1 Community engagement activities

MLPL and specialist consultants have undertaken community engagement since mid-2018. These activities are summarised in Section 6.1. In addition, Tetra Tech Coffey undertook consultation specifically to inform this SIA. The detail of SIA-specific consultation is provided in Section 6.3.

Jointly, the findings of community engagement and SIA consultation have informed the SIA by developing an understanding of the following:

- existing social conditions within the local and regional study area;
- local community values about their area and what places are important to them;
- attitudes towards the project and areas of community concern;
- potential social impacts from the project to inform the impact assessment and identification of management measures; and
- benefits (if any) the community views the project as providing.

5.6.2 SIA consultation

The scoping phase identified the range of potential social impacts and provided the basis for identifying the stakeholders for inclusion in the SIA consultation. The social wellbeing framework described in Section 5 is also used to identify stakeholders who may be impacted or can provide input about potential impacts, for instance, community housing organisations offer valuable information about the availability of affordable housing in the study area.

The selection process for inclusion in the SIA consultation program was based on discussions with TasNetworks as well as the need for a broad representation of community views and values. More than 100 individuals and representatives of community organisations were invited to participate; these include:

- local governments and local business associations;
- emergency services;
- housing stakeholders (real estate agents and emergency accommodation providers);
- First Peoples; and
- representatives from community organisations, recreation groups, conservation organisations and youth groups.

Consultation for the SIA involved one-on-one structured qualitative interviews with key stakeholders undertaken by an independent SIA specialist. The interviews are confidential, and the feedback has been used in the SIA assessment to confirm existing baseline and project engagement outcomes and inform the impact assessment and development of management measures.

The interviews sought to understand the perceived potential impacts and opportunities, as well as potential management and mitigation measures. Questions asked were designed to allow the participant to talk about what they felt was important. The flow of the conversation was dictated by the participant's responses and questions.

The responses that participants provided to the questions about the project were analysed according to the social wellbeing framework (see Table 5-2), these have been presented in Section 8

The authors of this report followed the social ethical standards of the IAIA, of which they are members.

5.7 IDENTIFYING AND ASSESSING IMPACTS

In addition to examining the impacts of the project to wellbeing in the baseline assessment, it is important to note that the SIA looks beyond impacts on individual property rights and looks more at the groups of people that make up the community.

5.7.1 Impact identification and description

The impact identification phase involved a review of the potential socio-economic issues, impacts and opportunities identified during the scoping phase. Impact identification is primarily focused on understanding how project-related activities or inputs may result in changes in socio-economic values. A social impact occurs when these changes are experienced by people and communities (Slootweg, Vanclay, and Van Schooten 2001). The project's impact pathways were identified through an analysis of the project description, and:

- consideration of key areas of concern or opportunity identified during SIA consultation and community engagement;
- review of relevant literature on the socio-economic impacts of linear energy and similar infrastructure;
- the professional judgement of the SIA study team; and
- the findings of other technical studies (Section 2.2).

5.7.2 Impact assessment approach

A significance-based approach was used to assess potential project impacts (positive and negative) on the identified social values. A significance-based approach uses the principles of social sensitivity and magnitude of impact to assess the significance of an impact. These are defined further below.

A key consideration in assessing impacts are the principles of ecologically sustainable development, where the identification and assessment of impacts and development of mitigation or enhancement measures:

- Considers the potential for short and long-term effects on the socio-economic environment and develops mitigation or enhancement measures accordingly.
- Considers how socio-economic values can be maintained or enhanced for the benefit of future generations.
- Adopts the precautionary principle and proactively implements mitigation measures where there is uncertainty regarding potential impacts on socio-economic values.

This SIA, and EIS as a whole, is precautionary in nature, as it uses a conservative approach or assumes that impacts will be experienced as a worst-case scenario. Where negative impacts or sensitivity may be classified between two levels, the higher or greater level of sensitivity or magnitude has been selected. While for positive impacts, where impacts or sensitivity may be classified between two levels the lower level of sensitivity or magnitude has been selected.

SIA and the assignment of sensitivity and magnitude ratings are subjective and a matter of professional judgement. Similarly, the technical studies that are used to inform the SIA (see Section 2.2) apply a range of techniques (for example, traffic engineering and visual impact assessment) to support an assessment of the significance of impacts within their disciplinary area. The sensitivity and magnitude criteria cannot be compared across technical studies, and as such, the criteria used to measure the significance of social impacts will differ from those used in the technical studies.

Given the precautionary approach in some situations the implementation of a mitigation or enhancement measure may not significantly change the overall impact.

5.7.3 Sensitivity criteria

Social sensitivity to change is determined with respect to its uniqueness or rarity, importance and resilience to change. These contributing factors are described below:

- Uniqueness or rarity of a place or service is an assessment of its occurrence, abundance and distribution within and beyond its reference area (e.g., local government area, Central Coast and Burnie LGAs).
- Importance of a place or service considers the level of value attributed to a place or service by receivers. Importance may be indicated by conservation status, cultural importance (e.g., use in festivals), or economic value.
- Resilience to change is determined by the extent to which a place, service or receiver can cope with or withstand changes without affecting the level of value.
- Replacement potential is the potential a representative, or equivalent place or service, can be found to replace any losses.
- Community Value is the community infrastructure, assets, places and values of importance and concern to the community in which a project is proposed to be located. This factor also considers what is currently provided for the community (for example, road capacity, community facilities, and open space areas) and how it could be affected by a project.

The criteria for determining social sensitivity are set out in Table 5-3 below.

Table 5-3 Social sensitivity criteria

Level	Criteria
Extremely Sensitive	It is unique.
	The value is intact and retains its intrinsic value.
	The place or service is highly valued by the community. The place or service may: • Be listed on a recognised or statutory state register. • Contributes to community events or uses at a state or local level. • Contributes to the state or regional economy in terms of the number of jobs or gross domestic product.
	The place, service or receiver cannot adapt to change.
	It is not widely distributed throughout the system/area and consequently would be difficult or impossible to replace.
	There are no accessible and available alternative services or places.
Very Sensitive	It is locally unique to the community in which it occurs, with few regionally available alternatives.
	The value is relatively intact and retains most of its intrinsic value.
	The place or service is highly valued by the community. The place or service may: • be listed on a recognised or statutory state register. • contribute to community events or uses at a state or local level. • contribute to the state or regional economy in terms of number of jobs or gross domestic product.
	The place, service, or receiver has a limited capacity to adapt to change.
	It is not widely distributed throughout the system/area and consequently, recovery potential would be limited.
	There are no regionally available alternative services.
Sensitive	It is relatively well represented in the areas in which it occurs, but its abundance and distribution are limited by threatening processes.
	The value is in moderate to good condition and retains many of its intrinsic characteristics.

Level	Criteria
	The place or service is valued by the community. The place or service may: • be listed on a recognised or statutory state or local register. • contribute to community events or uses at a regional or local level. • contribute to the state or regional economy in terms of number of jobs or gross domestic product.
	The place or service has the capacity to adapt to change. Receivers have access to socio-economic resources to support their capacity to adapt to change.
	There are no locally available alternative services; however, alternative services are available and have capacity at a regional level.
Not very sensitive	It is not unique or rare, and numerous representative examples exist throughout the system/area.
	It is in a poor to moderate condition as a result of existing threatening processes which have degraded its intrinsic value.
	The place or service is valued by groups within the community. The place or service may: • be listed on a recognised or statutory local register. • contribute to community events or uses at a local level by groups within the community • contribute to the local economy in terms of a small number of jobs.
	There is a slight detectable response to the change in the value, but it can quickly recover.
	There are locally available alternative services.
Not Sensitive	It is not unique or rare and representative examples exist abundantly throughout the system/area.
	It is in poor condition as a result of existing threatening processes which have degraded its intrinsic value.
	The place or service is not valued within the community. The place or service: • is not listed on a recognised or statutory local register. • does not contribute to community events or uses at a local level by groups within the community. • does not contribute to the local economy.
	The place or service has the capacity to adapt to change.
	There are locally available alternative services.

5.7.4 Magnitude criteria

The magnitude of impacts on a social value incorporates an assessment of the geographical extent, duration and severity of the impact. These criteria are described below.

- **Duration** is the timescale of the effect, i.e., if it is short, medium or long term.
- **Severity** is an assessment of the scale or degree of change from the existing condition as a result of the impact. This could be positive or negative.
- **Geographical extent** is an assessment of the spatial extent of the impact.

The criteria for determining the magnitude of impacts on social values are set out in Table 5-4.

Table 5-4 Social magnitude criteria

Magnitude level	Criteria
Severe	A long term or permanent impact (greater than ten years, that causes a significant change from baseline conditions. Or consequences of the impact are unknown. The effect extends to communities across the State.
Major	A medium to long term impact (one to five years) that results in substantial change from baseline conditions. The effect extends to communities in the regional area.

Magnitude level	Criteria
Moderate	A short to medium term impact (6 to 12 months) that results in a considerable change from baseline conditions. The effects extend beyond the operational area but are contained within communities within the local study area.
Minor	A temporary or short-term impact (three to six months) that results in noticeable changes to the baseline conditions. If the effect extends beyond the operational area, it may affect discrete sections of communities within the local study area.
Negligible	A temporary impact (less than three months) that results in little or no change from baseline conditions. It affects a small number of individuals.

5.7.5 Assessment of significance

The significance of impacts (positive and negative) on a social value is determined by the sensitivity of the value itself and the magnitude of the change it experiences. Table 5-5 shows how using the criteria described above, the significance of impacts is determined having regard to the sensitivity of the environmental value and the magnitude of the expected change. This approach adopts a five-by-five matrix.

Table 5-5 Assessment of significance of impacts

Magnitude of impact	Sensitivity of Social Value				
	Extremely sensitive	Very sensitive	Sensitive	Not very sensitive	Not sensitive
Severe	Major	Major	Major	High	Moderate
Major	Major	Major	High	Moderate	Low
Moderate	High	High	Moderate	Low	Low
Minor	Moderate	Moderate	Low	Low	Very low
Negligible	Moderate	Low	Low	Very Low	Very low

5.7.6 Environmental Performance Requirements

EPRs set out the environmental and social outcomes that must be achieved during the design, construction, operation and decommissioning of the project. Compliance with EPRs is intended to minimise impacts and the risk of harm to the environmental, social and cultural values to within reasonable limits having regard to contextual factors and the practical delivery of the project.

In order to develop EPRs relating to the social impacts of the project, industry-standard approaches, leading practices and the latest international approaches to social impact management have been considered. EPRs are also informed by the legislative and regulatory environment pertaining to the relevant jurisdictions. In addition, project-specific measures are recommended to minimise impacts or risks to identified social values.

This performance-based approach allows for flexibility in how a specified outcome is achieved rather than providing prescriptive measures that must be employed. It allows contractors and MLPL to determine the best way to achieve EPRs and manage impacts whilst developing and optimising their design solutions.

Potential management measures were identified to demonstrate how the magnitude of potential impacts occurring could be reduced and to inform the development of EPRs. Mitigation measures were identified for impacts assessed as having a significance ranking of major, high or moderate with only standard controls applied. Example management measures are based on experience from other infrastructure projects and, where appropriate, have been informed by other technical studies being completed for the EIS. Other key considerations for the development of EPRs are recommendations made by key agencies and the findings of community engagement and SIA consultation.

The residual impact assessment presented in this SIA assumes the implementation of management measures to comply with EPRs. Justification is provided to demonstrate how the management measures serve to reduce the significance ranking.

5.7.7 Cumulative impact assessment

The EIS guidelines and EES scoping requirements both include requirements for the assessment of cumulative impacts. Cumulative impacts result from incremental impacts caused by multiple projects occurring at similar times and within proximity to each other.

To identify possible projects that could result in cumulative impacts, the International Finance Corporation (IFC) guidelines on cumulative impacts have been adopted. The IFC guidelines (IFC, 2013) define cumulative impacts as those that 'result from the successive, incremental, and/or combined effects of an action, project, or activity when added to other existing, planned, and/or reasonably anticipated future ones.'

The approach for identifying projects for assessment of cumulative impacts considers:

- Temporal boundary: the timing of the relative construction, operation and decommissioning of other existing developments and/or approved developments that coincides (partially or entirely) with Marinus Link.
- Spatial boundary: the location, scale and nature of the other approved or committed projects expected to occur in the same area of influence as Marinus Link. The area of influence is defined as the spatial extent of the impacts a project is expected to have.

Proposed and reasonably foreseeable projects were identified based on their potential to credibly contribute to cumulative impacts due to their temporal and spatial boundaries. Projects were identified based on publicly available information at the time of assessment. The projects considered for cumulative impact assessment for Tasmania are:

1. Guilford Windfarm
2. Robbins Island Renewable Energy Park
3. Jim's Plain Renewable Energy Park
4. Robbins Island Road to Hampshire Transmission Line
5. Bass Highway upgrades between Cooee and Wynard
6. NWTD
7. Hellyer Windfarm
8. Table Cape Luxury Resort
9. Lake Cethana Pumped Hydro
10. Youngmans Road Quarry
11. Port Latta Windfarm
12. Port of Burnie Shiploader Upgrade
13. Quaylink – Devonport East Redevelopment.

5.7.7.1 Method

The cumulative impacts that may result from this project in conjunction with other proposed and reasonably foreseeable future projects have been assessed.

The management of social impacts will need to address the peaks in the construction workforce relating to the terrestrial construction activities in Tasmania in the context of other large-scale infrastructure construction

projects in the region. The significance assessment method used to identify the residual impacts of the proposed project in Section 9.6 has been used to assess the cumulative socio-economic impacts.

The assessment of potential cumulative socio-economic impacts is described below for each of the affected values. Mitigation or management strategies have been proposed to inform further action that is outside the direct control of Marinus Link to manage cumulative impacts.

The approach to cumulative impact assessment follows Therivel and Ross (2007, p.367). This is essentially an adaptive environmental management approach, in this case, through ongoing proactive use of management plans involving monitoring, evaluation, and mitigation. Consequently, management measures for the monitoring and mitigation of cumulative impacts have been indicated as requirements of the SIMP (EPR S01 Tas).

5.8 LIMITATIONS AND ASSUMPTIONS

There are limitations around information on developments surrounding the project area due to the lack of availability and adequacy of publicly available data and information for other projects. Where uncertainty exists regarding the spatial or temporal context of other projects, a conservative approach was adopted, e.g., assuming the timing of the construction phase of a proposed or reasonably foreseeable project entirely within the north west region of Tasmania overlaps with the project timing.

This SIA should be read with the following limitations:

- The SIA relies on information from a range of secondary sources. Except where stated, the authors have not attempted to verify the accuracy or completeness of this information.
- This SIA was undertaken at a point in time. Communities and people within communities change, residents move, businesses start or close, and other external socio-economic factors may result in changes not captured by this report. This SIA study was undertaken after the COVID-19 pandemic, and this affected several baseline conditions in the local and regional study area, including:
    - Increased demand in the construction sector due to a range of socio-economic factors.
    - Changes in the demand experienced in the retail, tourism, and accommodation sector.
    - Changes in health service and emergency service planning and activity.
    - Changes in general wellbeing, including increased anxiety, worry, and loneliness.
- Similarly, this SIA includes information gained from consultation with key stakeholders and the findings of broader community consultation based on their views expressed during consultation. These views may change over time or in response to other changes in the socio-economic environment.
- Changes to baseline conditions may affect the sensitivity of social values to change or result in changes to project activities that otherwise result in changes to the magnitude of social impacts. This introduces a level of uncertainty in assessing the potential socio-economic impacts and benefits of the project.
- This SIA and the assessment of the magnitude of some social impacts are based on the findings of other studies, as outlined in Section 2.2.
- Credible non-project activities that could contribute to a cumulative impact on the valued environmental, social and cultural components will be identified and then assessed for their spatial and temporal relationship to the project to determine if cumulative impacts are possible and, if possible, significant. Management strategies will be proposed where the project could contribute to a significant cumulative impact. Cumulative impacts are outlined in Section 10.

6. COMMUNITY CONSULTATION OUTCOMES

6.1 PROJECT ENGAGEMENT

The project team has been engaging with stakeholders and the community in Tasmania. The SIA also draws from the stakeholder engagement feedback from key community engagement activities. A summary of areas of engagement and activities and issues raised by stakeholders in Tasmania are detailed in Table 6-1.

Table 6-1 Summary of community engagement activities and outcomes

Key consultation activities on the release of EIS guidelines (2022 to 2023)		
Timing	**Activities**	**Issues raised during the consultation**
September 2022	• Community newsletter • Sulphur Creek drop-in information session (near Heybridge) • Burnie Farmers Market pop-up information stall	**Environment:** • General interest in potential impacts on the environment during construction and operations. **Construction impacts:** • General concerns about impacts to residents during construction and interest in construction duration. **Operational impacts:** • Concern about noise during operations of the converter station. **Social:** • Concern about construction workforce housing availability. **Health**: • Concerns about the potential electromagnetic field (EMF) impacts on local residents **Jobs and procurement:** • Opportunity for the use of local suppliers. • Concerns about skilled worker availability. **Community benefits:** • Suggestions for financial or in-kind contributions to community development in the local area near Heybridge.
October 2022	• Burnie Show and Agri Expo pop-up information stall • Meeting with Burnie City Council • Meeting with Central Coast Council	
November 2022	• ICT Conference Hobart pop-up information stall • Rotary Club of Burnie presentation • NWTD Meet the Projects presentation • Meeting with Burnie City Council • Meetings with Business North West and Launceston Chamber of Commerce	
December 2022	• Community newsletter • Burnie Farmers Market pop-up information stall • Launceston industry and stakeholder breakfast • Regional Development Australia presentation	
March 2023	• Tasmania Aboriginal Centre meetings • Community newsletter • Devonport industry and stakeholder breakfast • Burnie drop-in information sessions	
April 2023	• Community and stakeholder webinar • Meeting with Aboriginal Heritage Tasmania	
June 2023	• Burnie City Council presentation • Presentation to Traditional Owner Groups	
Consultation detailing early EIS technical study findings (March to April 2023)		
Timing	**Activities**	**Issues raised during the consultation**
September 2022	• Community newsletter • Sulphur Creek drop-in information session (near Heybridge) • Burnie Farmers Market pop-up information stall	**Noise:** • Concerns about noise associated with the construction of the converter station.

Key consultation activities on the release of EIS guidelines (2022 to 2023)		
Timing	**Activities**	**Issues raised during the consultation**
October 2022	• Burnie Show and Agri Expo pop-up information stall • Meeting with Burnie City Council • Meeting with Central Coast Council	• Concerns about noise associated with the operation of the converter station. **Traffic and transport:** • Concerns about the increase of traffic and safety on local roads during construction, particularly at the Minna Road and Bass Highway intersection. **Visual amenity:** • Concerns about the visual impact of the converter station on the local community. **Environment:** • Interest in impacts to fauna at the converter station site. **Jobs and procurement:** • Suggestions to provide further detailed information about local job and procurement opportunities. • Interest in skilled worker availability. **Social:** • Concern about housing availability and affordability and how this will be impacted by the project's construction workforce.
November 2022	• ICT Conference Hobart pop-up information stall • Rotary Club of Burnie presentation • NWTD Meet the Projects presentation • Meeting with Burnie City Council • Meetings with Business North West and Launceston Chamber of Commerce	

6.2 ABORIGINAL ENGAGEMENT

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In March 2023, MLPL engaged with representatives of the Tasmanian Aboriginal Centre, Tasmanian Aboriginal Community, and Aboriginal Heritage Tasmania. However, upon advice from Aboriginal Heritage Tasmania and stakeholders from within the Tasmanian Aboriginal community, it was agreed that a different approach to First Peoples engagement in Tasmania was more suitable. MLPL has subsequently discussed a collaborative approach to First Peoples engagement with related major projects and organisations (e.g. Renewables, Climate and Future Industries Tasmania (RECFIT), Hydro Tasmania, NWTD projects) to plan coordinated engagement that is both culturally appropriate and addresses the needs of the Tasmanian Community. MLPL has committed to developing and implementing a strategy that commits to an ongoing relationship and partnership with First Peoples for the development and delivery of the project.

Following in-person meetings and ongoing engagement with MLPL, in September 2023 invitations were sent to representatives from the following First Nations groups to participate in one-on-one interviews to inform the SIA:

- Tasmanian Aboriginal Centre
- Aboriginal Land Council of Tasmania
- Cape Barren Island Aboriginal Association Inc.
- Elders Council of Tasmania Aboriginal Corporation
- Six Rivers Aboriginal Corporation
- Circular Head Aboriginal Corporation
- Flinders Island Aboriginal Association Inc.
- Karadi Aboriginal Corporation
- South East Tasmanian Aboriginal Corp.

- Weetapoona Aboriginal Corporation.

To date, none of the organisations contacted have accepted an invitation to participate in an interview.

Table 6-2 lists the identified Tasmanian First Peoples stakeholders.

Table 6-2 Tasmanian First Peoples stakeholders

Tasmanian First PeoplesStakeholders	
Community	Flinders Island Aboriginal Association Inc.
Aboriginal Affairs Tasmania	Karadi Aboriginal Corporation
Aboriginal Heritage Tasmania	Office of Aboriginal Affairs
Aboriginal Land Council of Tasmania	Six Rivers Aboriginal Corporation
Cape Barren Island Aboriginal Association Inc.	South East Tasmanian Aboriginal Corp.
Circular Head Aboriginal Corporation	Tasmanian Aboriginal Centre
Elders Council of Tasmania Aboriginal Corporation	Weetapoona Aboriginal Corporation

6.3 SIA CONSULATATION

In February 2023, more than 100 email invitations were sent to invite stakeholders to participate in the SIA consultation. Stakeholders included recreation groups, community groups, local government authorities and tourism bodies. In addition, residents (landowners) in Heybridge were invited to participate in the SIA consultation process. A small number of these stakeholders participated in the SIA consultation.

The interview process was used to confirm existing baseline information, the perceived potential impacts, and potential benefits, as well as potential management and mitigation measures. Questions asked were designed to allow participants to talk about what they felt was important. The participant's responses and questions dictated the flow of the conversation.

Participants' responses to the questions about the project were analysed according to the social wellbeing framework (Table 5-2). A summary of the key themes and views raised in the SIA engagement, which have been used to inform the sensitivity values are detailed in Table 6-3 below.

Table 6-3 SIA consultation feedback

Aspect	Feedback	Stakeholder
Community identity		
Landscape and amenity	Concerns about impacts to visual amenity given that the project site at Heybridge is high profile and visible from the highway. Want installation of vegetation screening to "hide it away somewhat". Skyline aesthetics impact.	Community Organisation
	Heybridge Beach area, particularly in the study area near the project site, holds significance within the community. Location (Heybridge) within an industrial area means not much housing or recreation areas nearby. Football Oval and Scouts camp are not far from the site.	Local Government Authority, Landowner
	Blythe River (water sports and swimming) and the whole of Bass Strait, surfing Sulphur Creek to Preservation Bay, and trail walking/bike riding around Chasm Creek and Dial Range Road are considered recreation areas near the project area.	Local Government Authority, landowner

Aspect	Feedback	Stakeholder
	Rural bushland, riverfront, shopping in Burnie or Ulverstone.	Landowner
	Perception proposed energy projects encroach on farmland and nature reserves -– potential to impact lifestyle and environment. *"Key feature is the environment and liveability of this region."*	Local Government Authority.
	Construction impact concerns include noise, vibration and increased traffic on local roads, which already experience daily peak hour congestion, land values, EMFs and dust.	Landowner
Cultural diversity	Still experiencing subtle racism and gender bias with some migrants unable to get jobs.	Local Government Authority
Social capital and community cohesion	Tight-knit community where everyone knows everyone, with a heavy retiree or semi-retired population. *"Heybridge is a community, not a town, so very local-orientated."*	Landowner
	An increasing number of activists in Penguin and Ulverstone, with questions about managing economic development with impacts on tourism and the environment and maintaining liveability.	Local Government Authority
	Many within the community have moved to the area for its stable character and are generally unsupportive of any developments that may impact this.	Local Government Authority and Landowner
Character and sense of place	The project impacts a large area consisting of various diverse, mixed communities currently transitioning from rural to semi-rural.	Local Government Authority
	The community is characterised by disparity from a two-speed economy effect.	Local Government Authority
	Strong sense of identity. The community will want to voice their thoughts and be involved.	Community Organisation
Ecology and natural resources	Concern about impacting reef beds and marine life located offshore at Heybridge and the white belly sea eagles and penguins	Landowner
	Concerns about water contamination and waste. Community focused on circular economy to be more environmentally responsible.	Local Government Authority
Economy and Livelihoods		
Employment	Concerned there will be no long-term local employment opportunities. A development application for a truck and machinery wash facility on land adjoining the project.	Community Organisation
	It is a working-class area with a dependence on social welfare. Unemployment is higher than the national average.	Community Organisation
Industry and business	Economic opportunities within the region include energy, agriculture, defence, services (aged care and health), aquaculture, mining, tourism and education (with the expansion of the UTAS facility).	Chamber of Commerce Organisation, Local Government Authority
	The lack of a local workforce makes it hard for businesses to expand to take on opportunities presented by major projects. "*The largest construction company in Tasmania has 200 employees and work lined up for 2 years. It will be a mainlander contractor who will employ other smaller local companies*."	Chamber of Commerce Organisation
	The project needs to continue to provide information to the community and leverage relationships with Business NW and Minister Barnett to promote opportunities for local businesses. Especially around REZs and timelines.	Local Government Authority
	Concern project construction may impact/delay local, smaller building projects with the workforce tied up on multiple major projects.	Chamber of Commerce Organisation
	The community doesn't see the value in these projects – "*what does it do for them?"*	Local Government Authority
Workforce skills and availability	The workforce is primarily blue-collar/industrialised. Difficult to attract professionals to the area (engineers).	Chamber of Commerce Organisation, Local Government Authority.
	Workforce inclusion is low for migrants, the elderly, and women. How to get them into careers they value and earn enough.	Local Government Authority
	Concerns that the local workforce lacks the capacity and skillset to fill the high-end advanced manufacturing jobs required for ML and other construction projects like it (bridges, football stadiums and wind farms).	Chamber of Commerce Organisation
	Concerns local workforce will be drained by the number of major projects in the area.	Chamber of Commerce Organisation, Local Government Authority.

Aspect	Feedback	Stakeholder
	Opportunity for ML to "inspire young people" to seek out further education and obtain skillsets to fill project jobs that don't require a university degree (civil construction and truck licence).	Chamber of Commerce Organisation, Local Government Authority.
	DIDO and FIFO culture is increasing, with the workforce living in rural, smaller communities and commuting to where work is.	Local Government Authority
	Concerns raised about the local workforce acquiring unique skillsets and experiences only relevant to ML – "*How do you make skillset/experience transferable after the project is completed?"*	Local Government Authority
Socio-economic disadvantage	Substantial issues of poverty, high unemployment, particularly within the youth and long-term unemployed families, and lack of participation in education and training.	Local Government Authority
	Barriers to the workforce include: • not having a driver's licence – due to no/limited public transport, the only option to get to and from jobs. • Limited and low-quality childcare options.	Local Government Authority
Housing affordability and availability	Extreme concerns about housing supply for major construction projects like Marinus Link. *"Insufficient housing for all of these (construction) projects. We don't have the people to build the houses for the (project) workers to live in."*	Community Organisation
	The local community is already struggling to obtain social and affordable housing. *"There are no vacancies. Even all the motels are full."*	Community Organisation
	No housing projects/developments are currently planned to fix the crisis.	Chamber of Commerce Organisation,
	Leaving a lasting legacy within the local community through the opportunity to leverage innovative new housing solutions to create workers' accommodations, such as 3D printing houses using cement-based products, modular transportable homes, and prefabricated homes. Once construction is completed, transform them into affordable/social housing for the local community.	Chamber of Commerce Organisation, Local Government Authority
Agriculture	Farmers are concerned by the large area for energy projects, particularly at Robbins Island – unique privately owned land.	Local Government Authority
Tourism	Concerns the tourism industry will be affected due to the lack of available accommodation for tourists, particularly during construction when FIFO workers occupy hotels. Already shortages and high prices occur during peak season for travel to Tasmania and the area. "*Over Christmas, locals couldn't get children home due to increased price of Spirit of Tasmania and no availability."*	Chamber of Commerce Organisation, Local Government Authority
	Use community benefit scheme to support local tourism events and function art on soundproofing panels etc.	Landowner
Infrastructure and Services		
Governance	No specific governance issues.	
Health infrastructure and services	Health levels are also low – smoking, obesity and heart problems are greater than in other places in Australia.	Chamber of Commerce Organisation
	Higher quality health and community services are needed to attract more professionals to the area.	Local Government Authority
Emergency Services	Heybridge boat ramp may need upgrading in case of an incident, as it's only accessible during the high or mid tide.	Landowner
Transport	Minor disruptions from construction, such as traffic interruptions, will cause significant unhappiness within the community. Concerns were voiced via Facebook.	Chamber of Commerce Organisation
	The predicted increase in Renewable Energy and associated industries exports via Burnie and Devonport, as well as construction commencing on major projects, will lead to increased traffic along the coastal strip (highway).	Local Government Authority
Other energy infrastructure	Projects in the local area include: • Robbins Island (140 turbines, DA lodged) • Hellier and Guilford (Arc Energy 125 turbines),	Chamber of Commerce Organisation

Aspect	Feedback	Stakeholder
	• Hampshire – Eco fuel (like ethanol) uses renewable energy to make hydrogen and use the waste from forestry operations (employ 200 people full time and up and running 2026). • Battery of the nation at Lake Cethana – pumped hydro. • Whaleback Ridge – manufacture wind farm with 450 turbines to make hydrogen. • Avebury Nickel – Zeehan – only just started shipping nickel concentrate late last year. Dormant mine, but it is now viable. • MMG – processing tailings in mines. • Lots of mining activities on the west coast. • Also, talk about Mt Lyell being reopened, and if so, about 500 jobs. Marinus Link is critical to these projects going ahead – if MLPL does not go ahead, some of these projects won't go ahead as there will be no export market for energy.	
	Biomass energy production, advanced manufacturing and defence component parts, Port Redevelopment in Burnie. Battery projects (Shorewell) and NBN projects in Cradle Coast Region. Heavy reliance on transmission line projects eventuating to connect all these renewable projects to the grid.	Local Government Authority
	The high degree of uncertainty of sequencing of projects is dependent on the project.	Local Government Authority
People's productive capacity		
Health (mental and physical)	The project may cause stress and anxiety in the local community. Many within the community don't see any local benefit. The community is unaware of cumulative impacts that are or may occur from other TasNetworks projects currently underway in Tasmania's north-west as a result of the project. Many in the community believe the project is also delivering the transmission project, which agricultural landowners are concerned about.	Chamber of Commerce Organisation Local Government Authority
Education and Training	Overall, education levels are lower than national averages.	Chamber of Commerce Organisation
	TasTafe delivers free placements for certain industry segments, but not sure about the uptake levels.	Chamber of Commerce Organisation
	Lack of alignment between skills in demand in the local area and people studying these skills – i.e. STEM subjects highly critical for renewable space. TAFE offers only linear and traditional pathways.	Local Government Authority

7. EXISTING CONDITIONS

This section presents an overview of the socio-economic conditions experienced by the communities within the study area, followed by a comparison of demographic data that characterises the profile of the resident population (measured as a place of enumeration unless otherwise defined).

7.1 COMMUNITY IDENTITY

This section provides a consideration of factors that contribute to the way the community identifies itself in terms of civic participation, resilience, feelings of trust and safety and a sense of belonging in the local and regional study area. These social values are largely conceptual in that they are terms used to describe a number of factors that contribute to a community's identity, wellbeing and sense of place. In this baseline, the potential indicators of community identity include social capital, community cohesion, character and amenity, sense of place and community safety.

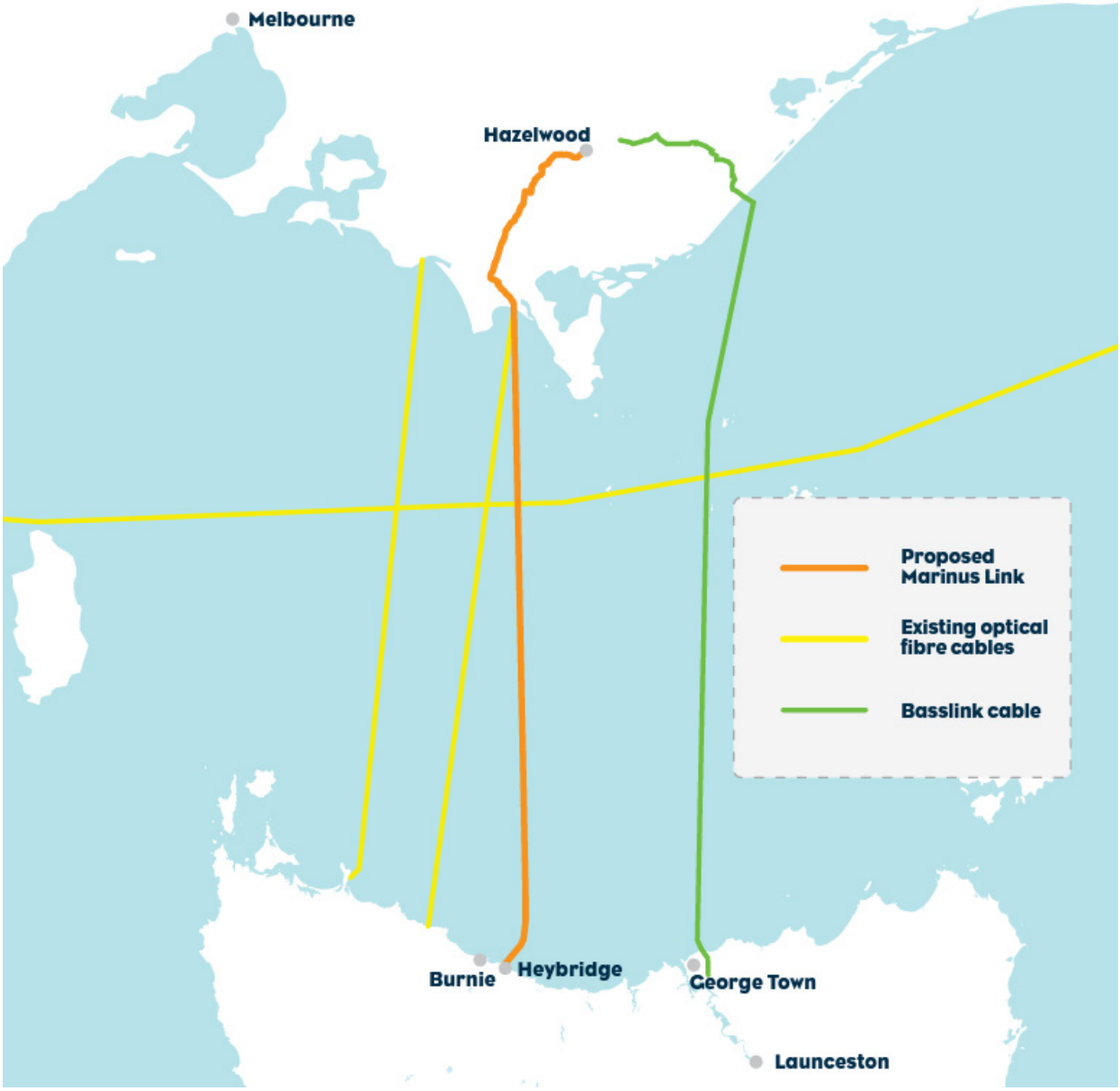
Social capital is a broad concept that is often used to refer to how established social networks within a community can be drawn upon to support individual and group needs. Communities that have social capital typically have more well-developed social networks with greater levels of trust (Pope 2003). These networks can be used to band together to respond to crises and challenges and build on and celebrate community assets (Onyx and Leonard 2010; Bulleen and Onyx 2005; Larsen et al. 2004).

7.2 POPULATION AND DEMOGRAPHIC CHARACTERISTICS

7.2.1 Place

Two converter stations and a high voltage alternating current (HVAC) switching station are proposed to be located near the coast at Heybridge, within the Burnie City LGA. The Tasmanian landfall and shore crossing are adjacent to the Heybridge Converter Station site.

The subsea cable traverses the Bass Strait from Heybridge in Tasmania and is proposed to make its shore crossing connect at Waratah Bay in Victoria, the land route via a transition station. The subsea cables will connect directly to the two converter stations, which are connected to the HVAC switching station. The offshore subsea cables will run due north-south along a longitude of 146°05' across the Bass Strait. The subsea cables will deviate from this longitude in approximately 60 m water depth off the Tasmania coast and near Tongue Point, and Wilsons Promontory National Park to the Tasmanian and Victorian landfalls and shore crossings, respectively.



Source: Marinus Link, Proposed Route Overview to Support Community Input, December 2020

Figure 7-1 Marinus Link transmission line route

7.2.2 Local government areas

7.2.2.1 Burnie City LGA

Burnie City is within the ancestral territory of the Plairhekenillerplue band of the North Peoples Tribe. The Burnie City LGA has a total land area of 611 km^2, is located on Tasmania's northwest coast and as of June 30, 2021, had an estimated residential population of 19,646 persons (ABS 2022a). The LGA is bounded to the north by the Bass Strait and adjoins the LGAs of Waratah-Wynyard and Central Coast. The Burnie central business district (CBD) is located about 50 km west of the Devonport CBD and 150 km north-west of the Launceston CBD.

The Burnie area was first settled by Europeans in 1827, with the establishment of a port to service the Surrey and Hampshire pastoral holdings (AEC Group 2007). The region's relative isolation and cold winters resulted in limited population growth, with the population remaining below 200 for its first 50 years (AEC Group 2007). However, there have been two major socio-economic periods of growth in the Burnie region, largely related to industrial development:

- In the 1880s, mineral deposits were discovered on the west coast and the establishment of first a tramway and then a railway connection to Burnie resulted in Burnie becoming the export point for a number of mines in the region, including the Mount Bischoff tin mine, which at the time was one of the richest mines in the world (AEC Group 2007). This, in turn, supported the development and expansion of the Burnie region; by 1900, the population in the Burnie area had grown to over 1,500 people.
- The establishment of the Associated Pulp and Paper Mills in 1938 resulted in rapid population and economic growth, and by 1945 there were more than 10,000 people residing in the area from a base of around 4,000 (GHD 2010).

Today, Burnie City is served by the Bass Highway and the Ridgley Highway and remains the primary population centre for the Burnie City LGA and the regional activity centre for the Cradle Coast Region. Burnie City, at the regional level, provides a range of health, education, cultural, community support and industrial services (Cradle Coast Regional Planning Initiative 2010). The Burnie City LGA also includes the localities of Ridgley and parts of Heybridge, with the remainder of the population sparsely spread across the LGA, although most of the population is located along and close to the coast.

7.2.2.2 Central Coast LGA

The First Peoples of the Central Coast LGA area are the Palawa/Pakana of the Punnilerpanner clan. The Central Coast LGA has a total land area of 933 km² is located on Tasmania's north coast and as of June 30, 2021, had an estimated residential population of 22,176 persons (ABS 2022a). The LGA is bounded to the north by Bass Strait and adjoins the LGAs of Burnie City, Devonport, Kentish and Waratah-Wynyard.

European settlement of the Central Coast LGA began in the late 1830s and was primarily associated with the growing Tasmanian forestry industry. The population grew during the late 1800s when several ports operated and the railway line from Launceston was opened.

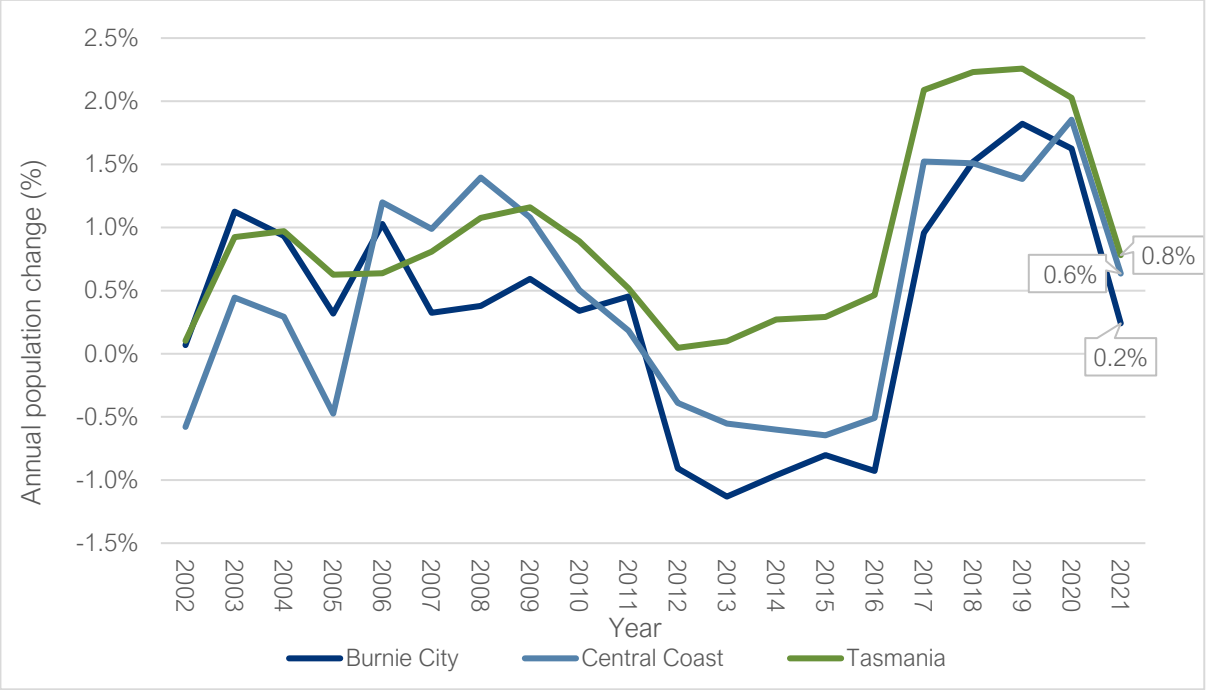
Ulverstone is the urban centre of the LGA and its largest town; the second largest town is Penguin, which is located 13 km to the west of Ulverstone. The majority of the LGA's population is concentrated in the coastal towns, with the remainder living in smaller localities such as Forth, Gawler, Heybridge, Leith, Sulphur Creek and Turners Beach.

7.2.3 First Peoples

The proposed alignment takes in areas of Heybridge and Burnie, which is recognised as the Tommeginne Country of the Palawa nation. The Plairhekehillerplue People are represented by the Six Rivers Aboriginal Corporation.

7.2.4 Population trends and projections

The population change for the estimated residential population for each of the LGAs within the regional study area is presented in Figure 7-2. Both LGAs experienced a period of population decline between 2012 and 2015. Similarly, both LGAs and Tasmania as a whole experienced a decline in the rate of growth between 2020 and 2021, of which the rate of decline for Tasmania was highest (0.8%) and lowest for Burnie City LGA (0.2%).



Source: ABS (2022b) Estimated Residential Population LGA, 2001 to 2021

Figure 7-2 Population changes in the regional study area and Tasmania

The estimated resident population for the two LGAs in the regional study area is presented in Table 7-1. Population changes between the years 2001 to 2021 for both LGAs were below that of the State of Tasmania, which grew by 19.9 % over this period. Central Coast shows a larger change in population in the same period (9.6 %) than Central Coast (7.1 %).

The estimated resident population for the two LGAs in the regional study area is presented in Table 7-1 below. Population changes between the years 2001 to 2021 for both LGAs were below that of the State of Tasmania, which grew by 19.9 % over this period. Central Coast shows a larger change in population in the same period (9.6 %) than Central Coast (7.1 %).

Table 7-1 Estimated resident population in the regional study area and Tasmania, 2001 to 2021

Area	2001	2006	2011	2016	2021	Percentage change	
						Average annual	2001-2021
Burnie City	19,077	19,748	20,164	19,228	20,441	0.3 %	7.1 %
Central Coast	21,242	21,428	22,332	21,736	23,278	0.5 %	9.6 %
Tasmania	473,668	489,302	511,483	517,514	567,909	0.9 %	19.9 %

Source: ABS (2022) Estimated Residential Population by LGA 2001 to 2021

Table 7-2 details the current population projections for LGAs within the regional study area from 2017 to 2042 and their projected changes over this period. As detailed, both LGAs within the regional study area are estimated to experience population decreases between 2027 and 2042. Burnie City is predicted to decrease in population by -8.5 %, whereas Central Coast LGA is predicted to decrease by -3.0 %. However, for Tasmania, in the same period, the population is estimated to grow by 12.5 %.

Table 7-2 Estimated resident population in the regional study area and State for 2001 to 2021

Area	2017	2022	2027	2032	2037	2042	2017 to 2042 population change %
Burnie City	19,412	20,343	19,836	19,257	18,613	17,886	-8.5
Central Coast	22,067	23,253	23,133	22,787	22,155	21,425	-3.0
Tasmania	528,324	570,344	583,953	593,921	600,186	603,470	12.5

Source: Tasmanian Government (2022a) Population projections for Tasmania and its Local Government Areas

7.2.4.1 Age and sex composition

Age and sex characteristics of a community indicate the existing and future needs of a community. Table 7-3 provides a summary of the age profile in the local and regional study area. All areas are ageing, with median ages greater than 40 years old. The median age is highest in the suburb of Heybridge and LGA of Central Coast at 48 years.

Table 7-3 also provides the dependency ratio for the study area and compares the same to Tasmania. A dependency ratio shows the ratio of the population that is not typically in the labour force (0 – 14 years and 65+ years) compared to those typically within the labour force (15 to 64 years). A high ratio indicates that there are more people of working ages who can support the population of dependent ages and vice versa. The dependency ratio is the highest for Central Coast LGA, at 68 dependent persons for every 100 working-aged people. Whereas the suburb of Heybridge and the LGA of Burnie City ratio' are 62 and 59, respectively.

Table 7-3 also provides the sex ratio for the study area, compared to Tasmania. The sex ratio compares the number of males to every 100 females in the population. The sex ratio for both LGAs shows a relatively even balance between the males and females, with 93 males to every 100 females and is similar to the sex ratio for Tasmania. Heybridge, however, has 118 males for every 100 females, indicating that more males than females live in this suburb.

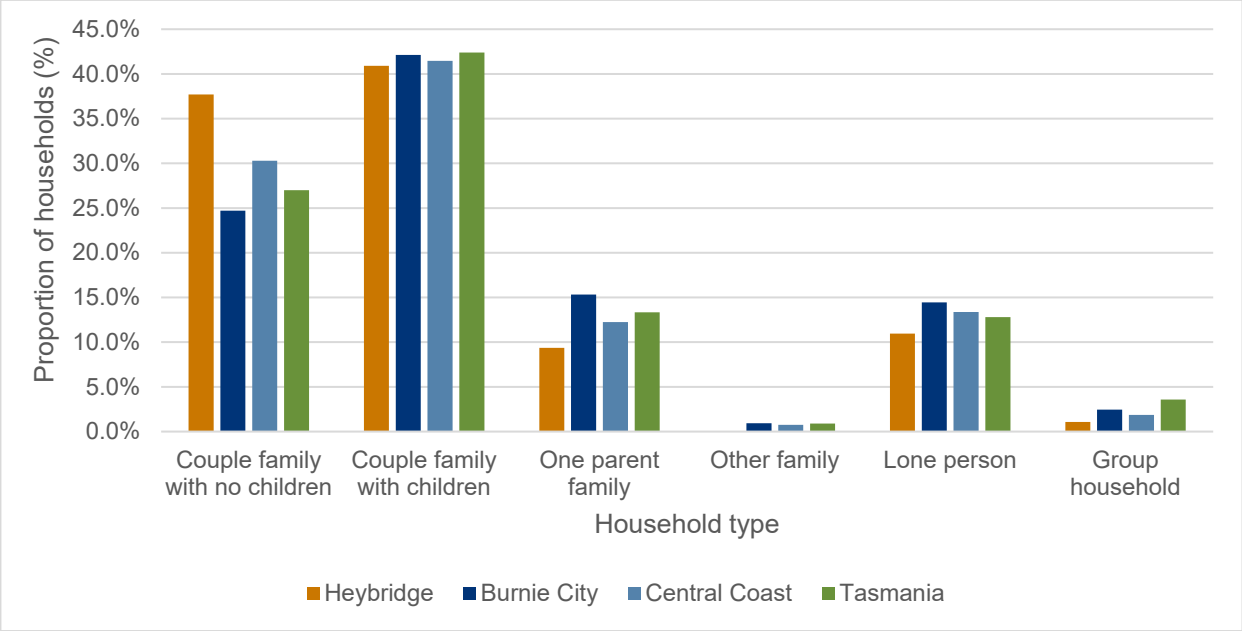
Table 7-3 Age and sex summary profile of local and regional study areas

Area	Median age	0 to 14 years		15 to 64 years		65 and over		Dependency ratio[1]	Sex ratio
Heybridge	48	69	15.8%	269	61.6%	99	22.7%	62	118
Burnie City	40	3,605	18.1%	12,544	63.0%	3,770	18.9%	59	93
Central Coast	48	3,572	15.3%	13,542	59.5%	5,637	24.8%	68	93
Tasmania	42	92,640	17.0%	348,308	62.5%	116,642	20.9%	60	96

[1]Number of dependent persons within a population compared to 100 working persons.
Source: ABS 2021 Census of Population and Housing. General Community Profile

7.2.4.2 Household composition

Household composition is used to characterise the type of household (family, single persons, group/shared household) within a dwelling. Figure 7-3 shows the household composition of the local and regional study areas. The dominant household type was couple families with children, followed closely by couple families with no children. The suburb of Heybridge has more couple families with and without children and fewer one-parent, lone-person and group households than the LGAs in the regional study area and Tasmania as a whole.



Source: ABS 2021 Census of Population and Housing. General Community Profile

Figure 7-3 Household composition local and regional study areas (2021)

7.2.4.3 First Peoples

In 2021, 30,186 persons (or 5.4 %) identified as Aboriginal and/or Torres Strait Islanders (First People) in Tasmania. Table 7-4 shows the proportion of First Peoples living within the study area at the time of the 2021 Census. As shown, Burnie and Central Coast LGAs, had similar proportions of First Peoples to the state, while Heybridge had a higher proportion (7.6 %) of residents identifying as First People than the state.

Table 7-4 Proportion of First Peoples – local and regional study area

Study area	Indigenous		Non-Indigenous		Not stated	
	No.	%	No.	%	No.	%
Heybridge	30	6.7%	384	85.7%	34	7.6%
Burnie City	1,692	8.5%	17,341	87.0%	892	4.5%
Central Coast	1,875	8.2%	19,797	87.0%	1,082	4.8%
Tasmania	30,186	5.4%	501,521	89.9%	25,851	4.6%

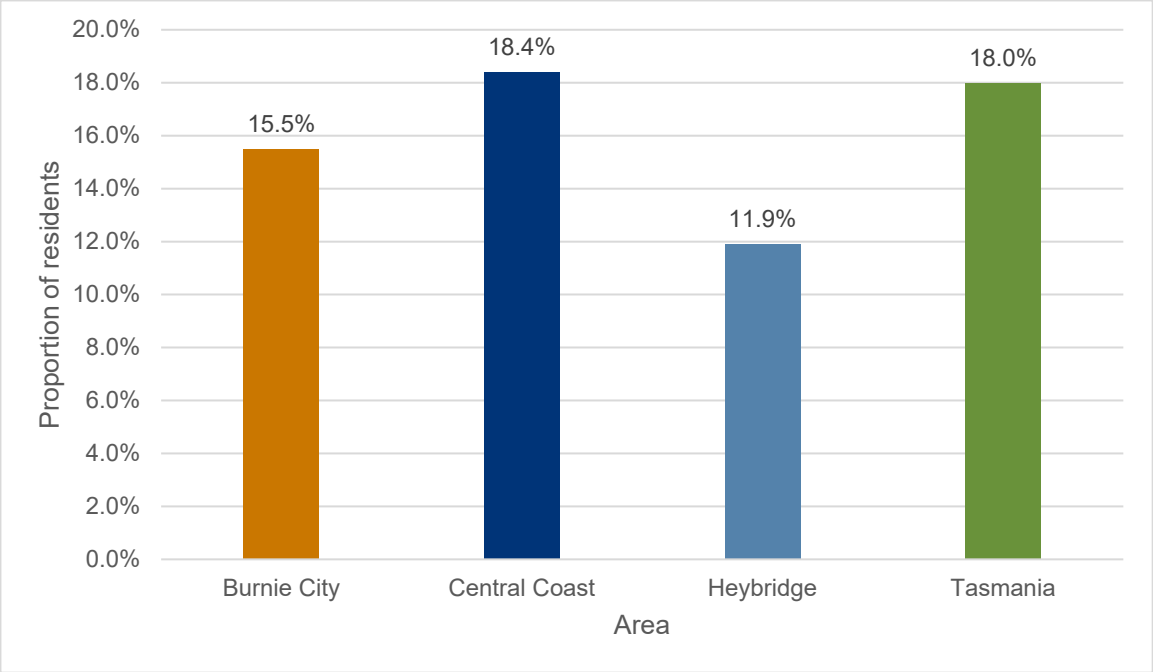
Source: ABS 2021 Census of Population and Housing. General Community Profile

7.2.5 Heybridge locality

Heybridge is a small rural town situated in Tasmania's north-west coast in the Burnie and Central Coast LGAs. Heybridge covers an area of 6.5 km^2 and, as of June 30, 2021, based on the place of usual residence, is home to 442 people (ABS, 2022a). Heybridge shares land borders with Chasm Creek, Round Hill, Stowport, Cuprona, and Howth localities. Bass Strait lies on the northern border. Heybridge's history over the 20th Century is dominated by the construction, operation and eventual closure of the tioxide plant. The factory, at its peak, produced 35,000 tons per annum of tioxide and employed up to 450 people (Summers, 2006). Ongoing rehabilitation has improved the environmental conditions from the plant directly discharging waste into Blythe Creek, causing discolouration of water in 'tioxide beach'. MLPL intends to develop the Heybridge converter station on the former tioxide plant site. Heybridge is now viewed as a small coastal retirement town.

7.2.6 Volunteering

Figure 7-4 shows the proportion of the population that stated that they volunteered in the 2021 Census in the study area. Volunteering is a common indicator of social capital, as it provides a basis for working together and forms relationships within communities, which are likely to build social networks and establish higher levels of trust and resilience within a community (Pope 2003). As shown, Heybridge had the lowest proportion of the population who had undertaken voluntary work for an organisation or group in the last 12 months before the 2021 Census (11.9 %). Burnie (15.5 %) was below the state (18.0 %) of people who had volunteered in the previous 12 months. Central Coast (18.4 %) recorded a higher proportion of volunteerism within the LGA population. It should be noted that the 12 months before the 2021 Census included periods when the population were in COVID lockdowns and as a result, the rates of volunteering were much lower than had been recorded at the time of the 2016 Census.



Source: ABS 2021 Census of Population and Housing, General Community Profile.

Figure 7-4 Proportion of residents who have volunteered in the last 12 months

7.2.7 Cultural diversity

The ABS national framework for describing cultural and language diversity (ABS 2022c) includes four indicators, namely, country of birth of the person, a main language other than English spoken at home, proficiency in spoken English and Indigenous status (see Table 7-7). Table 7-5 reports on a self-assessed measure of ethnicity and cultural diversity. The predominant ancestries identified in the study area were English and Australian.

Table 7-5 Self assessed cultural diversity within the study area

Ancestry	Heybridge (%)	Burnie City (%)	Central Coast (%)	Tasmania (%)
English	45.2	42.9	45.2	43.7
Australian	53.1	46.1	45.1	40.4
Irish	7.7	9.4	9.3	10.2
Scottish	10.2	9.1	9.3	9.4
Australian Aboriginal	6.2	7.6	7.4	4.8
German	3.2	5.5	4.5	5.8

Note 1: In this census question, respondents could report up to two ancestries on their census form.
Note 2: As multiple responses are recorded, the sum of all ancestry responses will not equal the total number of people in the area.
Source: ABS (2022a) Census of Population and Housing, 2021 Table Builder.

Overall, a review of demographic indicators of cultural diversity suggests a high level of cultural homogeneity. The majority of people were born in Australia (Table 7-6), and over 80 % of people identified as either English or Australian (Table 7-6). Similarly, most people speak English at home (Figure 7-5).

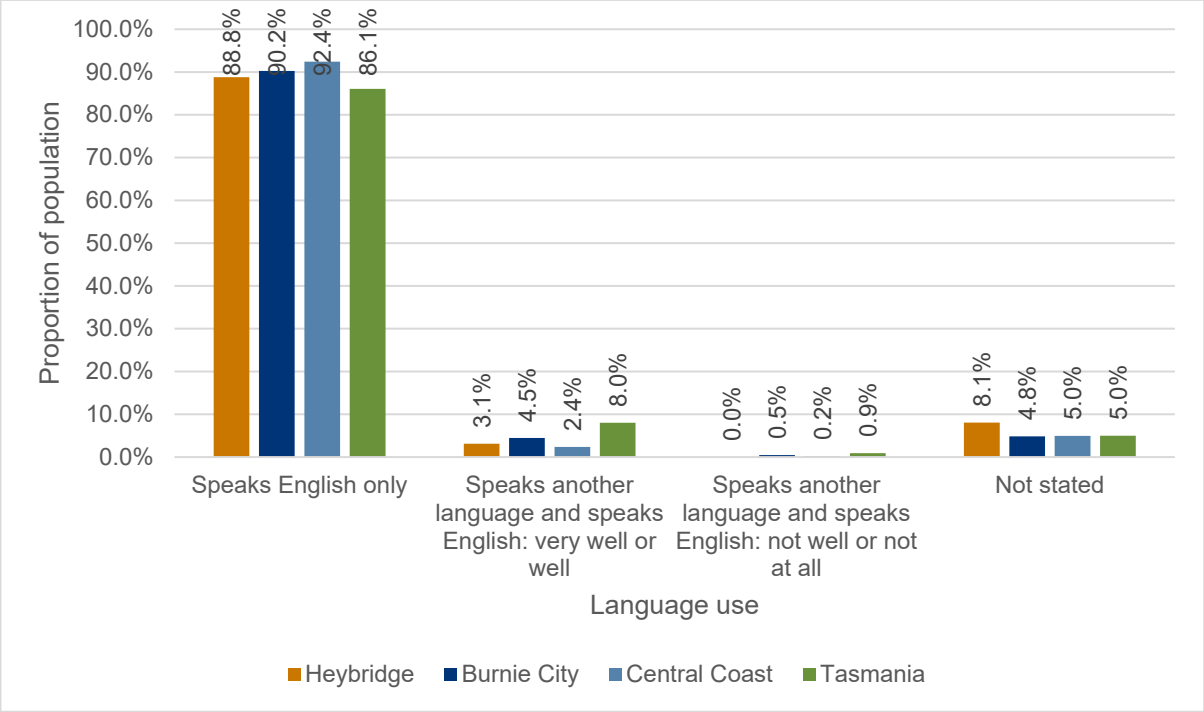
Table 7-6 details the birthplace of residents in the suburb of Heybridge and the LGAs of Burnie and Central Coast. More than four-fifths of the residents in each area were born in Australia, ranging from 80.8 % in Heybridge to 84.4 % in Burnie, compared to 79.1 % in Tasmania. The second most frequently cited country of birth was England for all areas, ranging from 3.5 % in Central Coast to 2.0 % in Burnie, compared to 3.5 % in Tasmania.

Table 7-6 Birthplace – study area

Country of birth	Heybridge (%)	Burnie City (%)	Central Coast (%)	Tasmania (%)
Australia	80.8	84.4	84.1	79.1
England	2.7	2.0	3.5	3.5
New Zealand	0.7	0.9	0.9	1.0
Germany	0	0.3	0.2	0.4
China	0	0.3	0.2	1.2
India	0	0.8	0.3	1.1
Nepal	0	0.4	0.1	1.1
Netherlands	1.1	0.2	0.8	0.4
Philippines	0	0.4	0.4	1.1
Scotland	0	0.3	0.4	0.4
Not stated	10.4	5.5	6.4	5.6

Source: ABS (2022a) Census of Population and Housing, 2021 Table Builder Pro

Data presented in Figure 7-5 shows that the majority of residents in the study area only spoke English at home. This ranged from 88.8 % in Heybridge to 92.4 % in Central Coast LGA. There were very few people who did not speak English at all within their homes in the regional study area.



Source: ABS 2021 Census of Population and Housing, General Community Profile.

Figure 7-5 Proficiency in English (2021)Table 7-7 below lists the range of languages spoken by residents within the local and regional study area compared to Tasmania. The data highlights the cultural homogeneity in the local and regional study area and shows that the proportion of households that speak a language other than English is low and less than 1% of households for each identified language.

Table 7-7 Languages spoken at home – local and regional study area

Language	Heybridge	Burnie City	Central Coast	Tasmania
Afrikaans	0.0%	0.1%	0.0%	0.0%
Arabic	0.0%	0.3%	0.1%	0.1%
Australian Indigenous Languages	0.0%	0.0%	0.0%	0.2%
Chinese languages	0.7%	0.6%	0.0%	0.0%
French	0.0%	0.0%	0.0%	0.3%
German	0.0%	0.2%	0.3%	1.5%
Bengali	0.0%	0.1%	0.4%	1.8%
Hindi	0.0%	0.2%	0.1%	0.1%
Nepali	0.0%	0.4%	0.1%	0.3%
Punjabi	0.0%	0.3%	0.0%	0.2%
Sinhalese	0.9%	0.3%	0.0%	0.0%
Urdu	0.7%	0.1%	0.0%	0.1%
Other Indo-Aryan languages:	0.0%	0.0%	0.0%	0.1%
Italian	0.0%	0.1%	0.1%	0.2%
Japanese	0.0%	0.1%	0.2%	1.3%
Khmer	0.0%	0.0%	0.1%	0.5%
Korean	0.0%	0.0%	0.0%	0.2%

Language	Heybridge	Burnie City	Central Coast	Tasmania
Macedonian	0.0%	0.0%	0.0%	0.3%
Malayalam	0.0%	0.2%	0.0%	0.0%
Persian (excluding Dari)	0.0%	0.0%	0.4%	2.8%
Polish	0.0%	0.0%	0.0%	0.2%
Portuguese	0.0%	0.1%	0.0%	0.1%
Samoan	0.0%	0.0%	0.0%	0.1%
Serbian	0.0%	0.0%	0.0%	0.0%
Filipino	0.0%	0.1%	0.0%	0.1%
Indonesian	0.0%	0.0%	0.0%	0.1%
Tagalog	0.0%	0.1%	0.0%	0.1%
Other Southeast Asian Austronesian languages:	0.0%	0.1%	0.0%	0.1%
Spanish	0.0%	0.2%	0.0%	0.1%
Tamil	0.0%	0.1%	0.0%	0.0%
Thai	0.0%	0.1%	0.0%	0.0%
Vietnamese	0.0%	0.1%	0.1%	0.1%
Other*	0.0%	0.7%	0.0%	0.1%

* *Includes languages not identified individually, 'Inadequately described' and 'Non-verbal, so described'.*

Source: ABS 2021 Census of Population and Housing. General Community Profile

7.2.8 Landscape amenity and character

Landscapes are defined by people. The definitions are, therefore, just as varied, dynamic, and complex as the people who define them. Sense of place describes the relationship between people and the spatial area (including landscapes) that they live in and/or identify with. How a change in the landscape affects individuals and communities is dependent on the meaning that each individual attaches to the features within the landscape. If the change is deemed by an individual to be inconsistent with either their values or the physical setting, then change is viewed negatively. Similarly, if a change in the landscape is consistent with the values or physical setting, then the change is perceived to be neutral or positive.

SIA consultation for the project identified several natural and recreation areas (Table 7-8) that are sensitive to changes in the landscape. These included the Chasm Creek Conservation Area and Blythe River Conservation Area and numerous unnamed and informal public reserves. These are described in Table 7-8 below.

Table 7-8 Natural and recreational areas within 3.0 km of the Heybridge Converter Station site

Name	Description and community use	Distance from the project
Blythe River Conservation Area	935 ha Central Coast LGA	1 km
Chasm Creek Conservation Area	55 ha Burnie City LGA	1 km
Public Reserves	River Reserves, Public Reserves and Informal Reserves are managed under the Crown Land Act and by DIPWE and local government.	Ranging from 100m to 3km from the site

7.3 ECONOMY AND LIVELIHOODS

This section describes how people make a living in the local and regional study area in comparison to Tasmania as a whole and provides an overview of the structure of the economy.

7.3.1 Employment profile

This section provides an overview of the employment profile within the local and regional study area.

7.3.1.1 Employment

Table 7-9 shows the employment characteristics of the local and regional study areas compared to Tasmania at the 2021 Census. As detailed, the proportion of people in Heybridge (5.0 %) who were unemployed is slightly below the state level (5.9 %). Central Coast LGA had the lowest unemployment rate in the regional study area at 4.6%. Labour force participation for Heybridge (53.7 %), Central Coast (54.6 %) and Burnie City (56.9 %) was lower than that of the state (58.2 %). Lower participation rates may, in part, be due to the comparatively aged population in the local and regional study area; however, it is noted that low participation along with higher unemployment rates can also exacerbate socio-economic disadvantage in the region.

Table 7-9 Employment status – local and regional study areas (2021)

	Heybridge	Burnie	Central Coast	Tasmania
Unemployed	10	559	484	16,058
Unemployment rate (%)	5.0	6.0	4.6	5.9
Labour force	202	9,295	10,461	270,774
Labour force participation (%)	53.7	56.9	54.6	58.2

Source: ABS 2021 Census of Population and Housing. General Community Profile

7.3.1.2 Unemployment

Table 7-10 shows the proportion of people aged 15 and over who reported being in the labour force in the area compared to Tasmania at the 2021 Census. As detailed, the proportion of people in the local and regional study area who were unemployed was slightly below the state level, except for the Burnie LGA, where the unemployment level was slightly above Tasmania's average. With the exception of Central Coast, full time employment in the study area was higher than that of the state (51.6 %). It is noted that low participation, along with higher unemployment rates, has been a feature of socio-economic disadvantage in Tasmania for some time and is symptomatic of the area's generational disadvantage (Barton, Denham, and Fairbrother 2019).

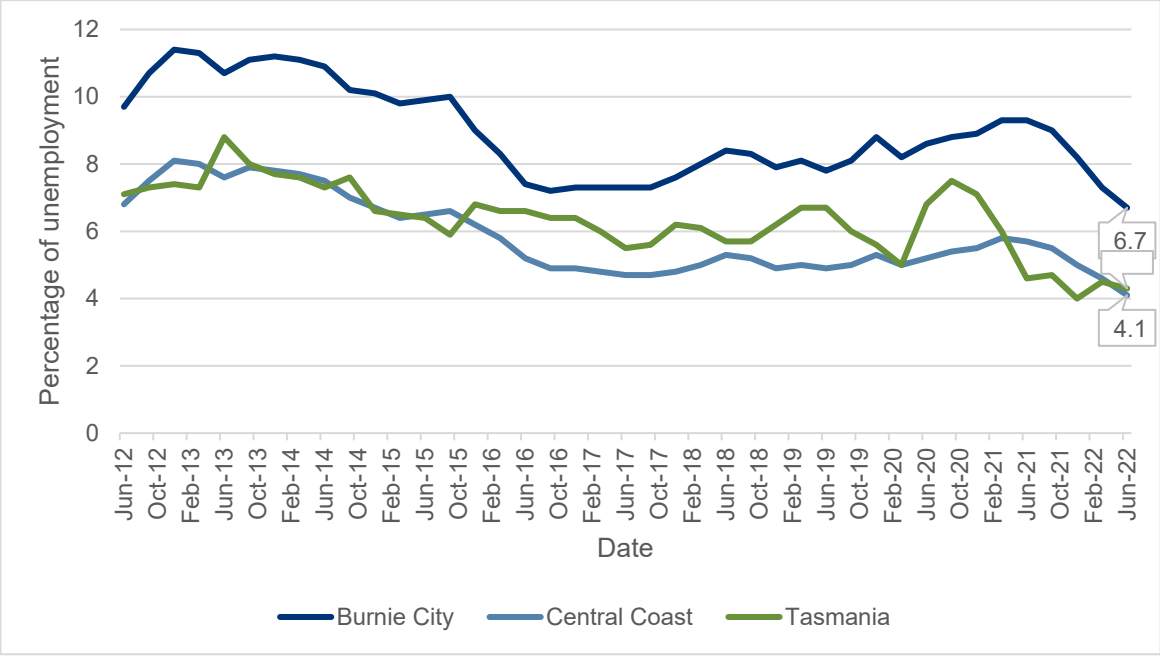
Table 7-10 Employment status (15 years and over)

Area	Worked full time	Worked part time	Away from work	Unemployed
Heybridge	52.0%	35.6%	7.4%	5.0%
Burnie City	53.5%	34.4%	6.1%	6.0%
Central Coast	51.4%	37.0%	7.0%	4.6%
Tasmania	51.6%	36.4%	6.0%	5.9%

Source: ABS 2021 Census of Population and Housing. General Community Profile

Figure 7-6 below shows the unemployment rate in the regional study area from June 2012 to June 2022. As shown, unemployment rates in Central Coast LGA area have generally been under that of the state; however, noting that Tasmania has historically had unemployment rates above that of mainland Australia. The exception to this is the Burnie LGA, where unemployment rates have consistently been above that of the state.

The COVID-19 pandemic began to have a negative impact on the Australian labour market from March 2020, when the initial shutdown of non-essential services and trading restrictions took effect (Department of Education, Skills and Employment 2021). The effect of COVID-19 can be clearly seen in the regional study area, where the unemployment rate increased in all areas from March 2020. The Department of Education, Skills and Employment has noted that the unemployment rate may not fully reflect the labour market adjustment to COVID-19, noting that record numbers of people left the labour force, leading to a smaller increase in the unemployment rate than would have otherwise occurred (Department of Education, Skills and Employment 2021). As such, there is potential that there has been a greater change in the labour market in the regional study area than shown or currently understood.



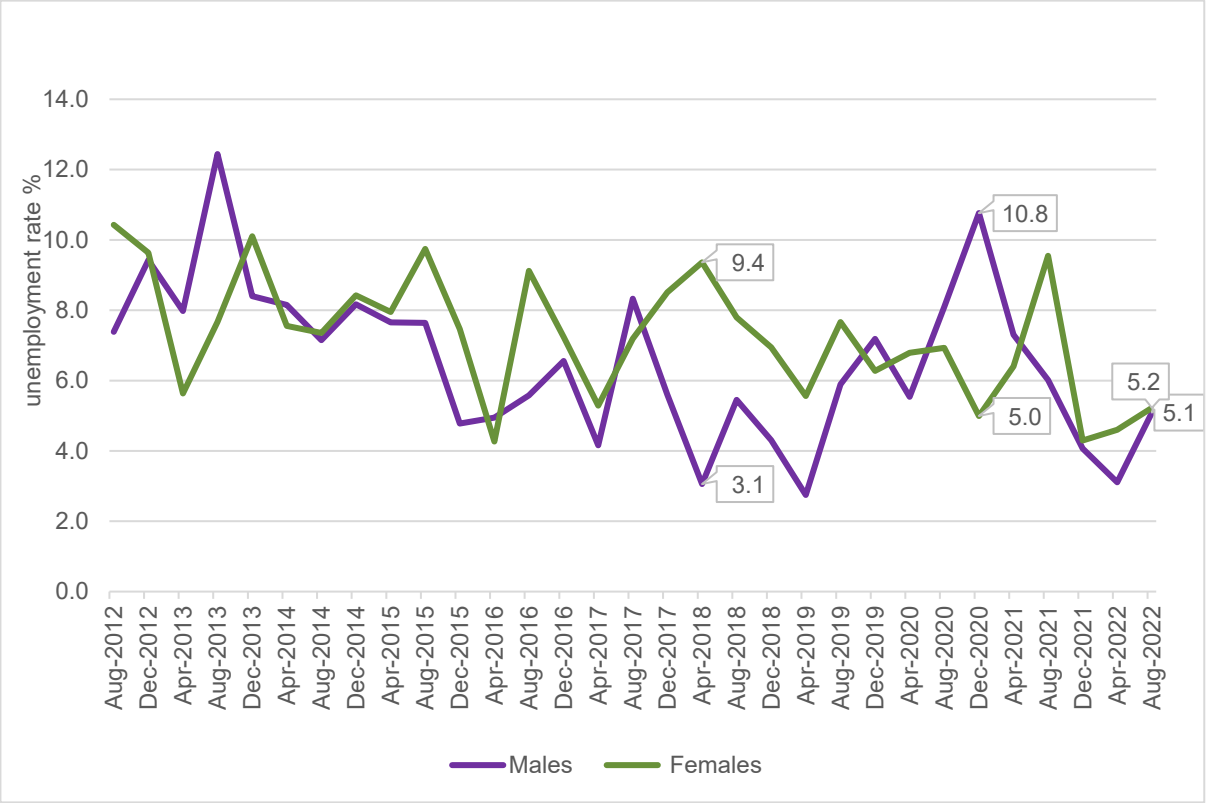
Source: Department of Education, Skills and Employment (Department of Education, Skills and Employment 2022) Small Area Labour Markets (SALM), June Quarter 2022 and ABS (ABS 2022b) 6202.0 Labour Force, Australia

Figure 7-6 Unemployment rate from June 2012 to June 2022

This section reviews unemployment data to identify groups in the regional study area that have higher unemployment rates. The groups considered include women and young people (16-24 years). Given the volatility of unemployment data, particularly since the COVID-19 pandemic, this section presents the most up-to-date data available, which is provided by the ABS at a statistical area 4 (West and North-West Tasmania) level.

Figure 7-7 displays the monthly female and male unemployment rates between August 2012 and August 2022. As shown, females in the West and North-West regions of Tasmania typically have higher unemployment rates than males. This was particularly prominent between December 2017 and August 2019, when the female unemployment rate was between 8.5 % and 7.7 %, while male unemployment was between 5.6 % and 5.9 %. However, over the ten-year period between August 2012 and August 2022, the average difference between male and female unemployment was 0.7%.

As of August 2022, the male unemployment rate was 5.2 % and the female rate was 5.1 %.

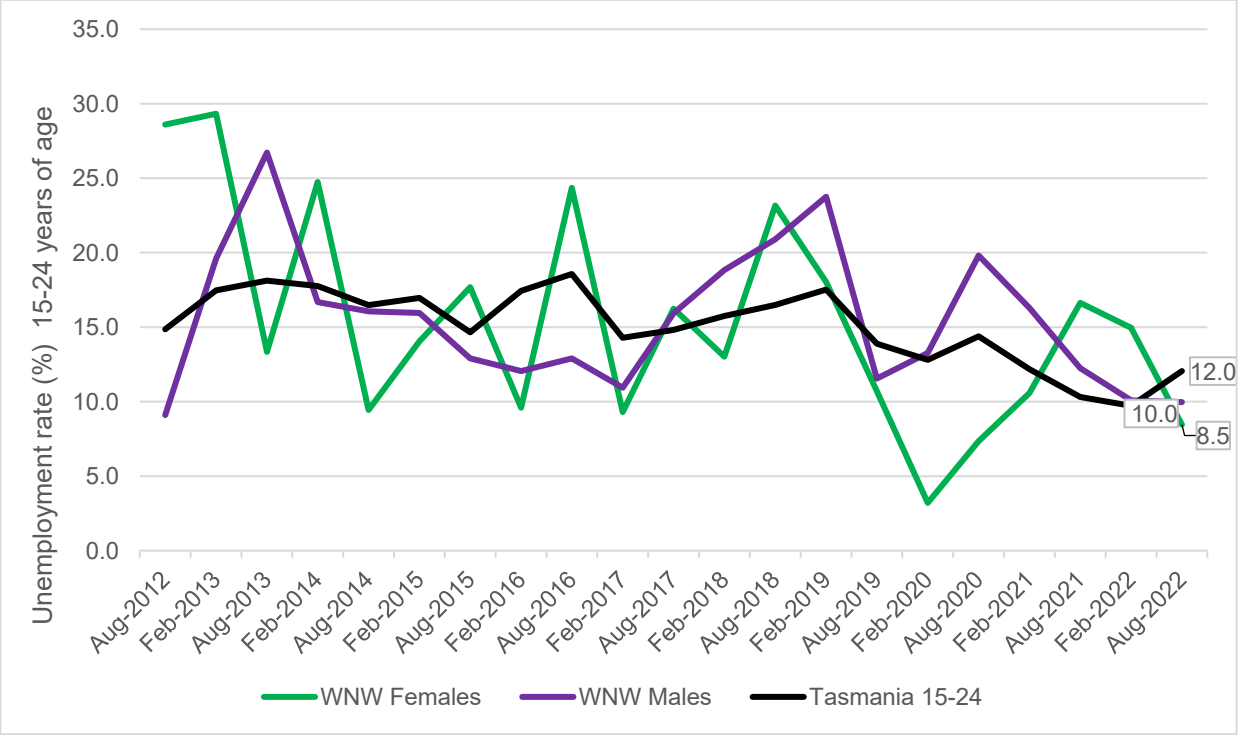


Source: ABS (ABS 2022) 6291.0.55.001 – RM1 – Labour force status by Age, Labour Market Region (ASGS) and Sex, October 1998 onwards

Figure 7-7 Unemployment rate by sex – West and North-West region (2022)

Youth unemployment is a noted issue in the region (Walker and Fairbrother 2105). Figure 6-8 shows the youth unemployment rate every month between August 2012 and August 2022 for females and males in the West and North-West region against the Tasmanian average. There have been large fluctuations in the youth unemployment rate for youth in the West and North West, and there have been a number of periods in which the female youth unemployment rate reached over 20 %, including February 2013 (29.3 %), February 2014 (24.7%), August 2016 (24.4%) and August 2018 (23.2%). As of August 2022, the youth unemployment rate for males was 10 % and for females was 8.5 % in the West and North-West regions, while youth unemployment across Tasmania was 12 %. Youth unemployment is comparatively lower in the LGAs; 6.4% in Burnie, 6.7% in Central Coast and 0.00%* in Heybridge.

*Youth that are not currently employed full-time, part-time or away from work are not looking for part-time work, in the labour force or are not stated.



Source: ABS (ABS 2022) 6291.0.55.001 – RM1 – Labour force status by Age, Labour Market Region (ASGS) and Sex, October 1998 onwards

Figure 7-8 Unemployment rate 15- to 24-year-olds – West and North-West region and Tasmania (2022)

7.3.2 Workforce skills and availability

This section considers the availability of a suitably qualified workforce to service the project, including identifying any potential workforce shortages, particularly as it relates to the project's workforce requirements. It primarily draws upon the findings of the Civil Construction Industry Workforce Plan 2019-2025 (Civil Contractors Federation Tasmania 2019) (workforce plan), which outlines workforce requirements for the civil construction industry in Tasmania, with a focus on identified large-scale projects identified within the Tasmanian Infrastructure Plan (2018). In addition to the skills requirements for the construction phase of the project, the workforce requirements of the operations phase would be focused on electricians.

The workforce plan projected that based on the 2018 understanding of infrastructure development, the following additional number of workers would be required state-wide to 2028:

- 193 managers (e.g., construction manager, project builder, engineering manager).
- 186 paraprofessionals (e.g., engineers, occupational health and safety advisors, building associates, technicians).
- 115 administration workers (e.g., contract administrator, general clerks, bookkeeper, payroll clerk).
- 276 plant operators (e.g., earthmoving plant operator, excavator operator, grader operator, loader operator, truck driver).
- 189 onsite construction workers (e.g., builder's labourer, concreter, paving and surfacing labourer, road traffic controller, labourers.

The workforce plan notes that the largest projected shortfall was for plant operators and paraprofessionals. This projected shortfall appears to be a continuation of an existing shortage of qualified and available workers in the construction industry in Tasmania, which was noted by the Department of Jobs and Small Business in

August 2018. This historical data was reiterated in the SIA consultation, where shortages in the construction industry were noted by a number of stakeholders.

At a more granular level, the Department of Small Jobs and Small Business publishes occupational-level skill shortage information for Tasmania. The current published status of workforce availability for occupations relevant to the project is detailed in Table 7-11

Table 7-11 Workforce availability – Tasmania

Occupation	Labour market rating	Key findings	Date
Civil engineering professionals (Department of Jobs and Small Business 2019)	Shortage	The majority of vacancies were located across Tasmania. The majority of vacancies were for civil engineers, geotechnical, structural and transport engineers. Regional vacancies were more difficult to fill than metropolitan vacancies.	February 2019
Electrical engineer (National Skills Commission, Skills priority list)	Shortage	There is a shortage of electrical engineers in Tasmania and nationally with a moderate future demand.	July 2023
Electrician (National Skills Commission, Skills priority list)	Shortage	Shortage in Tasmania and nationally, with strong future demand.	July 2023

7.3.3 Income

The median household income in the local and regional study areas is lower than the median in Tasmania, with the Central Coast LGA median at $150 per week less than the state median of $1,358.00 (Table 7-12).

Table 7-12 Median household income – local and regional study areas, 2021

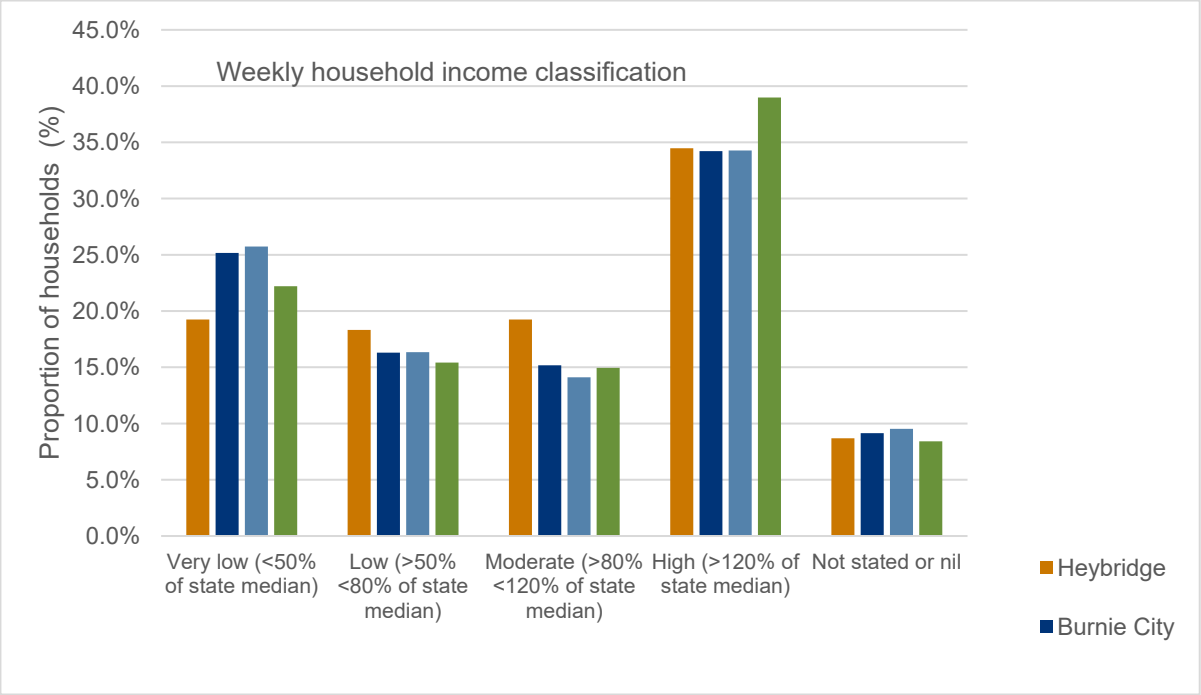
Area	Heybridge	Burnie City	Central Coast	Tasmania
Median household income ($/weekly)	$1,289.00	$1,225.00	$1,209.00	$1,358.00
Median household income ($/annual)	$67,028.00	$63,700.00	$62,868.00	$70,616.00

Source: ABS 2021 Census of Population and Housing. General Community Profile

Figure 7-9 shows the median weekly household income as at the 2021 Census, with incomes aggregated as follows:

- Very low-income households are defined as those with incomes <50 % of the state median income.
- Low-income households are defined as those with incomes between >50 % and <80 % of the state median income.
- Moderate-income households are defined as those with incomes between >80 % and <120 % of the state median income.
- High-income households are defined as those with incomes >120 % of the state median.
- Slightly higher proportions of households in each of the LGAs were classified in the very low- and low-income brackets compared to that of the state (22.2 %) and Heybridge (19.3 %). Conversely, slightly

lower proportions of households in the local and regional study area were classified in the high-income bracket compared to the state (39.0 %).



Source: ABS (2022a), Census of Population and Housing. General Community Profile 2021

Figure 7-9 Household income distribution, 2021

7.3.4 Industry and businesses

Table 7-13 details employment by industry in the local and regional study area at the 2021 Census (counting persons 15 years and over), with the industries that represent the top three industries of employment for the local and regional study area highlighted in grey. As shown, health care and social assistance, along with retail trade and education and training, are the most common industries of employment in the local and regional study area. Nearly one-quarter of the Heybridge local study area works in health care and social assistance. Other dominant industries of employment include:

- Agriculture, forestry, and fishing, which employed 7.3 % of the workforce in the Central Coast LGA, 3.8 % of the workforce in the Burnie City LGA, and 5.1 % of the local study area.
- Manufacturing, which employed 7.7 % of the workforce in the Burnie LGA, 8.1 % of the workforce in the Central Coast LGA and 9.6 % in the local study area.
- Construction, which employed 9.4 % of the workforce in the Central Coast LGA, 6.5 % of the workforce in Burnie City LGA, and 8.4 % in the local study area.

Table 7-13 Employment by industry local and regional study area

Area	Heybridge	Burnie City	Central Coast	Tasmania
Agriculture, Forestry and Fishing	4.7%	3.8%	7.3%	5.3%
Mining	1.6%	4.2%	2.3%	1.0%
Manufacturing	8.9%	7.7%	8.1%	6.4%

Area	Heybridge	Burnie City	Central Coast	Tasmania
Electricity, Gas, Water and Waste Services	0.0%	0.7%	1.3%	1.8%
Construction	7.9%	6.5%	9.4%	8.6%
Wholesale Trade	4.2%	3.5%	2.9%	2.2%
Retail Trade	8.4%	11.9%	10.0%	9.6%
Accommodation and Food Services	1.6%	7.3%	6.5%	7.6%
Transport, Postal and Warehousing	8.9%	5.0%	5.3%	4.1%
Information Media and Telecommunications	0.0%	0.7%	0.4%	1.0%
Financial and Insurance Services	1.6%	1.5%	1.0%	1.9%
Rental, Hiring and Real Estate Services	0.0%	1.0%	0.8%	1.1%
Professional, Scientific and Technical Services	3.1%	2.9%	3.6%	5.1%
Administrative and Support Services	3.1%	2.6%	2.4%	2.9%
Public Administration and Safety	2.1%	5.6%	5.2%	7.3%
Education and Training	5.8%	8.1%	9.6%	9.4%
Health Care and Social Assistance	22.0%	19.0%	16.5%	16.4%
Arts and Recreation Services	0.0%	0.6%	0.9%	1.8%
Other Services	3.7%	4.3%	4.0%	3.8%
Inadequately described/Not stated	5.8%	2.9%	2.8%	2.8%

Source: ABS, Census of Population and Housing. General Community Profile 2021

7.3.5 Housing affordability and availability

This section provides an overview of housing in the regional study area, including dwelling structure and occupancy, tenure type and affordability.

7.3.5.1 Dwelling structure and occupancy

Housing in the local and regional study area is predominantly detached or separate houses, ranging from 96.4 % of dwellings in the suburb of Heybridge to 90.2 % for both Central Coast and Burnie City LGAs, as shown in Table 7-14. The proportion of detached or separate houses in the local and regional study area is above the 87.7 % of Tasmania.

The proportion of private dwellings that were occupied on the 2021 Census night in the local and regional study area was above that of the State (88.2 %).

Table 7-14 Dwelling structures – local and regional study area

Area	Dwelling structure					Total private dwellings	Occupancy
	Detached	Semi-detached	Attached	Other	Not stated		
Heybridge	96.4%	3.6%	0.0%	0.0%	0.0%	195	89.2
Burnie City	90.2%	7.8%	1.8%	0.2%	0.1%	8,856	91.5
Central Coast	90.2%	7.8%	0.3%	1.5%	0.1%	9,968	92.6
Tasmania	87.7%	6.1%	5.3%	0.6%	0.2%	247,597	88.2

Note: Based on the census count of all persons enumerated in the dwelling on Census Night, including visitors from within Australia. Excludes usual residents who were temporarily absent on Census Night. Excludes 'Visitors only' and 'Other non-classifiable' households.
Source: ABS 2021 Census of Population and Housing. General Community Profile

7.3.5.2 Tenure

Social and affordable housing supports the productivity of socially and economically vulnerable people through improved education, health, and wellbeing outcomes. If socially and economically vulnerable individuals and families do not have access to social and/or affordable housing, then they are excluded from accessing education and employment, which in turn affects their health and wellbeing.

Table 7-15 describes the tenure and landlord type in the local and regional study area. The rate of home ownership (owned outright and with a mortgage) was higher in Heybridge (78.3 %) and Central Coast LGA (75.7 %) than in the state (70.1 %) and Burnie City (65.5 %). Real estate agents accounted for a third (32 %) of landlord types in Central Coast LGA, nearly half (48 %) in Burnie City LGA and 61.8 % for Heybridge. However, nearly two-fifths of landlords in Heybridge and Central Coast is a person not in the same household. Landlords in Heybridge were either real estate agents or a person not living in the same household, whereas Burnie City and Central Coast LGA and Tasmania had a more diverse mix of landlord types, including community housing providers and the state housing authority.

Table 7-15 Tenure and landlord type – local and regional study area

	Heybridge	Burnie City	Central Coast	Tasmania
Tenure type				
Owned	78.3%	65.5%	75.7%	70.1%
Rented	19.4%	31.9%	20.8%	26.4%
Other tenure type	0.0%	1.0%	1.5%	1.9%
Not stated	2.3%	1.6%	2.0%	1.6%
Rental Tenure				
Real estate agent	61.8%	48.0%	32.0%	45.6%
State or territory housing authority	0.0%	18.9%	19.7%	15.3%
Community housing provider	0.0%	4.1%	4.7%	4.9%
Person not in the same household*	38.2%	23.9%	37.7%	28.9%
Other landlord type†	0.0%	4.6%	4.4%	4.5%
Landlord type is not stated	0.0%	0.5%	1.4%	0.9%

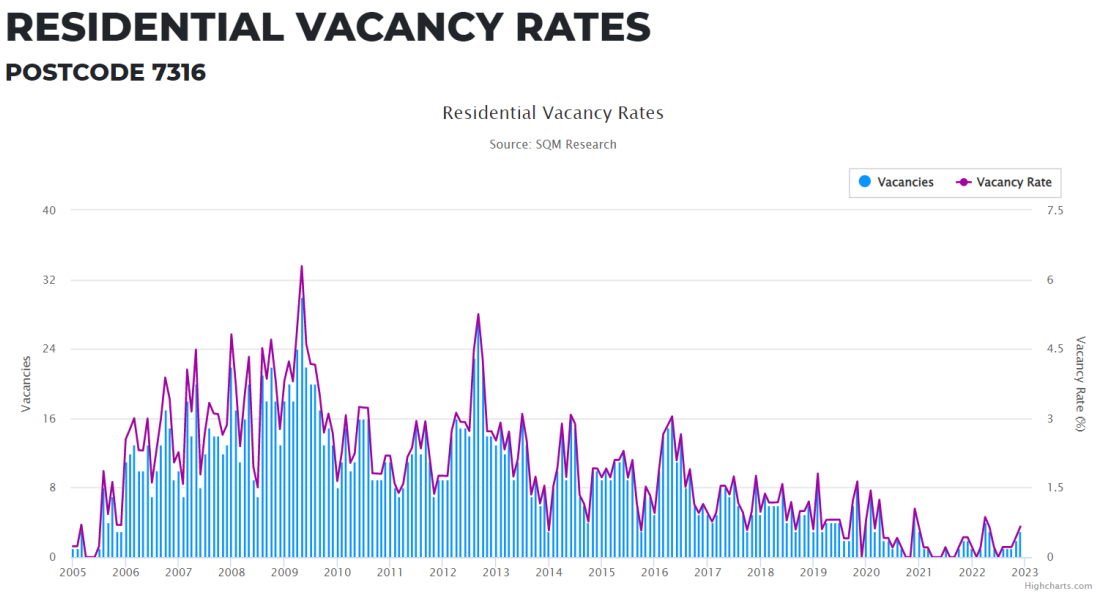
** Comprises dwellings being rented from a parent/another relative or other person.*
† Comprises dwellings being rented through an 'Owner/manager of a Residential park (including caravan parks and manufactured home estates)', 'Employer - Government (includes Defence Housing Australia)' and 'Employer – other employer'.
Source: ABS (2022a) Census of Population and Housing, 2021.

7.3.5.3 Rental availability and affordability

Rental vacancy rates are used to indicate the availability of rental properties. In general, vacancy rates are indicative of demand and the potential difficulty in securing rental housing as follows:

- Rates above 3.5 % are indicative of weak demand and most people would be able to access housing.
- Rates between 2.5 % and 3.5 % are indicative of a normal market, and most households without socio-economic vulnerabilities would be able to access housing.
- Rates below 2.5 % are indicative of high demand and many households may compete for housing and some households may have difficulty in accessing the housing they would prefer.
- Rates below 1.0 % are indicative of a rental shortage, which often results in rent increases and pushes low income households out of the private rental market (REIQ 2020; UTAS 2019).

Rental vacancy rate data are published by postcode by SQM Research. In the regional study area, data published for the Heybridge/Penguin postcode 7316 are shown in Figure 7-10. The most recent vacancy rate (April 2023) was 0.7 %. Vacancy rates in this area have been tight since May 2020, which indicates that the region has experienced a rental shortage since COVID and has not yet recovered. Rental vacancy rates for other postcodes in the region, such as Burnie City (7320) was 1.3 %, Burnie LGA (7321) was 1.1 %, Central Coast (7315) was 0.5 %, and Somerset (7322) was 1.2 %.



Source: SQM Research 2023

Figure 7-10 Rental vacancy rates – 7316 postcode

SGS Planning, National Shelter, Community Sector Banking, and Brotherhood of St Laurence (2019) have developed a Rental Affordability Index that calculates rental affordability on an annual basis. As affordability is based on household income, the index calculates affordability based on several different types of renting cohorts. Rental affordability as at quarter 2 in 2022 across various state suburbs in the local study area is shown in Table 7-16. Rental housing is defined as affordable for the average rental household with a household income of $100,000 per annum (2022 income levels).

Affordability for single part time worker parents on benefits (with a household income in the region (where data was available) was rated as unaffordable or severely unaffordable.

Table 7-16 Rental affordability – various postcodes within the local study area (Quarter 2, 2022)

Area (postcode)	Average rental household	Pensioner couple	Single part time parent worker on benefits	Student share house
Heybridge/Penguin (7316)	Affordable	No data available	No data available	Acceptable
Burnie City (7320)	Affordable	Moderately unaffordable	Unaffordable	Acceptable
Central Coast LGA (7315)	Affordable	Moderately unaffordable	Unaffordable	Acceptable
Somerset (7322)	Affordable	Acceptable	Moderately unaffordable	Data not available

Source: SGS Planning et al. (2023) Rental Affordability Index

7.3.6 Socio-economic disadvantage

ABS produces four socio-economic indices for areas (SEIFA), the latest being based on the 2016 Census. These indices identify relative advantages and disadvantages at a geographic level. Each has been examined for the local and regional study areas to ascertain levels of economic prosperity.

First is the index of relative socio-economic advantage and disadvantage (IRSAD), which looks at multiple indicators that measure people's ability to access materials or social resources and participate in society. These measures include income, employment, education, car ownership, and housing. The components of IRSAD are:

- **Ranks:** All areas are ordered from the lowest to highest score, then the area with the lowest score is given a rank of 1, the area with the second-lowest score is given a rank of 2 and so on.
- **Deciles:** The IRSAD divides the state population into ten equal deciles. The lowest-scoring 10 % of the decile groups is the most disadvantaged group and is given a decile number of 1, and the highest-scoring 10% is the most advantaged, which is given a decile of 10.
- **Percentile:** The IRSAD divides the state population into one hundred equal percentiles. The lowest-scoring 1 % of the decile groups is the most disadvantaged group and is given a decile number of 1, and the highest-scoring 1 % is the most advantaged, which is given a decile of 100.

Data as shown at the ABS Statistical Area 1 (SA1) level and discussed for the regional and local study areas in Table 7-17.

Table 7-17 Index of relative socio-economic advantage and disadvantage (IRSAD)

		Ranking within Australia			*Ranking within Tasmania*		
Area	**Usual resident population**	**Rank**	**Decile**	**Percentile**	**Rank**	**Decile**	**Percentile**
Heybridge (suburb)	430	2101	2	16	223	4	33
Burnie City (LGA)	18895	67	2	13	9	4	31
Central Coast (LGA)	21362	138	3	26	18	7	61

Source: Census of Population and Housing: Socio-economic Indexes for Areas (SEIFA), LGAs, Australia, 2016
Census of Population and Housing: Socio-economic Indexes for Areas (SEIFA), State suburbs, Australia, 2016

7.3.7 Accessibility and affordability of goods and services (cost of living)

There is limited recent data published on the cost of living in Tasmania. The most recent data available is concerned with access to and the affordability of food.

In 2014, the University of Tasmania conducted a survey of the price and availability survey for healthy food across Tasmania, which found that the cost of healthy food in the North West Tasmanian region that includes the regional study area was generally in line with food costs across the state as a whole (UTAS 2015). However, it has been noted that food costs may be an issue in the region, particularly in the less densely populated areas of the North West such as the local study area (Eat Well Tasmania 2021), where people are likely to rely on smaller grocery stores and convenience shops. The cost of using these stores in the North West to fill a standardised basket of food was $ 497, compared to $ 355 at a major supermarket. More recently, the Tasmania Project Cost of Living Survey (UTS 2021) received a total of 1,284 responses. Key findings of the report were found that 18% of Tasmanians are food insecure, indicating that almost one in five people in Tasmania had issues accessing adequate food. It also found that one in two (51 %) Tasmanian households has experienced food insecurity over the previous month. This is nearly double the rate recorded in May 2021 (27 %).

Food insecurity was reported to be higher for several cohorts, including (Kent et al. 2022):

- Most young adults in Tasmania aged 18-24 years experienced food insecurity over the previous month (92 %), a figure which comprises marginal, low and very low food security.
- Other at-risk groups included Tasmanians who are unemployed (85 % food insecure), temporary residents (84 %), single parents with dependents (78 %), people living with a disability (76 %), and Aboriginal and Torres Strait Islander identifying people (76 %).

When coupled with older data about the food costs outside of major centres, this data indicates that it is likely that people living in less densely populated areas who are socio-economically vulnerable are at heightened risk of food insecurity, which would be in part driven by the affordability of food.

Consequently, people in the local study area are required to drive to major centres to access basic goods at an affordable price, which in turn increases transport costs. Therefore, it is likely that there is diminished access to affordable food in the local study area.

Similarly, a 2014 report on the cost of living in Tasmania (Eccleston, Churchill, and Smith 2014) found that electricity prices increased by 66.8 % between 2008 and 2013. These cost increases, alongside the cost increases in other essentials such as food and health services, resulted in households with very low incomes experiencing financial stress. A more recent statement by the Tasmanian Council of Social Service (2019) reiterated these findings, noting that the cost of energy in Tasmania is burdensome for those on very low incomes.

7.3.8 Land use and natural resources

Tourism is an important industry for North West Tasmania, with visitors attracted by the region’s natural features and scenic coastline.

Approx. 840 tourism businesses operate across the region in the form of accommodation (45 %), attractions (19 %), tours, transport, events, dining + info services. This does not include Airbnb, which fluctuates around 1,600 listings. There are three airports, one cruise port and the TT-Line ferry port (West by Northwest, 2022).

The region saw over 500,000 visitors annually (pre-covid) which accounted for 38% of all visitors to Tasmania and generated $462 million into the regional economy (West by Northwest, 2022). The region's top tourist attractions include:

- International Visitor icons such as Cradle Mountain, Stanley and Strahan;
- World's equal highest-rated wilderness world heritage area;
- Vibrant agricultural district – Tasmania's food-bowl and Tasting Trail;
- Some of the world's best golf courses;
- Access to three airports and Spirit of Tasmania; and
- New world-class mountain bike trails and walking trails.

Table 7-18 LGAs within the West by North West and Visit Northern Tasmania

West by North West	Visit Northern Tasmania
• West Coast Council • Circular Head Council • King Island Council • Waratah-Wynyard Council • Burnie City Council • Central Coast Council • Devonport City Council • Latrobe Council • Kentish Council	• Meander Valley Council • West Tamar Council • Northern Midlands Council • George Town Council • Launceston City Council • Dorset Council

7.4 INFRASTRUCTURE AND SERVICES

This section describes the infrastructure and services available to the local and regional community including municipal and social infrastructure and associated services.

7.4.1 Governance and planning

This section describes state, regional and local government plans for the regional and local study area. These plans identify governance and planning priorities, and community values, aspirations and challenges at the regional and local scale for the communities within the regional study area.

The Tasmanian Renewable Energy Plan (Tasmanian Government 2020b) focuses on the delivery of renewable energy in a way that supports the Tasmanian community, including the development of the Tasmanian workforce through training and education investments. The regional land use and economic development strategies described below seek to create opportunities for economic growth through coordinated infrastructure development, increasing the value of productivity per worker, increasing the number of skilled workers, and investing in the Tasmanian people's productive capacity through health, education, and wellbeing initiatives. Both the Cradle Coast Regional Land Use Strategy (Tasmanian Government 2022c) and the Northern Tasmania Regional Land Use Strategy (Tasmanian Government 2021b) identify the importance of energy generation, distribution and supply.

The Cradle Coast Regional Land Use Strategy (Tasmanian Government 2022c) acknowledged that new transmission lines and corridors generate community concern for potential visual and amenity impacts to areas of high natural conservation. The Northern Tasmanian Land Use Strategy (Tasmanian Government 2021b) focused on the economic opportunities associated with the renewable energy sector for energy generation and the need to support sector development through infrastructure. This plan also acknowledged the challenges of age, labour and skill shortages associated with the capacity of the region's resident population to participate in the renewable energy sector development.

The Cradle Coast Regional Futures Plan (Cradle Coast Authority 2018) takes a collaborative approach to identify ways to address the key challenges that could impair the capacity of the local workforce to transition into the new emerging industry development associated with renewable energy, advanced manufacturing, and agriculture. Unlike the individual local government plans described below (and the statutory land use plans summarised above), this plan is a regionally owned and implemented strategy that identifies ways to prepare the region so that it may access the benefits and opportunities associated with the new and emerging industries.

The local governments within the region varied in terms of the number and type of plans and strategies addressing the aspirations of their respective communities. It should be noted that none of the local government strategies or plans mentioned renewable energy generation or infrastructure as an economic platform. Burnie City Council's Strategic Plan (Burnie City Council 2020) and Settlement and Investment Strategy (Burnie City Council 2017) contained actions to address the ongoing consequence of the cessation of the Burnie pulp mill. These actions focus on repositioning its future through industry and land use diversification and investment in education and transport infrastructure to consolidate its role as the hub of the Cradle Coast region.

The Central Coast Strategic Plan (Central Coast 2019) and the Central Coast Social Planning Framework (Central Coast Council 2022) place emphasis on the social priorities of its residents through their social planning framework, food security strategy and youth strategy. In addition to the council's corporate strategic plan and economic development strategy. The priorities for the Central Coast Council focus on connectivity (transport and social networks), increasing its population base through attracting creative professionals, retirees and families whilst retaining their youth and enhancing their community identity. The food strategy, social planning framework and youth strategy highlight the actions and processes that would be taken to achieve the community priorities.

7.4.1.1 State government plans and regional plans

The State government plans and regional plans are discussed in turn below.

Tasmanian Renewable Energy Action Plan 2020

The Tasmanian Renewable Energy Action Plan 2020 (Tasmanian Government 2020b) aims to deliver in the following three areas:

1. Transforming Tasmania into a global renewable energy powerhouse.
2. Making energy work for the Tasmanian community.
3. Growing the economy and providing jobs.

The following objectives and actions are relevant to the project:

- Major renewable energy projects such as Battery of the Nation and Project Marinus, as well as other existing and future wind farm developments, are highlighted as central to achieving the objectives of the plan.
- To support the expansion of renewable energy in Tasmania in a way that supports the Tasmanian community, the plan committed to the development of the Renewable Energy Coordination Framework.
- To support the development of the sector, the Tasmanian Government committed to the development of a skills and training initiative, Energising Tasmania (Tasmanian Government 2021a), to expand the workforce skills in areas such as engineering, project management, civil construction and trades. The program includes a training grants fund, a training market development fund to support training providers, a fund to deliver an industry-led workforce development plan, and the establishment of an industry advisory group.

Cradle Coast Regional Futures Plan 2019 – 2022

The Cradle Coast Authority (2018) developed the Regional Futures Plan to guide the industry transition from manufacturing and food processing, agriculture, and forestry to new and emerging industrial development. The plan was published in 2018 and acknowledged that net employment opportunities in the new industries of aquaculture, niche food production, renewable energy, tourism and health care and social assistance would exceed predicted trends at the time of publication. Accordingly, pre-COVID-19 growth was strong; however, post-COVID-19 is demonstrating continuing upward trends for the creation of new job opportunities in the region. The Cradle Coast Authority is comprised of nine LGAs in North and North West Tasmania, namely:

- Circular Head
- Waratah/Wynyard
- West Coast
- Burnie City (membership lapsed in July 2022)
- Central Coast
- Kentish
- Devonport
- Latrobe
- King Island

The Regional Plan identified several structural challenges to overcome to develop the skills and abilities of the workforce so that the residential population may be in a position to be considered for the jobs associated with the new and emerging industries, especially in full-time higher-skilled occupations. These challenges include (Cradle Coast Regional Futures Plan 2018:8):

- High unemployment rates – Including youth unemployment and longer term unemployed (higher in most of the regions Council areas than the Tasmania average).
- Low educational attainment levels – There is a need to improve education outcomes, including life skills. Many employers have trouble recruiting suitable workers. Most new jobs require post-school qualifications.
- Shrinking working-age population – Due to a combination of older and aging workforce, static population growth and out-migration.
- Retaining population – The region has an ageing population, and retaining youth in the region, particularly for the workforce, is a challenge.
- Regionally dispersed population – Isolation of some communities, such as King Island, far North West and the West Coast, presents challenges for economic and services development. The hotspot for population growth is at the eastern end of the region.
- Significant labour demands – A significant number of new, skilled jobs will be added to the economy. This coincides with an ageing / shrinking workforce; therefore, filling these jobs/skills gaps will be a challenge.

Cradle Coast Regional Land Use Strategy

The amended Cradle Coast Regional Land Use Strategy (CCRLUS) (Tasmanian Government 2022c) came into effect on the 11th of May 2022. The amendments were made to provide greater recognition of King Island's unique circumstances as a result of its economy, historical pattern of development and isolation. The Cradle Coast Regional Land Use Strategy will guide land use planning processes from 2010 to 2030. The Strategy has a statutory function to inform the purpose and content of local planning schemes.

The CCRLUS applies To the local government areas of:

- Burnie City
- Central Coast
- Circular Head
- Devonport
- Kentish
- King Island
- Latrobe
- Waratah/Wynyard
- West Coast

The CCRLUS describes the strategic directions of the state and the region and how these will be implemented through the land use planning system. The purpose of the regional land use strategy is to provide certainty and predictability for the Government, local councils, developers, and the community on where, when and what type of development will proceed. Included in the CCRLUS are a range of land use strategies that protect and enhance energy generation, distribution, and supply within the region. This includes finding ways to become more energy efficient and reducing carbon emissions as a climate change mitigation and adaptation strategy, facilitating commercial and small-scale renewable energy generation and energy efficiency technology and practices in domestic, commercial and industrial use and recognising the strategic importance of inter-state connections for the import and export of energy. The CCRLUS also acknowledged that the development of the renewable energy industry in Tasmania would necessitate the development of new transmission lines and corridors and that these corridors can generate concern around potential visual and amenity impacts to areas with high natural conservation value, in part related to the many renewable energy generation sites that are located within or proximal to areas of conservation value.

7.4.1.2 Local government

This section provides an overview of community and strategic plans that are applied by the local governments within the regional study area. The vision and goals are articulated in each community plan and are summarised in Table 7-19.

Table 7-19 Community and strategic plan visions – regional study area

LGA	Vision	Goals/Objectives
Burnie City Council		
Making Burnie 2030 – Community Strategic Plan (Burnie City Council 2020)	'A vibrant, thriving beautiful place; a caring community; a regional leader engaged with the world; and a city that realises its dreams' (Burnie City Council 2020).	• Attractive place to live, work and play • An inclusive and healthy community • A centre for information, knowledge and learning • A secure, innovative and diverse economy • A natural and built environment that is respected and cared for • A regional hub
Settlement and Investment Strategy for Burnie to 2026 (Burnie City Council 2017)	'A forward-looking sustainable development framework and efficient land use planning system that leverages competitive advantages, encourages local economic and employment growth, recognises community, landscape and environmental values, and addresses land use planning challenges to position Burnie as a prosperous and liveable regional city and a preferred location in Tasmania and Australia for people to live, work and invest.'	• To reinforce Burnie's position as a major regional centre to the Cradle Coast Region and hub for trade, business, employment, transport, culture and leisure activities, health and education services. • To promote Burnie's economic base. • To support the operation of existing enterprise. • To attract and retain new business to Burnie that leverages the city's skill base and supply chains. • To foster diversity, growth and development for business and industry. • To transition functionally obsolete precincts to more suitable alternative uses. • To foster market and investment opportunities for business and industry. • To provide increasing employment for existing and future residents. • To provide education opportunities for existing and future residents. • To encourage population growth to sustain and extend services. • To ensure the provision of well-developed transport infrastructure. • To provide cost-effective infrastructure services.

LGA	Vision	Goals/Objectives
Central Coast Council		
Central Coast Strategic Plan 2014-2024 (Reviewed 2019)	**Central Coast – Living our potential:** • 'We are a vibrant, thriving community that continues to draw inspiration and opportunities from its natural beauty, land and people and connected by a powerful sense of belonging.'	**The Shape of the Place** • When planning for a vibrant and liveable place, it is important to focus on its shape – planning, precincts, open spaces, the physical environment and augmenting these to highlight the distinctiveness of Central Coast. **A Connected Central Coast** • Seeks to enhance connectivity both within Central Coast and the region – how people move from place to place, how accessible places are, and how people connect and with services within Central Coast. **The Environment and Sustainable Infrastructure** • Sustaining built infrastructure and the natural environment by encouraging innovation and investment in Central Coast. **Council Sustainability and Governance** • A leading Council is well governed and managed and engages effectively with its community.
Long Term Economic Development Strategy Central Coast Council 2020	**Willing and Able** • Central Coast's economic development is supported by all in our community; • Our industries, businesses, products and places are actively promoted by all; and • Whatever we are promoting, or doing and wherever we are, there is a visible and authentic link to the Coast to Canyon's place marketing brand. **Local Businesses** • We work together, share knowledge and provide referrals to local businesses in order to improve the Central Coast business environment and spread the economic and social benefits to all in our community; • Our industry sectors, local institutions, business leaders and community stakeholders all collaborate and network, aiming to increase economies of scale	• Strengthen collaborative networks and strategic partnerships. • Embed a culture of innovation. • Boost place marketing and management of place making infrastructure. • Attract investment and supporting business. • Appeal to relocating creative professionals, retirees, and families. • Increased the population and retain young people.

LGA	Vision	Goals/Objectives
	of outputs through innovation and clustering activities; and • We put ourselves under the microscope to see what we can enhance or build on in order to develop innovative and place-based, local economic development responses to emerging, new, or untapped opportunities or risks. **Identity and Image** • We socialise and enjoy a variety of unique and authentic experiences in our communities, which are honestly captured in our community identities and images; • Our vibrant, thriving and genuine communities are clearly visible and admired by relocating investors, developers, businesses and visitors; and • Industry sectors and businesses in our community are connected and supported by high-quality social and physical infrastructure.	
Central Coast Food Security Strategy (Central Coast Council 2021)	**Willing and Able** • Healthy eating is supported and actively promoted in our community; • Whatever we are doing or wherever we are, there is always a healthy food option on offer; • Our food outlets celebrate and make use of local produce; and • Our knowledge and skills support growing, buying, making, creating and presenting healthy food. **Farmers and Producers** • The rich productive soils of our landscapes, farms, communal spaces, public realm and backyards deliver quality products; and • Our farmers are known to us, as are our cooks and chefs, whether they are creating nutritional excitement at school, at work or at play. **Growing our health**	**Making healthy eating part of every aspect of community life:** • Support local food production initiatives and projects. • Identifying and facilitating action to address food security opportunities. • Health and wellbeing promotion. • Engage in targeted food security messaging. **Improving the accessibility and affordability of healthy food:** • Promote and support food security programs. • Identifying barriers to accessing healthy food. • Improve access to clean water. • Improve transport networks. **Increasing knowledge and skills in growing, preparing and purchasing food:** • Support food education programs in educational institutions.

LGA	Vision	Goals/Objectives
	• We are growing our health by eating and using the fruit and vegetables we produce and buy. This is part of our community's culture; and • We work together, share knowledge, skills and resources to make sure healthy food options are available to everyone, everywhere, every time we eat.	• Support community education programs. • Understand the local food production and distribution story.
Central Coast Social Planning Framework (Central Coast Council 2022)	'We are a vibrant, thriving community that continues to draw inspiration and opportunities from its natural beauty, land and people and connected by a powerful sense of belonging.'	**Active** • Opportunities and facilities to gather and participate in recreational activities and cultural experiences. **Engaged** • Capabilities and networks to volunteer our time and skills and engage in decisions that affect us. **Included** • Connectivity and inclusivity for our communities to access services, shops, education, work and play. **Learning** • The knowledge, skills and commitment to learning needed to participate fully in society and reach our potential. **Secure** • Local work opportunities and affordable living in a well-governed and safe community environment. **Healthy** • Local resources to support good food and lifestyle choices that build physical health and emotional resilience
Central Coast Youth Strategy 2018-2023 (Central Coast Council 2018)	'To allow Council to consult and engage with youth on decisions that affect them, and to remain flexible and responsive to the changing world in which youth and the community live. This will allow for new knowledge to be considered over the expected five-year life of the strategy.'	**Engaged** • Youth Engaged: Continue to develop the roles of young people participating in Youth Engaged. • The voice of Central Coast youth is valued, particularly in relation to Council decisions and policy shaping that impacts directly on youth.

		Included • Engage with Central Coast Young people to collect their stories and perspectives of Central Coast. • Central Coast Council Youth specific community grant. • Identify the top 5 priorities/concerns for youth on Central Coast. **Active** • More young people using Councils sport facilities, green spaces, parks and recreation assets and public spaces. • Work with Sporting clubs which utilise council facilities to develop the capacity to increase social inclusion in their club culture. • Increased health and wellbeing of our young people through engagement in visual & performing arts. • Recognise, support, and promote the artistic achievements of young people in Central Coast, including utilising Ulverstone VIC. • Central Coast Youth attending youth conferences, networking and training opportunities. **Healthy** • Young people are more engaged in accredited programs that encourage better health outcomes through activity and good food choices. • Young people utilising Council's cycleway infrastructure, Mountain bike Park facilities and choosing cycling as a healthy transport, recreation, and competition option. Pump and Jump developed if a collaborative funding arrangement is found. • Mental Health – work with young people to develop/explore how to deliver good mental health messages, activities, or practices to young people to assist them in managing/understanding their mental health.

LGA	Vision	Goals/Objectives
		Secure • Young people contributing to making Central Coast a community they feel safe in • Work with young people on ideas that they can develop to help them feel safe in Central Coast **Learning** • Document stories of the Council's UTAS bursary recipients for use in promotion in the E-newsletter. • Understanding of Council's capacity to undertake the "Youth First Employment Program." • Career Information Forum Days.

7.4.2 Community infrastructure and services

7.4.2.1 Education

Education facilities have been identified as social receptors and their services may be affected during the construction phase because of their proximity to the Bass Highway. These include a primary school and two schools that combine primary and secondary at the same location. Details of the schools are listed in Table 7-20.

Table 7-20 Educational facilities – local study area

Facility name	Enrolment number[1]	Type	Level	LGA	Distance from site (km)
Leighland Christian School (Burnie campus)		Independent	Primary (K-6)	Burnie City	5.4
North West Christian School	94	Independent	P – 12	Central Coast	12
Penguin District School	633	State	K – 12	Central Coast	13

Source: My Schools 2023

7.4.2.2 Health services and hospitals

The Tasmanian Health Service has responsibility for governing and delivering healthcare services in Tasmania and is divided into three regions, namely the North, North West, and Southern regions of Tasmania. Of which, the North West and North regions are relevant to the project. The Tasmanian Health Service administers the public hospital system and primary and community health services (including mental health and oral health services).

Five hospitals provide services to the regional study area:

- The North West Regional Hospital in Burnie provides acute general medical care services in the North West region.
- North West Private Hospital is a 48-bed acute medical, surgical, obstetric and mental health hospital.
- The Mersey Community Hospital at Latrobe is a dedicated elective surgery centre for all Tasmanians and provides a mixture of general hospital services to the local community.
- The Launceston General Hospital is the principal referral hospital for the North West and North regions, providing several tertiary services.
- The Deloraine District Hospital is an acute care facility that provides palliative and general medical care services to the Meander Valley region.

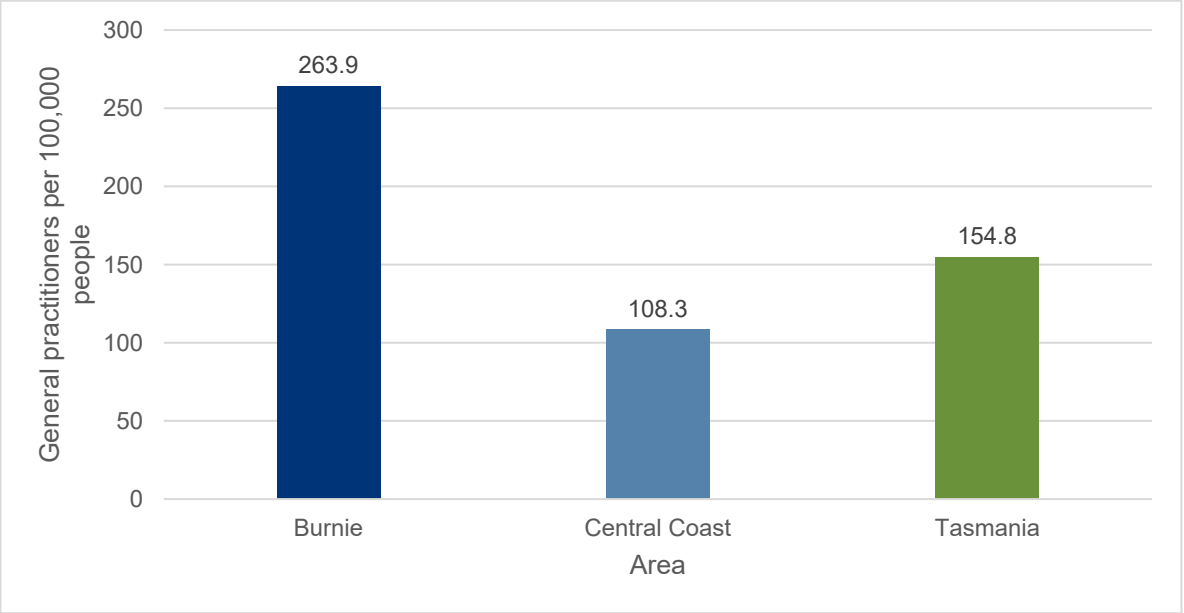
Table 7-21 details the medical services providers relevant to the study area and the services offered at each location.

Table 7-21 Health services relevant to the study area

Tasmanian Health Service Region	Facility	Services offered
North West	North West Regional Hospital	• The North West Regional Hospital at Burnie is a 160-bed facility. • It offers services in medical, surgical and allied health through inpatient and outpatient departments. The hospital caters for emergency resuscitation, surgery and intensive care of most trauma patients and other medical conditions. • North West Regional Hospital is a secondary-level service, so transfer to comprehensive tertiary hospitals occurs for some injuries and illnesses. • Other outpatient services provided by the North West Regional Hospital include diabetes education, pharmacy, physiotherapy and social work. • In 2020/21 the North West Regional Hospital saw 27,396 presentations to emergency, 10,735 inpatient admissions, 31,102 outpatient visits and conducted 5,025 operations.
	North West Private Hospital	• The North West Private Hospital is a 48-bed acute medical, surgical, mental health and obstetric facility. This hospital provides the only birthing service on the North West Coast and accepts both public and private maternity patients, delivering around 1,000 babies each year.
	Mersey Community Hospital	• The Mersey Community Hospital at Latrobe has 95 beds and offers general and specialist health services. Other services provided include oncology, elective surgery, accident and emergency care and cardiac rehabilitation. • In 2020/21, the Mersey Community Hospital saw 24,009 presentations to emergency, 10,735 inpatient admissions, 31,102 outpatient visits and conducted 5,025 operations.
	Burnie Community Health Centre	• The Burnie Community Health Centre provides health and community services. • Community services, visiting services and support groups that operate from the centre include Wetaway Program, Advocacy Tasmania Inc., child health centres, and podiatry.
	Central Coast Community Health Centre – Ulverstone	• The Ulverstone Community Health Centre provides a range of community services, visiting services, clinics and support groups from the centre, including palliative care, continence advisor, family and child health clinics and dementia care support service.
	Devonport Community Health Centre	• The Devonport Community Health Centre provides a range of community services, visiting services, clinics and support groups from the centre, such as community nursing, drug and alcohol services, diabetes education, continence advisor, dental clinic and sexual health clinic.
North	Launceston General Hospital	• The Launceston General Hospital is a 360-bed facility. As the principal referral hospital for the North and North West of Tasmania, the hospital provides emergency and acute care, specialist services, and inpatient and ambulatory care to Launceston and surrounding areas.

The goal of the Tasmanian Health Service is to see 80 % of all emergency department presentations within the recommended time for all triage categories. In 2018-19 in Tasmania's North West region, the North West Regional Hospital achieved this 71.1 % of the time and the Mersey Community Hospital achieved this 78.5 % of the time (DHHS 2019). In 2018-19 in Tasmania's North region, the Launceston General Hospital achieved this 60.8 % of the time (DHHS 2019). A recent audit of Tasmanian emergency department services has noted a 56 % increase in hospital admissions in Tasmania between 2009-10 and 2017-18, which was considered likely to increase (Tasmanian Audit Office 2019). Demand has been noted to increase during winter due to flu and other respiratory illnesses. As a response, the Department of Health publishes winter demand management plans, which also consider the potential for managing COVID-19 on Tasmania's emergency

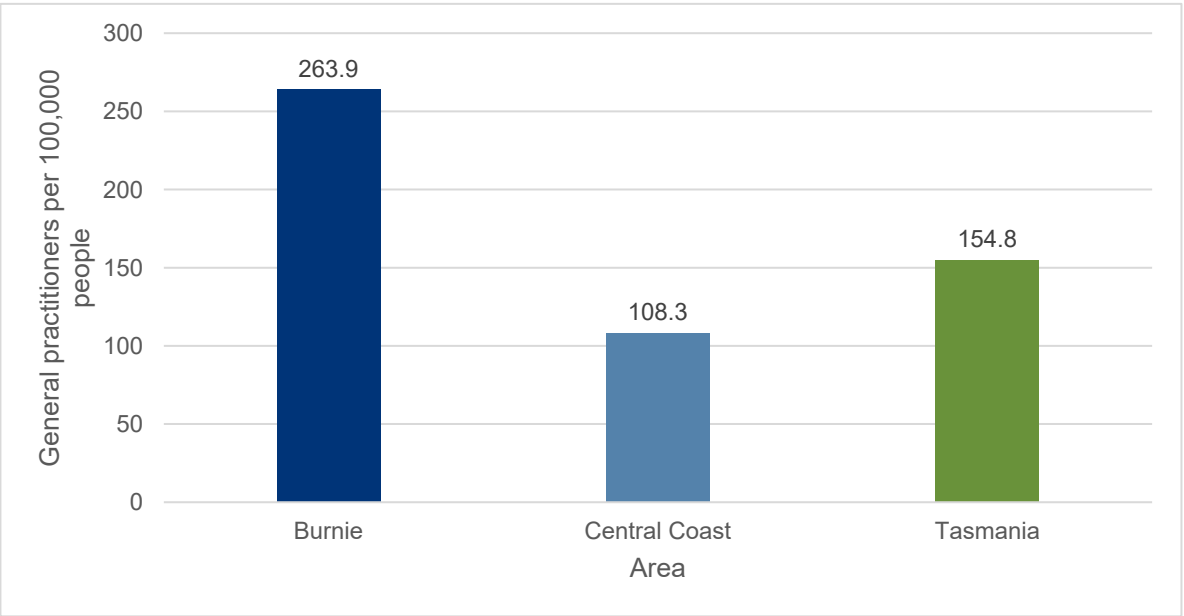
health network (Department of Health 2020).



Source: *PHIDU Torrens University Australia (2023) Social Health Atlas of Australia: Tasmania. Data by Local Government Area*

Figure 7-11 shows the rate of general practitioners (GPs) per 100,000 people in the study area. As shown, the rate of GPs compared to the population is lowest in Central Coast LGA, with 108.3 GPs per 100,000 people. Burnie City LGA has the highest proportion of GPs in the regional study area, with 263.9 GPs per 100,000 people compared to the state (154.8 per 100,000). Burnie City LGA has two hospitals and one community health facility.

These quantitative indicators are supported by the latest service needs analysis for Tasmania, which notes that Tasmania has an ageing healthcare workforce that is concentrated within the state's regional centres, resulting in a lower capacity of GP services in rural areas such as Central Coast LGA (Tasmania PHN 2019)



Source: PHIDU Torrens University Australia (2023) Social Health Atlas of Australia: Tasmania. Data by Local Government Area

Figure 7-11 General practitioners per 100,000 people in the regional study area, 2020

7.4.2.3 Ambulance services

There are two ambulance services within the regional study area. The location of the stations and the station types are described in Table 7-22.

A review of ambulance service provision in Tasmania has noted that demand for ambulance services in Tasmania has grown at an average annual rate of 5.5 % per annum between 2009-10 and 2015-16, which is significantly higher than the national average annual rate of growth (3.6 % per annum) (Department of Health and Human Services 2017). The review noted that there had been a growth in particular in the transport of non-acute patients, which in rural communities means that a paramedic crew may be tied up by transporting a non-acute patient and therefore unable to respond to a patient with a more acute need (Department of Health and Human Services 2017).

Table 7-22 Ambulance services within the regional study area

Station type	Location
Metropolitan/Urban Stations – paramedic crews are rostered 24 hours per day.	Burnie, Ulverston

Source: Department of Health (2022): Ambulance locations

7.4.2.4 Fire services

Table 7-23 details the fire stations located within the regional study area. The Heybridge Fire Station, located in the Central Coast LGA, is the only fire station located within 1 km of the project in the regional study area. All of the fire stations, except Burnie, are staffed by volunteer brigades.

Table 7-23 Fire stations within the regional study area

Local government area	Fire station/Brigade
Burnie	• Stowport/Natone Volunteer Fire Brigade • Ridgley Volunteer Fire Brigade • Burnie Fire Station
Central Coast	• Gunns Plains Volunteer Fire Brigade • Penguin Volunteer Fire Brigade • Heybridge Volunteer Fire Brigade • Sprent Volunteer Fire Brigade • Riana Volunteer Fire Brigade • North Motton Volunteer Fire Brigade • Forth Valley Volunteer Fire Brigade • Castra Volunteer Fire Brigade • Ulverstone Volunteer Fire Brigade

Source: Tasmanian Fire Service (2023)

7.4.2.5 Police services

There are three police stations within the regional study area. The closest police station to the project site is Burnie, 8 km away, with Penguin (18 km) and Ulverston stations (28 km) being located much further.

Table 7-24 Police services

Local government area	Police Station

Burnie	• 88 Wilson St, Burnie TAS 7320
Central Coast	• 3/5 Crescent St, Penguin TAS 7316 • 38 Victoria Street Ulverstone TAS 7315

Source: Google Maps 2023

7.4.3 Transport

Transport infrastructure supports the liveability in the study area and has the potential to be affected by the project activities.

7.4.3.1 Road Network

The road network forms the backbone of transportation in the Central Coast and Burnie LGAs. The main arterial road connecting these regions is the Bass Highway (A2), which runs along the north-west coast of Tasmania. This highway provides a direct and efficient route for commuting between the Central Coast and Burnie. It allows residents and visitors to travel by car, taxi, or ridesharing services, facilitating easy movement of people and goods between the two LGAs.

7.4.3.2 Public Transportation

Public transportation options in Heybridge are limited compared to larger cities. The town does not have a dedicated public bus service. However, there are bus services operated by Metro Tasmania that connect Heybridge to nearby towns and cities. These services are particularly useful for commuting to larger urban areas or accessing other parts of the region.

Burnie has a more developed public transportation system compared to Heybridge. Metro Tasmania operates bus services in Burnie, providing convenient transportation options within the town and its surrounding areas. These bus services connect various suburbs, including Heybridge, allowing residents to travel to Burnie for work, education, or leisure activities.

7.4.3.3 Cycling and walking

Heybridge provides a pleasant environment for cycling and walking enthusiasts. The town has footpaths and dedicated cycling lanes in some areas, making it safer and more convenient for pedestrians and cyclists. Many residents choose to walk or cycle for short trips within Heybridge, enjoying the scenic beauty of the coastal area.

7.4.3.4 Airport

Heybridge does not have its own airport. The nearest major airport is the Burnie Wynyard Airport, located approximately 20 kilometres east of Heybridge. This airport offers domestic flights to Melbourne, making it a convenient option for air travel. For international travel, residents typically travel to larger airports such as Hobart International Airport or Launceston Airport, both of which are a few hours' drive from Heybridge.

7.5 PEOPLE'S PRODUCTIVE CAPACITIES

This section describes the health of the population and their skills, knowledge and experience that enable them to participate in society and the economy.

7.5.1 Health

7.5.1.1 Wellbeing

Social wellbeing is a central component of health and it is increasingly recognised that mental health, in particular, is shaped by the broader social, economic and physical environment in which people live (WHO 2014). Measuring wellbeing is a complex undertaking and there is no 'standard' way to understand social wellbeing. Therefore, it is necessary to select available indicators of wellbeing. The WHO (2014) notes that there are a number of socio-economic factors that are linked to poor wellbeing, including relative socio-economic disadvantage and weak social support.

7.5.1.2 Mental health

Data presented in Table 7-25 describes the proportion of the population who experience a mental health condition. The proportion of the Tasmanian population who have a mental health condition is 11.5 %. Burnie has a higher proportion within their communities who experience a mental health condition, 12.7 % than Heybridge (7.6 %) and Central Coast (10.5 %).

Table 7-25 Mental health conditions

	Heybridge	Burnie City	Central Coast	Tasmania
Mental health conditions (including depression and anxiety)	7.6	12.7	10.5	11.5
No mental health Condition	81.7	79.5	81.6	80.7
Not stated	10.8	7.8	7.9	7.8

Source: ABS (2022a) Census of Population and Housing, 2021.

7.5.1.3 Need for Support

The purpose of this question within the Census is to identify people with a 'profound or severe core activity limitation' (ABS 2016d). The activity limitation is defined as *people who need assistance in their day-to-day lives with any or all of the following core activities – self-care, mobility or communication because of a disability, long-term health condition (lasting six months or more) or old age* and applies to all persons (ABS 2016d).

Table 7-26 below describes the proportion of the population within the local and regional study area that require support. The regional study areas of Burnie City (7.8 %) and Central Coast (7.5 %) have a higher need for assistance with core activities than the Tasmanian average of 6.8 %. The local study area has the lowest need for assistance, with 5.0 % of the suburb's population identifying a need for assistance with core activities. This data also indicates that the proportion of the population that have a need for support will also require a corresponding need for health services, respite centres and carers to enable this portion of the community to participate in society.

Table 7-26 Need for Support

Area	Has need for assistance with core activities %	Does not have a need for assistance with core activities %	Not stated%
Heybridge	5.0	87.2	7.7
Burnie City	7.8	86.9	5.2
Central Coast	7.5	87.2	5.3
Tasmania	6.8	87.8	5.4

Source: ABS (2022a), Census of Population and Housing, 2021

7.5.1.4 Health Conditions

The 2021 Census introduced a new set of questions on diagnosed long-term health conditions. Table 7-27 describes the proportion of the local and regional study area that reported one or more long term health conditions by sex. The data provides insight into the communities and their need for services to support their health needs. This data shows for the regional area that females have one or more health conditions than males in the same area. The local study area indicates a similar proportion of males and females experiencing one or more health conditions.

Table 7-27 Long term health conditions

Area	One or more health conditions		No health conditions		Not stated	
	Male	Female	Male	Female	Male	Female
Heybridge	32.1%	31.2%	59.0%	56.9%	9.0%	11.9%
Burnie City	32.4%	38.6%	59.5%	53.9%	8.1%	7.5%
Central Coast	33.2%	38.3%	58.4%	54.4%	8.5%	7.3%
Tasmania	30.8%	36.3%	60.9%	56.3%	8.3%	7.4%

Note: Measures the number of people who reported that they have been told by a doctor or nurse that they have any of these long-term health conditions. Includes health conditions that have lasted or are expected to last six months or more, may occur from time to time, are controlled by medication or are in remission.
Respondents had the option to record multiple long-term health conditions; the sum of the total responses count will differentiate from the total person count.
Source: ABS (2022a) Census of Population and Housing, 2021

7.5.2 Educational attainment

Table 7-28 details the highest level of educational attainment within the local and regional study area at the 2021 Census. The most common levels of educational achievement were year 10 and above (secondary education), and Certificate III.

Table 7-28 Highest level of educational attainment – local and regional study areas

	Heybridge	Burnie	Central Coast	Tasmania
Bachelor's degree level and above	10.7	12.9	14.1	21.9
Advanced Diploma and Diploma level	7.4	7.1	7.7	7.9
Certificate level IV	5.5	3.7	3.8	3.5
Certificate level III	20.8	18.0	18.6	15.0
Year 12	10.4	11.8	9.3	12.0
Year 11	2.7	5.1	4.4	4.3
Year 10	19.7	19.1	19.4	15.9
Certificate level II	0.0	0.1	0.1	0.1
Certificate level I	0.0	0.0	0.0	0.0
Year 9 or below	11.2	10.6	11.5	8.6
Inadequately described	1.4	2.4	2.5	2.3

No educational attainment	0.0	0.3	0.2	0.4
Not stated	10.4	8.7	8.4	8.2

Source: ABS (2022a), Census of Population and Housing, 2021

7.5.3 Training and industry development programs

The regional study area has a number of training and industry development programs, including those that are targeted to the renewable energy sector and the project in particular. These have been detailed in Table 7-29.

Table 7-29 Training and industry development programs

Plan/strategy/program	Summary
Interim Local Jobs Plan: North and North West Tasmania (Department of Education, Skills and Employment 2020)	The Plan seeks to maximise the extent to which local people are used to filling job opportunities to meet the needs of large construction projects (including Marinus Link) and identifies a number of programs and pathways aimed to facilitate this, including: The Industry Training Hub and the Career Facilitator in Burnie assists young people to build skills and choose occupations in demand in their region. The JobTrainer Fund provides free training in up to 200 priority qualifications with an identified need for skilled workers. *Energising Tasmania* is a commitment from the Commonwealth Government to develop a skilled workforce to meet the demand for a skilled workforce across major renewable energy projects, including Marinus Link.
North West Job Ready Generation Package (Tasmanian Government 2021c)	The package funds initiatives to support the upskilling of North West Tasmanians with qualifications and training required in growth sectors, including agriculture, mining, manufacturing, building and construction. The initiatives targeted at the building and construction sector include the North West Building Futures Program, which supports school-based apprenticeships within the building and construction sector.
Energising Tasmania (Tasmanian Government 2021a)	*Energising Tasmania* is a four-year commitment to developing a skilled workforce to support the Battery of the Nation initiative, and the renewable energy and related sectors in Tasmania have four key activities: • Tasmanian Energy and Infrastructure Workforce Advisory Committee, which provides advice to the Tasmanian Government on the implementation of the Energising Tasmania commitment. The Committee includes industry, training, education, and state government members. TasNetworks is a member of the Workforce Advisory Committee. • Energising Tasmania Training Fund, which delivers fully subsidised training for energy, infrastructure and related sectors. • Energy and Infrastructure Training Market Development Fund, which provides support training system capability to meet the needs of energy and infrastructure sectors. • Energy and Infrastructure Workforce Development Fund, which supports workforce development.

7.5.4 Food Security

In 2014, the University of Tasmania surveyed the price and availability of healthy food across Tasmania, which found that the cost of healthy food in the North West Tasmanian region that includes the regional study area was generally in line with food costs across the state as a whole (UTAS 2015). However, it has been noted that food costs may be an issue in the region, particularly in the less densely populated areas of the North West such as the local study area (Eat Well Tasmania 2021), where people are likely to rely on smaller

grocery stores and convenience shops. The cost of using these stores in the North West to fill a standardised basket of food was $ 497, compared to $ 355 at a major supermarket. More recently, the Tasmania Project (UTS 2021) found that 18 % of Tasmanians are food insecure, indicating that almost one in five people in Tasmania had issues accessing adequate food. Food insecurity was reported to be higher for several cohorts, including (Kent et al. 2022).

- More than two-fifths (42.9 %) of the young people (aged 18-24 years) who responded to the survey.
- More than half (56 %) of the First Peoples who responded to the survey.
- Nearly two-fifths (38.7 %) of the people living with a disability who responded to the survey.
- Half (50%) of the people earning less than $20,000 per year who responded to the survey.

When coupled with older data about the food costs outside of major centres, this data indicates that it is likely that people living in less densely populated areas who are socio-economically vulnerable are at heightened risk of food insecurity, which would be in part driven by the affordability of food.

Consequently, people in the local study area are required to drive to major centres to access basic goods at an affordable price, which in turn increases transport costs. Therefore, it is likely that there needs to be more access to affordable food in the local study area.

Similarly, a 2014 report on the cost of living in Tasmania (Eccleston, Churchill, and Smith 2014) found that electricity prices increased by 66.8 % between 2008 and 2013. These cost increases, alongside the cost increases in other essentials such as food and health services, resulted in households with very low incomes experiencing financial stress. A more recent statement by the Tasmanian Council of Social Service (2019) reiterated these findings, noting that the cost of energy in Tasmania is burdensome for those on very low incomes.

7.6 PROJECT WORKFORCE PROFILE

This section provides an overview of the project's workforce profile and includes the anticipated workforce size and duration of employment for major construction activities. The anticipated source of the construction workforce is also provided.

7.6.1 Construction workforce

The number of construction workers required during the construction phase is expected to peak at approximately 180 persons per day for converter stations (assume all in the same shift). The workforce will be made up of local, intrastate, interstate and international personnel depending on the complexity of the work and the requirement for specialist skills and equipment.

Subsea cable: There are expected to be 80 -100 crew on each cable-laying ship to enable multiple shifts for 24/7 operations over the time the subsea cables are laid.

7.6.2 Operations workforce

MLPL will operate 24 hours a day, every day of the year, for the expected 40-year operational life span. The converter stations will not be manned 24/7 and will only be attended to during normal working hours (Monday to Saturday, 7:00 am to 4:00 pm).

At most, five employees will be required to help operate the converter stations and therefore, a magnitude of negligible has been provided.

7.7 ECONOMIC VALUE-ADD TO LOCAL AND STATE EMPLOYMENT

The project will generate direct employment for construction and operation, however it will also generation a significant number of indirect jobs in Tasmania. This value-added to the economy creates significant local and state employment across various industries, including construction, professional services, retail, manufacturing and accommodation and food services.

SGS Economics and Planning undertook economic modelling and adopted an integrated approach incorporating Australia-wide, Victorian and Tasmanian impacts. This analysis uses Computable General Equilibrium (CGE) modelling techniques and an assessment period of 25 years from 2025 to 2050. The modelling traces the spending and employment impacts at the state level, but also outlines the impact on the regional communities where the infrastructure will be developed and operated.

In North West Tasmania, the project adds:

- $352 million to the local economy during the five years of construction (2025 to 2029). The peak annual impact occurs in 2027, with an annual contribution of almost $108 million. This construction phase also includes the first half year of operations as the project comes online in the second half of 2029.
- $361 million to the regional economy between 2030 and 2050 for operations and maintenance, at an average of $17 million per annum.

Extending the impact out to all of Tasmania, the project adds:

- $681 million to the state economy during the five years of construction (2025 to 2029), peaking at $213 million in 2027.
- $679 million to the state economy between 2030 and 2050 for operations and maintenance, at an average of $32 million per annum.

In terms of employment, In North West Tasmania, the project adds:

- 1,297 full-time equivalent (FTE) job-years in the regional economy during the five years of construction (2025 to 2029). The peak number of jobs created occurs in 2027 when 430 job-years are added.
- 306 FTE job-years in the regional economy between 2030 and 2050 for operations and maintenance, at an average of 15 job-years supported each year.

Extending the impact out to all of Tasmania, the project adds:

- 2,661 FTE job years during the five years of construction (2025 to 2029), with a peak of 895 job years added in 2027.
- 306 FTE job-years during operations in the state between 2030 and 2050, at an average of 15 job-years supported annually.

Including flow-on impacts, the jobs created occur across various industries, not just construction. Across Tasmania, demand is anticipated to be generate FTE job-years between 2025 and 2050 for the following industries: retail trade (281) and health care and social assistance (184).

There is expected to be a reduction FTE job-years between 2025 and 2050 for the following industries: agriculture, forestry and fishing (-241), manufacturing (-25) and mining (-8) as these sectors are likely to compete for workers with the project during the construction period.

8. SOCIAL WELLBEING VALUES, POTENTIAL IMPACTS AND BENEFITS

The social wellbeing framework (Table 5-2) is used to guide the identification of the key social values; the outcomes from the SIA engagement inform the social impact and the sensitivity of these values have been assessed using the sensitivity criteria described in Table 5-3.

Table 8-1 Social value sensitivity

Social value	Attributes and indicators	Sensitivity	Justification for sensitivity rating	Potential project impacts (positive and negative)
Community identity **Describes how a community defines itself in terms of civic participation, resilience, feelings of trust and safety and sense of belonging and place**	Social capital and community cohesion	Very sensitive	This sensitivity rating was determined based on consultation, indicating that this aspect of the social environment is highly important to the study area. Stakeholders indicated Heybridge was a tight-knit community where everyone knows everyone, and the community is very locally orientated.	No expected project impacts.
	Cultural diversity and heritage	Very sensitive	This sensitivity rating was determined based on the consultation through the SIA process with the community and First Peoples representatives.	No expected project impacts.
	Amenity and landscape	Very sensitive	This sensitivity rating was determined based on the consultation that indicated the high value of amenity in contributing materially to the livelihood and health of the people in the study area. They value the peace and quiet of their lifestyle. Furthermore, the town is highly visible from the highway and main entrance into town. Stakeholders highly value Blythe River, Bass Strait, surfing Sulphur Creek to Preservation Bay, and trail walking/bike riding around Chasm Creek and Dial Range Road are considered recreation areas near the project area.	**Potential negative impact:** Amenity impacts for nearby residents from noise and vibration as a result of construction activities (standard hours).
				Potential negative impact: Amenity impacts for nearby residents due to dust from construction activities.
				Potential negative impact: Amenity would likely be affected by after hours works required to undertake the 24/7 shore crossing works.
				Potential negative impact: Ongoing 24/7 operations may result in after-hours noise concerns for neighbouring residents, including the new residential development proposed at Devonshire Drive Hamlet in the Heybridge Residential Nature Reserve.
				Potential negative impact: Noise from construction activities may affect the study area's enjoyment of recreational spaces.

Social value	Attributes and indicators	Sensitivity	Justification for sensitivity rating	Potential project impacts (positive and negative)
				Potential negative impact: View of the converter stations from the southern edge of the Bass Highway and the converter stations will be a dominant view from the exit of the tioxide beach foreshore reserve, the only visitor access point and informal parking area.
	Natural resources and ecology	Very sensitive	Consultation has indicated a strong sense of community value towards the natural resources and ecology in the area and the importance of reef beds and marine life located offshore at Heybridge, such as the white belly sea eagles and penguin. As well as water contamination and waste. Community focused on circular economy to be more environmentally responsible.	**Potential negative impact:** There is the potential for increased strikes with increased construction vehicle movements, particularly with Tasmanian Devils and Spotted tail quolls. The project has the potential to impact on marine environment with the cable installation on nearshore Tasmanian seabed habitats.
Economy and livelihood **Describes how people make a living and the economic structure of the affected community.**	Employment and workforce	Very sensitive	This sensitivity rating was determined based on the consultation and baseline study that highlights the importance of employment in the region in contributing materially to livelihood. Stakeholder feedback further highlighted higher levels of unemployment and the importance of workforce training and longevity of employment or ability to transfer into another industry. There are also higher levels of youth unemployment.	**Potential positive impact:** The project's construction is expected to support the short-term employment of approximately 45% within the study area, which aligns with the values of the community in expanding local employment opportunities and industries.
				Potential positive impact: The project's construction may contribute to the demand for construction workers and attract employees away from local businesses. This may reduce the availability of these workers for other industries, and result in increased lead times for other types of construction or workforce shortages for local businesses.
				Potential positive impact: The project's operation is expected to support the employment of a small number of direct employees within the study area (less than 5).
				Potential negative impact: The project's construction will generate demand for construction workers, potentially drawing employees from other construction projects, industry sectors and local businesses. Due to this potential constraint on the workforce, there may be longer lead times for other construction projects and possible workforce shortages in the study area.
		Sensitive	This sensitivity rating was based on the proportion of jobs provided outside of the study areas and acknowledgement that it could help	**Potential positive impact:** The project's construction is expected to support the short-term employment of approximately 30% of the total construction workforce from the state and national workforce.

Social value	Attributes and indicators	Sensitivity	Justification for sensitivity rating	Potential project impacts (positive and negative)
			alleviate the constraints on local workforce availability.	
	Industry and business	Very sensitive	Consultation has indicated a strong community value around local industry and business, with it contributing materially to the livelihoods of people within the study area. Specifically, stakeholders indicated a strong focus and value on buying and supporting local businesses.	**Potential positive impact:** The project's construction will support local businesses by purchasing goods and services required to support the project's development.
	Housing affordability and availability	Extremely sensitive	A rating of extremely sensitive was determined based on the consultation that indicates this value contributes to the livelihood and health of people in the study area. Stakeholders noted there is an extreme concern for the lack of housing supply *"There are no vacancies, even the motels are full".* There are no immediate projects or developments underway to fix the problem.	**Potential negative impact:** The project's workforce may contribute to the demand for rental housing in the study area and exacerbate existing rental availability and affordability issues, disproportionately affecting very low and low-income households.
	Socio-economic dis/advantage	Very sensitive	This rating was determined to be very sensitive as SIA consultation and baseline characterisation indicated the study area faces issues has unemployment, particularly within the youth, long-term unemployed families and lack of participation in education and training.	**Potential positive impact:** The project's workforce may provide job opportunities directly and indirectly that help to help improve the socio-economic outcomes of the study area
				Potential positive impact: The project is expected to result in large taxation receipts ($762 million in total from 2025 to 2050) from the economic activity generated by Marinus Link, which will flow to local, state and the Australian Government.
Infrastructure and services **Describes the infrastructure and services that meet the needs and priorities of the affected community, including municipal and social**	Community infrastructure and services – health and wellbeing	Sensitive	A rating of sensitive was determined based on the consultation that indicates this value contributes to the livelihood and health of people in the study area.	**Potential negative impact:** The project's construction workforce may increase demand for health and emergency service providers, compromising service provision to the existing local and regional community.
	Community infrastructure – Childcare	Very sensitive	A very sensitive rating has been determined based on consultation and the baseline characterisation, which highlights the lack of availability of childcare in the study area, and it was	**Potential negative impact:** The project's construction workforce may increase demand for childcare providers, compromising service provision to the existing local and regional community.

Social value	Attributes and indicators	Sensitivity	Justification for sensitivity rating	Potential project impacts (positive and negative)
infrastructure and associated services.			determined to be a barrier to workforce participation.	
	Physical infrastructure – connectivity	Very sensitive	A rating of very sensitive was determined based on the consultation that indicates this value contributes to the livelihood and health of people in the study area. The consultation highlighted that people in the study area value their laid-back lifestyle and ease of connection within the town and surrounding areas.	**Potential negative impact:** The performance of the road network in the project area during construction creates delays for existing road users, reducing the efficiency of the study.
	Physical infrastructure – safety and capacity	Very sensitive	A rating of very sensitive was determined based on the consultation that indicates this value contributes to the livelihood and health of people in the study area. Safety and the capacity of the local road network are highly valued by the study area.	**Potential negative impact:** The capacity of the road network's road condition, design and operation of the road network to perform safely through the movement of the transformer transporter.
				Potential negative impact: Increased safety risk due to poor road lighting for shore crossing works at night
				Potential negative impact: Reduced road safety, including the road safety of vulnerable, particularly school bus routes.
People's productive capacities **Describes the skills, knowledge, and experience that are vital to survival and participation in society and its economy.**	Health – physical and mental	Very sensitive	A rating of very sensitive has been determined based on mental health contributing materially to the livelihoods of people within the study area. This was supported by the consultation feedback.	**Potential negative impact:** Concern about the project's construction period potential impacts may result in stress, anxiety and frustration for surrounding residents with construction fatigue, given night works are expected to occur seven days a week for up to 12 months and are expected to exceed average noise levels that result in sleep disturbance at the Devonshire Drive Hamlet.
				Potential negative impact: General road safety with an increase in construction vehicles and the potential to impact traffic and pedestrian safety.
				Potential negative impact: Stress, anxiety and frustration from the community due to a lack of understanding of the project's scope, cumulative impacts of projects in the areas and not seeing local benefit.
				Potential negative impact: Human health impacts from contaminated material exposure from construction disturbance from the former industrial site.

Social value	Attributes and indicators	Sensitivity	Justification for sensitivity rating	Potential project impacts (positive and negative)
				Potential positive impact: The project may add to the health and wellbeing of residents in the study area through investments in community infrastructure, the potential for downward pressure to be placed on the market regarding energy prices, as well as greater telecommunication security through expansion of the supply-side infrastructure.
				Potential negative impact: Potential human health impacts from contaminated material exposure from construction disturbance from the former industrial site.
				Potential negative impact: Transporting hazardous goods and materials to and from site.
				Potential negative impact: Concern about the project's potential impacts (e.g. EMF) may result in feelings of stress, anxiety and frustration for surrounding residents and communities.
	Education, training, and skills	Sensitive	A rating of sensitive was determined based on the consultation that indicates this value contributes to the livelihood and health of people in the study area.	**Potential positive impact:** Employment opportunities for females, youth, First Peoples and socially vulnerable groups in the regional construction workforce are available. Consultation identified opportunities for particularly to engage youth and provide new and transferable skills.

9. IMPACT ASSESSMENT

9.1 INTRODUCTION

This section provides a complete summary of the social impacts associated with the project. The broad conceptualisation of social impacts used here is consistent with the IAIA's current guidance on project-level impact assessment. This guidance provides an important insight into the scope of social impacts (Vanclay, Esteves and Franks 2015, p.2).

> *Because 'social impact' is conceived as being anything linked to a project that affects or concerns any impacted stakeholder group, almost anything can potentially be a social impact so long as it is valued by or important to a specific group of people. Environmental impacts, for example, can also be social impacts because people depend on the environment for their livelihoods and because people may have place attachment to the places where projects are being sited. Impacts on people's health and wellbeing are social impacts.*

Fundamentally, social impacts will be identified in other technical studies as dimensions of environmental or physical impacts. The section will summarise the social impacts identified in other technical study that have been produced as part of the current environmental assessment process. These are:

- Ecological Impact Assessment (Entura, 2023);
- Air Quality Assessment (Katestone, 2023);
- Noise and Vibration Assessment (Marshall Day, 2023);
- Landscape and Visual Impact Assessment (Landform Architects, 2023);
- Traffic and Transport Assessment (Stantec, 2023);
- Contaminated Land Assessment (Tetra Tech Coffey, 2023);
- EMF and EMI Assessment (JMME, 2023);
- Marine Ecology and Resource Assessment (EnviroGulf Consulting, 2023); and
- Economics Assessment (SGS Economics & Planning, 2023).

The following sections address the potential impact pathways identified across the social wellbeing framework (Table 5-2) under the following thematic headings:

- Community identity
- Economy and livelihood
- Infrastructure services
- People's productive capacity.

The environmental performance requirements from the relevant technical studies are noted and detailed in Section 9.7.

9.2 COMMUNITY IDENTITY

This section considers the project's potential to impact community identity in terms of social capital, community cohesion, cultural diversity, character, landscape and amenity, ecology and natural resources, sense of place and community safety. The elements of community identity from the social wellbeing framework that were identified as being affected are landscape and amenity, and natural resources and ecology. No potential impact pathways were identified for social capital or community cohesion.

9.2.1 Construction

The project's construction activities will result in temporary changes to the environment, which have the potential to affect the community identity of the local study area. These changes are considered in the technical studies and include:

- Noise;
- Vibration;
- Air quality;
- Landscape and visual amenity;
- Natural values and ecology; and
- Amenity and access to recreational areas.

9.2.1.1 Noise

Table 9-1 details the acoustic environment indicator levels corresponding to criteria defined by the World Health Organization that are applied to long-term/permanent sources of noise. This is a key point of context, as the acoustic environment indicator levels do not differentiate between short-term and long-term/permanent noise sources.

Table 9-1 Residential locations – outdoor acoustic environmental indicator levels

Specific environment	Critical health effect (s)	Average noise levels and time base (hours)	Max. noise levels
Outdoor living area	Serious annoyance, daytime and evening	55 dB	
Outdoor living area	Moderate annoyance, daytime and evening	50 dB	
Outside bedrooms	Sleep disturbance, window open	45 dB	60 dB

Source: World Health Organization, Guidelines for Community Noise (1999)

Standard hours

To create a baseline, the Noise and vibration assessment (Marshall Day 2023) considered the impact on existing residential developments to the east and approved residential development sites to the west and southwest. The approved residential developments include:

- the Heybridge Residential Nature Reserve, which consists of six hamlets for residential subdivision, the nearest being the Devonshire Drive Hamlet, where local roads have been constructed (the remaining hamlets set further back from the site from the Eagle Sea Estate, some of which are currently in construction); and
- a residential development located just north of the Heybridge Residential Nature Reserve on George Street.

Seven residential dwellings to the east of the site have been identified as the nearest locations in the residential area. Additional receiver points were defined from inspection of aerial imagery and the Burnie Local Provisions Schedule to represent the boundaries of the nearest approved residential development sites, the Devonshire Drive Hamlet and the George Street development.

Construction activities include:

- Converter station earthworks and infrastructure construction;
- Shore crossing construction; and
- Offsite transportation.

Construction will occur at the converter stations six days per week, between 7:00 am and 4:00 pm. The predicted noise levels are above the daytime background noise levels presented, indicating that construction noise will likely be clearly audible. Table 9-2 provides a prediction of noise levels for key construction activities and references points are existing residential dwellings and proposed residential development sites.

Construction noise levels are predicted to be highest at the proposed development within the south and southeast section of the Devonshire Drive Hamlet of the Heybridge Residential Nature Reserve, specifically at the south and southeast sections of the hamlet. This site is presently undeveloped, and the risk of construction noise impacts on future dwellings depends on the timing of construction of these dwellings (i.e. whether the hamlet will be occupied at the time when construction works are occurring).

These findings represent a common outcome for construction work in urban areas, particularly for a major infrastructure project. However, the results indicate a risk of community disturbance from construction noise, particularly given the duration of the construction program. Accordingly, mitigation and management of construction noise impacts will need to be prioritised during the development of detailed construction plans.

The noise levels are expected to reflect a common outcome for construction work in urban areas, particularly for a major infrastructure project. However, the noise assessment indicated there is a risk of community disturbance from construction noise, particularly given the duration of the construction program, which could be up to 36 months.

Accordingly, mitigation and management of construction noise impacts will need to be prioritised during the development of detailed construction plans.

Construction activities generally occur six days per week in daylight hours and adhere to the time periods specified by the EMPC Noise Regulations unless unavoidable works are required.

Table 9-2 Predicted noise construction levels

	Shore crossing HDD	Earthworks	Infrastructure
Existing residential dwellings	**51-57 dB**	**54-60 dB**	**59-66 dB**
Residential development sites	**51-61 dB**	**53-64 dB**	**58-71 dB**

Outside hours works

Construction works will be restricted to normal working hours (Monday to Saturday, 7:00 am to 4:00 pm) generally. Exceptions to this will be unavoidable works which occur infrequently (e.g. a concrete pour that needs to continue uninterrupted).

Unavoidable works relate to:

- drilling for shore crossings which are expected to involve shore crossing works occurring 24 hours per day, seven days per week, for a combined period of approximately 12 months to ensure the stability of the borehole;
- works that need to be undertaken without a break in the program, such as concrete pouring;
- delivery of essential, oversized plant or equipment;
- time-sensitive maintenance or repair of public infrastructure;
- emergency works required due to unforeseen circumstances;
- protection and control commissioning work within the switching station; and
- project activities that will be scheduled to reduce the need for night-time work.

The primary consideration for works outside normal working hours is the shore crossing works which could occur 24 hours per day, seven days per week, for a period of up to 12 months in total. MLPL advises that these works will need to be continuous to ensure the stability of boreholes.

The predicted noise levels for the shore crossing works are above the reference level corresponding to the night period EPP acoustic indicator level (see Table 9-1). The highest predicted noise levels relate to the Heybridge Residential Nature Reserve, specifically at the south and southeast sections of the Devonshire Drive Hamlet, comprising of 6 hamlets.

The predicted noise levels are based on the assumption of two shore crossing rigs operating simultaneously. However, irrespective, the margin of the predicted noise levels above the reference level for works conducted during the night indicates a risk of sleep disturbance to multiple residential properties around the project.

If approval is obtained for unavoidable works outside of normal working hours for the shore crossing, then dedicated noise mitigation and management measures will need to be developed and implemented to minimise the impact on nearby residents.

9.2.1.2 Vibration

Construction vibration was also assessed in the Noise and Vibration Assessment (Marshall Day, 2023). The assessment considered potential effects in terms of both the potential for cosmetic building damage and disturbance of human comfort. Based on the separating distances to construction activities, vibration from construction activities is not a material consideration for the project.

9.2.1.3 Air quality

The potential for air quality (dust) impact on human health was considered in the Heybridge air quality technical assessment (Katestone, 2023). The assessment considers the following construction activities:

- Demolition – any activities involved in the removal of an existing structure.
- Earthworks – covers the processes of soil-stripping, ground levelling, excavation and landscaping.
- Construction – any activities involving the provision of a new structure, its modification or refurbishment.
- Trackout – the transport of dust and dirt from the construction site onto the public road network, where it may be deposited and then re-suspended by vehicles using the road network.

The assessment considered three separate dust impacts, which are considered to be the key impacts of construction activities:

- annoyance due to dust soiling;
- the risk of health effects due to an increase in exposure to PM10; and
- harm to ecological receptors.

The assessment has shown that, without the implementation of measures to comply with EPRs, the preliminary risk of impacts (in terms of both health effects and nuisance) at nearby sensitive receptors associated with the construction of the proposed Heybridge converter station is low. Even with a low risk of impacts, dust mitigation measures should be applied during construction to minimise emissions and the potential for impact.

9.2.1.4 Landscape and visual amenity

Visual amenity was described in the SIA consultation as very important.

Most of the study area is either within the Environmental Management Zone or Bass Straight to the north. Areas with the most significant protection are landscapes within the Environmental Management Zone. They include the foreshore areas along tioxide beach and the steep-sided vegetation areas to the west of the site and east of Heybridge.

The purpose of the Environmental Management Zone is to provide for the protection, conservation and management of land with significant ecological, scientific, cultural or scenic value.

Recreational Zones include the Cuprona Football Club to the south of Heybridge and foreshore areas at Blythe Head to the north of the Bass Highway. These areas are highly valued for their natural appearance, recreational uses and biodiversity values.

Settlements and residential areas include a greater number of people than vegetation areas within the Environmental Management and Recreational Zones. Residential areas and communities include land within the General Residential Zone within Heybridge, the Landscape Conservation Areas in the elevated areas to the west of the site, and areas within the Rural Living Zones. The sensitive landscape area is confined to coastal areas and foreshore locations.

Direct impacts to these areas have been avoided by shore crossing of the proposed cables from within the boundaries of the site, under the Bass Highway and foreshore areas, to a distance of approximately 1.0 km offshore.

Topography and vegetation will screen the construction and operation of the project from many areas, including the nearby township of Heybridge, foreshore areas and reserves, and the public road network.

There may be dwellings within the township of Heybridge where the site may be visible. However, from the review of the project from publicly accessible locations, there were no obvious locations where this may occur.

Impacts on recreational locations such as foreshore areas, reserves and trails will be limited. Most ground-level construction activity will be screened or filtered by topography and existing vegetation retained along the site's eastern and northern edges or vegetation along the foreshore areas. There will be the potential elevated equipment, such as cranes, would be visible above the tree line. However, these impacts will be temporary and short in duration.

The greatest visual impact will be from the tioxide beach access road directly to the north of the site. From this location, the converter stations will be approximately 65 m to the south and visible over the train line, median-separated travelling lanes of the Bass Highway and overhead power lines.

9.2.1.5 Natural resources and ecology

Terrestrial (land-based)

The *Nature Conservation Act 2002* (NC Act) provides for the conservation and protection of the fauna, flora and geological diversity in Tasmania and for the declaration of national parks and other reserved land.

Within the study area, the following native vegetation listed under the NC Act was identified:

- Eucalyptus amygdalina coastal forest and woodland – on the shoreline crossing

- Coastal scrub – on the shoreline crossing
- Eucalyptus viminalis–*Eucalyptus globulus* coastal forest and woodland – on the converter station site

The Environment Protection and Biodiversity Conservation Act 1999 Act (EPBC Act) is Commonwealth Government legislation that protects Matters of Environmental Significance (MNES). The EPBC Act provides for Commonwealth involvement in the assessment and approval of proposed actions that could have an impact on an MNES.

The potential presence of five EPBC Act listed fauna species, including:

- Tasmanian devil
- Spotted tail quoll
- Tasmanian wedge-tailed eagle
- White throated needletail
- Fork-tailed swift
- The potential presence of the white bellied sea-eagle which is listed on the NC Act for fauna species.

No raptors have been identified in the immediate vicinity, with the last known nest site being more than 1.5 km from the site, and no raptor has been verified as present since 2006. Ongoing monitoring for raptor nests is recommended, with mitigation measures to be adopted should a nest be within 500 m or 1 km line-of-sight in the period priority to construction.

There are no significant impacts expected from the proposal on threatened ecological communities, threatened flora or threatened fauna species at either the converter station or the shore crossing site.

The only species assessed with a higher magnitude of impact were Tasmanian devils (Sarcophilus harrisii) and spotted tail quolls (Dasyurus maculatus subsp. maculatus), due to the risk of roadkill.

Marine

The shore crossings of the project's individual HVDC and optical fibre cables will be undertaken using HDD. The nearshore zone in Tasmania is defined as the zone from the low tide level at 1 m depth (i.e., end of the Tasmanian shore trench) to 2.5 km seaward where the water depth is 20 m.

The project's proposed construction activities in nearshore Tasmania include:

- Pre-lay grapnel runs for route clearance.
- Shore crossing marine exit hole to the subtidal seabed.
- Cable lay on the seabed.
- Post lay cable installation and burial in soft seabed.
- Post lay cable installation on the hard seabed.
- Post lay cable crossings of third-party seabed infrastructure.

The potential impacts of shore crossing exit hole breakthroughs in soft sediment seabed include:

Disturbance of seabed nearshore habitats.

- Changes to water quality:
- Unavoidable minor release of drilling fluids (water including bentonite clay) at shore crossing borehole breakthrough; and
- Releases of shore crossing borehole solids (cuttings and coarse sediments).

Disturbance of nearshore seabed benthic communities.

There is a low diversity and abundance of benthic fishes, macroinvertebrates and infauna present in the seabed. Jet trenching cable installation and burial impacts are expected to temporarily displace benthic and pelagic fauna and flora, including more mobile bottom-living fishes, crabs, cetaceans and pinnipeds.

9.2.1.6 Summary of potential impacts

The SIA consultation found that residents highly value the existing amenity which underpins their coastal lifestyle. The construction activities may affect the amenity and character for some residents. These activities may also temporarily impair residents' enjoyment of their properties and activities that are undertaken within them and, for some, may be experienced as disruptive or annoying.

Table 9-3 details the pre-mitigated assessment and provides justification for each magnitude rating.

Table 9-3 Pre-mitigated impact assessment on community identity values (construction)

Affected social value	Potential impact	Pre-mitigated impact assessment			
		Sensitivity	Magnitude	Impact	Justification for magnitude rating
Amenity and Landscape	**Negative:** Amenity impacts for nearby residents from Noise, vibration and visual as a result of construction activities (standard hours).	Very sensitive	Moderate	High (negative)	The moderate magnitude rating has been provided as the amenity impacts during construction will likely result in a noticeable change from baseline conditions in the study area. Noise, vibration and visual amenity changes may impact residents' enjoyment of their properties and activity undertaken within them. General construction activities are expected to be six days a week. The proportion of people affected will be notable and works are expected to occur for up to 36 months.
Amenity and Landscape	**Negative:** Amenity impacts for nearby residents due to, dust from construction activities.	Very sensitive	Minor	Moderate	The minor magnitude rating has been provided as the amenity impacts during construction will likely result in a temporary/occasional change from baseline conditions in the study area and may affect a discrete section of the community. While dust is not expected to be of significant concern, the construction will generate dust, particularly from earthworks and access track construction.
Amenity and Landscape	**Negative:** Construction activity undertaken outside of regular working hours to complete shore crossing works with noise levels exceeding sleep disturbance	Very sensitive	Major	Major (negative)	The major magnitude rating has been provided as the amenity impacts during construction will likely result in a noticeable change from baseline conditions in the study area. Noise, vibration and visual amenity changes are likely to impact residents' enjoyment of their properties and activity undertaken within them. Construction activities are expected to be undertaken 24 hrs a day, seven days a week

Affected social value	Potential impact	Pre-mitigated impact assessment			
		Sensitivity	Magnitude	Impact	Justification for magnitude rating
	measure (outside hours).				and for a period of up to 12 months. The levels exceed the noise level from WHO for sleep disturbance.
Amenity and Landscape	**Negative:** Noise from construction activities may affect the study area's enjoyment of recreational spaces.	Very sensitive	Minor	Moderate (negative)	Construction activities may be heard from neighbouring recreational areas, but given the distance from key locations, this magnitude has been rated as minor as it's likely to result in a small but measurable change from the baseline conditions and be intermittent in nature.
Natural resources and ecology	**Negative:** Impact on fauna and flora, with consideration for roadkill as a result of construction vehicle movements.	Very sensitive	Minor	Moderate (negative)	While the project is expected to not impact threatened flora or fauna, there is the potential for increased roadkill due to construction vehicle movements, particularly with Tasmania Devils and Spotted Tail Quolls.
Natural resources and ecology (marine)	**Negative:** Impact on marine environment with the cable installation on nearshore Tasmanian seabed habitats.	Very sensitive	Minor	Moderate (negative)	The minor magnitude aligns with technical studies that indicate the seabed habitats are likely to be restored within a few days or weeks and the sediment will recover within six months to a year. The studies also showed a low diversity and abundance of benthic fishes, macroinvertebrates and infauna.

9.2.1.7 Environmental performance requirements

EPRs have been recommended in the following technical studies:

- Noise and vibration assessment (Marshall Day 2023)
- Air Quality assessment (Katestone 2023)
- Landscape and visual assessment (Landform Architects 2023)
- Terrestrial ecology assessment (Entura 2023)

The proposed EPRs to manage and mitigate the impacts related to social impacts for the Marinus Link project are listed in Table 9-4 .

Table 9-4 EPRs for community identity impacts (construction)

EPR ID	Environmental Performance Requirements	Project stage
S03 Tas	**Develop and implement a community and stakeholder engagement framework** Prior to commencement of project works, develop a community and stakeholder engagement framework to outline the approach to engagement with community, stakeholders and First Peoples will be undertaken for project and by all contractors. The community and stakeholder engagement framework must: • Identify key community and stakeholder groups across the project. • Describe the approach for engaging the community, stakeholders and First Peoples. • Establish communication protocols and tools for communication. • Outline complaints policies and management procedures for recording, managing, and resolving complaints. The complaints management system must be consistent with Australian Standard AS/NZS 10002: 2014 Guidelines for Complaints Management in Organisations. Principal contractors must prepare a community and stakeholder engagement management plan in accordance with the framework for their works package. The community and stakeholder engagement framework and contractors community and stakeholder engagement management plan must be updated annually to reflect any project or stakeholder changes and improvements identified. The community and stakeholder engagement framework must be implemented during construction.	Construction

Other technical studies will also contribute to addressing EPRs and are detailed below.

Noise and Vibration

NV02: Develop and implement a construction noise and vibration management plan (CNVMP)

Air Quality

AQ01: Develop and implement a construction dust management plan.

Terrestrial ecology

EC01 Tas: Minimise vegetation removal and implement and implement vegetation protection measures

EC02 Tas: Implement measures to protect fauna

EC03 Tas: Implement measures to protect raptors

Marine

MERU01: Monitor HDD activities for the shore crossing to avoid or minimise impacts to the marine environment

MERU02: Placement of final subsea project alignment to avoid or minimise impacts on benthic habitats

9.2.1.8 Residual impact

The residual impacts are detailed later at the end of this section (see Table 9-15) and summarised briefly below:

Amenity and landscape

Following the implementation of mitigation and management measures to comply with the EPRs listed above, it is anticipated that the changes in amenity values from general construction activities and visual impacts will affect some residents during construction.

Visual amenity from construction works occurring during the day will result in an overall residual impact of **moderate** for both the impact on residential dwellings and the enjoyment of nearby recreational areas. The daytime noise is expected to be above daytime background noise but reflects common noise from construction projects in urban areas, while minor dust may also be generated from the works.

Impacts for nearby residents due to dust from construction activities will be mitigated with the development and implementation on construction dust management plan and air quality will be monitored and measured to minimise dust from construction activities will be implemented. With the implementation of EPRs, the magnitude can be reduced to **negligible**, resulting in a residual impact of **moderate.**

In relation to the noise generated by outside-of-hours work, following the application of EPRs, the impact magnitude can be reduced to negligible, resulting in a residual **high** impact . The impact can be further reduced by avoiding or limiting shore crossing works at night. At this stage, the rating reflects the noise level expected for shore crossing drilling as it would exceed the sleep disturbance level set by WHO and the noise is expected to be occur over a period of up to 12 months.

Natural resources and ecology

Following the implementation of measures to comply with EPRs, the residual impact for ecology and natural resources is **low**, as the possibility of increased roadkill because of construction vehicle movement will result in a **negligible** magnitude of impact, as no Tasmanian devil dens have been located in close proximity to the site. Mitigation measures include site inductions and toolbox talks.

Overall, there is expected to be no impact on threatened ecological communities, threatened flora or threatened fauna species at either the converter station or the shore crossing site. The EPRs require ongoing monitoring and vigilance to detect any potential change of conditions, such as a raptor nest being located within proximity to the construction works.

With respect to the marine environment, the project has avoided the reef area and there is a low diversity of benthic in these areas and it is expected that the impacts will be short term on the seabed habitat. Based on this, the magnitude can be reduced to **negligible**, resulting in a residual impact of **low**.

9.2.2 Operation

Minor maintenance activities will occur over the project's lifetime to access the underground cable and converter station. This may result in temporary changes for people in the study area, infrequent and short-term in nature.

9.2.2.1 Noise

The primary sources of operational noise associated with the project are the fixed items of the plant to be located at the converter station.

Environmental noise associated with the operation of the converter station was identified as a key design consideration during the concept development for the project, primarily due to the proximity of potential future dwellings to the west of the site at the Devonshire Drive Hamlet of the Residential Nature Reserve.

A particular consideration for these homes is their elevated position relative to the site of the project. The effect of this height difference is that barriers are not a practical noise control measure. The main noise control options for the project, therefore, comprise strategic equipment placement, selection of low noise emission plant, and the use of acoustically rated enclosures for certain equipment items.

There is a risk that tones could be audible or characterised as a low frequency. If this were to occur, the noise levels will be above the design targets at the Devonshire Drive Hamlet. This aspect of the converter station, therefore, warrants further scrutiny and review during the design and procurement of the plant.

In terms of the emergency standby generator plant, the predicted noise levels, levels will increase but will stay below the *Environment Protection Policy (Noise) 2009* acoustic environment indicator noise level.

9.2.2.2 Visual amenity

Once the converter station is complete, the community may be concerned about the visual impact from the tioxide beach access road directly to the north of the site.

9.2.2.3 Natural resources and ecology

The native vegetation communities on the sites will be maintained during the operation of the converter station. It will be necessary to manage these to minimise disturbance to these communities and reduce the potential impacts from the introduction of weeds, pests and pathogens.

9.2.2.4 Summary of potential impacts

Once constructed, the converter station may result in impacts on social values, including visual amenity and operational noise, particularly the proposed new development at Devonshire Drive. Also, the project may require maintenance activities, and ongoing monitoring of fauna (particularly for raptor nests) will be required to minimise any adverse impacts. Table 9-5 details the pre-mitigated assessment and provides justification for each magnitude rating.

Table 9-5 Pre-mitigated impact assessment on community identity values (operations)

Affected social value	Potential impact	Pre-mitigated impact assessment			
		Sensitivity	Magnitude	Impact	Justification for magnitude rating
Landscape and amenity	**Negative**: Ongoing 24/7 operations may result in after-hours noise concerns for neighbouring residents, including the new residential development proposed at Devonshire Drive Hamlet in the Heybridge Residential Nature Reserve.	Very sensitive	Moderate	High (negative)	The technical studies indicated there is the potential for operational noise to cause disturbance to proposed new residential developments. Also, there may be a tonal noise that impacts surrounding residential properties. Based on the potential of a noticeable change from baseline conditions impacting a small section of the community and the long-term impact, this has been rated as a moderate magnitude.
Landscape and amenity	**Negative**: Visual amenity: View of the converter stations from the southern edge of the Bass Highway and the converter stations will be a dominant view from the exit of the tioxide beach foreshore reserve, the only visitor access point and informal parking area.	Very sensitive	Major	Major (negative)	The converter stations will present a noticeable visual change from the baseline, affect a large section of the community and be there for the long term at, as such present a major magnitude rating.

Affected social value	Potential impact	Pre-mitigated impact assessment			
		Sensitivity	Magnitude	Impact	Justification for magnitude rating
Natural resources and ecology	**Negative**: Ongoing impacts on flora and fauna in line with maintenance activities and operation of the converter station.	Very sensitive	Negligible	Low (negative)	There is no expected impact on threatened species of flora or fauna. Therefore, the magnitude rating is negligible.

9.2.2.5 Environmental performance requirements

EPRs have been recommended in the following technical studies:

- Noise and vibration assessment (Marshall Day 2023)
- Landscape and visual assessment (Landform Architects 2023)
- Terrestrial ecology assessment (Entura 2023)

Proposed EPRs to manage and mitigate the impacts related to noise and vibration, landscape and visual amenity, and terrestrial ecology for the project are listed below.

Noise and vibration

NV05: Prepare an operational noise management plan

NV06: Prepare an operational noise compliance assessment report

Terrestrial Ecology

EC06 Tas: Operational implementation of vegetation protection measures

EC05 Tas: Operational implementation of measures to protect raptors

Landscape and visual amenity

LV01: Design converter station buildings to minimise visual impacts from public locations;

LV02: Implement measures to establish and maintain a vegetative screen for public views of above-ground components

LV03: Design of enabling works to minimise visual impacts from public locations.

9.2.2.6 Residual impact

The residual impacts are detailed later at the end of this section (see Table 9-15) and summarised briefly below:

Amenity and landscape

Following the implementation of mitigation and management measures to comply with the EPRs, it is anticipated that the changes in amenity values from general operational activities and visual impacts will affect some residents.

With the implementation of the noise management and compliance requirements, the magnitude of the noise impacts has been reduced to minor for the long-term operation of the project. However, in the short term, with the commissioning of stages, the noise will remain at a medium magnitude. Once commissioning is completed, it is expected the residual impact will be **moderate**.

The visual amenity magnitude of impact has reduced to **moderate** with the implementation of vegetative screening and the application of design elements, such as the building being painted green to blend more

sympathetically into the surrounding environment. The residual impact is **high,** and this could be further mitigated in the future should roadwork or intersection upgrade works occur.

Natural resources and ecology

The magnitude rating for flora and fauna will remain negligible and a residual impact rating of **low**.

9.3 ECONOMY AND LIVELIHOODS

This section considers the potential for the project to affect characteristics of the socio-economic environment that support affordable lifestyles. Specifically, this section examines employment, local businesses, workforce availability, and housing affordability and availability.

9.3.1 Construction

The project's construction activities will result in impacts on the study area's economy and livelihoods. These changes are considered in the technical studies and include changes to:

- Employment opportunities;
- Workforce availability;
- Industry and business;
- Skills development; and
- Availability and affordability of housing.

9.3.1.1 Employment opportunities and workforce availability

Employment will be associated with a range of activities for the construction of the project for onshore and offshore components. Local employment associated with the project will be predominantly through contractors.

The number of construction workers required during the construction phase is expected to peak at approximately 180 persons per day for the converter station.

Jobs are projected to be created across a range of local industry categories and occupational classifications. The construction phase will lead to employment for technicians and trades workers (e.g., electricians, architectural, building and surveying technicians, welders and metal fitters and machinists), labourers and machinery operators. Other opportunities include professionals (e.g., electrical engineers), tradespeople (e.g., electricians), managers and clerical and administration for operations.

Given the project is also maritime project, local professionals and tradespeople with experience in maritime settings will be required. Examples include maritime safety employees, marine preservation advisors, maritime construction and engineering experts, maritime logistics, and transportation specialists.

Employment impacts from the project will represent a benefit to the region. The workforce will be made up of local, intrastate, interstate and international personnel depending on the complexity of the work and the requirement for specialist skills and equipment.

For the Heybridge site, it is anticipated that local workers from North West Tasmania may make up approximately 45 % of the construction workforce, with 30% from elsewhere within Tasmania. Interstate resources coming from other locations within Australia may make up approximately 17 % of the workforce, with the balance international.

It is expected the Heybridge Converter Station construction will take to be up to 36 months for each stage, including approximately 12 months of shore crossing drilling to construct both of the 750 MW circuits.

According to the Economic Assessment (SGS Economics & Planning, 2023) during construction phase, the project is expected to add 1,337 FTE job-years in construction, 281 in retail trade and 184 in health care and social assistance. There is estimated to be a slight reduction in job-years in agriculture, forestry and fishing (-241), manufacturing (-25) and mining (-8) as these sectors are likely to compete for workers with the project during the construction period.

During the SIA consultation, a number of stakeholders raised concerns that there is an existing shortage of workers in the construction industry, which has flow-on impacts on residential construction/renovation and other projects in the region, and that this may be exacerbated by the project. There may also be an impact on local businesses and other key industries including agriculture, forestry and fishery, manufacturing and mining with challenges to recruit and attract employees.

9.3.1.2 Training and education

Any skill development associated with the project's employment will be an indirect impact (i.e., not undertaken for the project) and largely associated with cumulative demand for employees in the construction sector. Consequently, the construction of the project may contribute to the demand for the construction sector that may require formalised workforce training and development in the local and regional study area and for the state and national workforce.

Economic assessment (SGS Economics & Planning, 2023) outline that the University of Tasmania, TAFE Tasmania, Skills Tasmania, and the Education Department are all looking to the project and the induced renewable energy projects to provide demand for high-quality jobs and career pathways for students. These organisations are planning to shape curriculums and course offerings to create the workforce required and provide opportunities to young Tasmanians.

9.3.1.3 Industry and business

The project construction will require a range of goods and services. In addition to direct procurement by the project, some local and regional businesses will benefit from expenditure by the project's workforce. This expenditure will primarily be on local goods and services providers (e.g., grocery stores, food, and restaurant outlets).

The Economic Assessment (SGS Economics & Planning, 2023) details that the Tasmanian Renewable Energy Action Plan (TREAP) sets clear objectives and actions to transform Tasmania into a global Renewable Energy Powerhouse. Section 3.4 of the TREAP refers specifically to procurement and opportunities for local businesses. The aim is to maximise local Tasmanian business and employment opportunities for renewable energy projects. Ensuring the widest participation by Tasmanian businesses in renewable energy projects is a key priority for government. That means ensuring that renewable energy projects, where possible, will generate employment and opportunities for local businesses.

The assessment also outlines that during the construction phase of the project (2025-2029), $351 million is expected to be added to the North West Tasmania economy, while the operational phase (inclusive of half of 2029 through 2050 in the modelling) is projected to contribute a cumulative $306 million to the North West Tasmania economy. The assessment highlights that the project will result in large taxation receipts ($762 million in total from 2025 to 2050) from the economic activity generated by the project, which will flow to local, state and the Commonwealth government.

9.3.1.4 Availability and affordability of housing

Non-local Tasmania workers will seek accommodation for short periods in major townships in North West Tasmania. It is expected that the non-residential workforce will require short-term and/or rental

accommodation within proximity to the worksites to reduce fatigue limits on travel for the construction workforce.

As outlined in the baseline characteristics, the availability and affordability of rental housing in the regional study area are highly constrained. Housing affordability is a community concern and has the highest effect on vulnerable groups, such as those on a limited or fixed income.

Given the limited availability of affordable rental accommodation in the regional study area, the non-residential the project's workforce will compete for the limited accommodation available, affecting housing availability and affordability. This will affect people on very low- and- low incomes in the regional study area to a greater extent than those on moderate and higher incomes.

However, there is potential that housing could be sourced from outside of this region or that there will be an increased uptake of short-term accommodation, given the limited availability of housing. This is highly dependent on the availability of short-term accommodation at the time of construction, though this source of accommodation is likely to be limited.

9.3.1.5 Summary of impacts

An influx of workers and their families in North West Tasmania during construction will inevitably result in positive and negative impacts on the area's economy and livelihoods; this will present opportunities for investment in new or improved facilities supported by population growth and economic development.

Table 9-6 Pre-mitigated impact assessment on economy and livelihood values (construction)

Affected social value	Potential impact	Pre-mitigated impact assessment			Justification for magnitude rating
		Sensitivity	Magnitude	Impact	
Employment and workforce	**Positive:** The project's construction is expected to support the short-term employment of approximately 45 % of the total construction workforce within the local and regional study area.	Very sensitive	Minor	Moderate (positive)	The magnitude has been defined as minor as it will result in a small but measurable change from the baseline condition and will affect a small section of the community.
	Positive: The project's construction is expected to support the short-term employment of approximately 30% of the total construction workforce from the state and national workforce.	Sensitive	Negligible	Low (positive)	The magnitude has been defined as negligible as, from a broader state and national perspective, the impact will be a marginal change and only affect a small proportion of the population.

Affected social value	Potential impact	Pre-mitigated impact assessment			Justification for magnitude rating
		Sensitivity	Magnitude	Impact	
	Positive: The project may contribute to a diversity of longer-term and secure employment opportunities and skills training opportunities for residents across a range of skill levels. There might also be jobs created in related industries who benefit from the economic activity, including retail, administrative services and accommodation and food.	Very sensitive	Minor	Moderate (positive)	The magnitude has been defined as minor as it will result in a small but measurable change from the baseline condition and will affect a small section of the community.
	Negative: The project's construction will generate demand for construction workers, potentially drawing employees from other construction projects, industry sectors and local businesses. Due to this potential constraint on the workforce, there may be longer lead times for other construction projects and possible workforce shortages in the study area.	Very sensitive	Moderate	High (negative)	The proposed development will provide a range of direct and indirect employment opportunities, which should increase participation in the workforce. A moderate magnitude has been provided based on the noticeable change expected in the region with the high demand for construction workers to deliver this project and with the medium-term nature of the project.
	Positive: The project's construction	Very sensitive	Minor	Moderate (positive)	Demand for labour for the construction

Affected social value	Potential impact	Pre-mitigated impact assessment			Justification for magnitude rating
		Sensitivity	Magnitude	Impact	
	may contribute to existing and predicted demand for the construction sector, which may require formalised workforce training and development in the study area.				sector may require the training and development of the local and regional workforce, which will create a minor magnitude positive impact given the small section of the community that will be affected by this project.
Industry and business	**Positive:** The project's construction will support local businesses through the goods and services required to support the project's development.	Very sensitive	Minor	Moderate (positive)	Local and regional businesses will benefit from expenditure by the project's workforce. This expenditure will primarily be on local goods and services providers (e.g., grocery stores, food, and restaurant outlets) and, in particular, local accommodation providers. The impact will be small but measurable and will affect a small proportion of the community (business owners).
Housing affordability and availability	**Negative**: The project's workforce may contribute to the demand for rental housing in the regional study area and exacerbate existing rental availability and affordability issues, disproportionally affecting very	Very sensitive	Major	Major (negative)	Given the limited availability of rental housing in the study area, the magnitude of major has been determined as there may be a significant impact on vulnerable groups due to the increasing demand for housing and rental prices

Affected social value	Potential impact	Pre-mitigated impact assessment			Justification for magnitude rating
		Sensitivity	Magnitude	Impact	
	low- and low-income households.				likely to escalate. It may also have flow on impacts to the livelihoods of those in the business community if short term accommodation is utilised for construction workers and not made available to tourists in peak seasons.
Socio-economic dis/advantage	**Positive**: The project's workforce may provide job opportunities directly and indirectly that help to help improve the socio-economic outcomes of the study area.	Very sensitive	Negligible	Low (positive)	With the diversity of jobs on offer combined with the forecast increase in the purchase of local goods, there will be a potential economic uplift; however, this is likely to impact on a small section of the community so the magnitude is considered minor.

9.3.1.6 Environmental performance requirements

Proposed EPRs to enhance and mitigate the impacts related to employment and workforce; industry and business; socio-economic dis/advantage and housing affordability and availability for the project are listed in Table 9-7.

Table 9-7 EPRs for economy and livelihood impacts

EPR ID	Environmental Performance Requirements	Project phase
S01 Tas	**Develop and implement a social impact management plan** Prior to commencement of project works develop a social impact management plan. The plan must be developed in consultation with relevant government and local government agencies, key stakeholders, and directly affected parties to minimise social impacts across the project during construction. The social impact management plan should be location specific and address key components of the construction program, including the staging of land cable trenching and installation. The plan should be a public document and be readily available on the project website. The plan must include: • A high-level summary of community baseline conditions, a summary of the anticipated social impacts (positive and negative), potential residual impacts and consideration for cumulative impacts. The plan will be reviewed and updated to	**Construction**

EPR ID	Environmental Performance Requirements	Project phase
	address any shifts in the socio-economic environment on the baseline and impacts and consider the ongoing cumulative impacts of projects in the region. • Incorporate key strategies, their objectives for managing social impacts and the responsibilities for implementation of the strategies including the workforce and accommodation strategy (EPR S02), community and stakeholder engagement framework (EPR S03), community benefits sharing scheme (EPR S04), and industry participation plan (EPR S05). • An employment and training performance strategy with a focus on providing local opportunities • Describe the requirement for first response medical capabilities on-site for both local and non-local employees and contractors to minimise the impact on local health services. • Outline of a protocol to be developed for engaging with community and managing social impacts during an emergency that must be developed in consultation with local emergency response providers and referenced in the project's emergency response plan. The social impact management plan must be implemented during construction.	
S02 Tas	**Develop and implement a workforce and accommodation strategy** Develop a workforce and accommodation strategy to address the potential social impact from the project's workforce and accommodation requirements during construction. The strategy must: • Be developed in consultation with government, industry and other relevant providers. • Include a protocol for the identification and management of impacts due to accommodation requirements. • Address cumulative impacts on accommodation due to other large-scale construction and infrastructure projects in the identified local study areas. The outcomes of the strategy must be considered during construction planning.	**Construction**
S03 Tas	**Develop and implement a community and stakeholder engagement framework** Prior to commencement of project works, develop a community and stakeholder engagement framework to outline the approach to engagement with community, stakeholders and First Peoples will be undertaken for project and by all contractors. The community and stakeholder engagement framework must: • Identify key community and stakeholder groups across the project. • Describe the approach for engaging the community, stakeholders and First Peoples. • Establish communication protocols and tools for communication. • Outline complaints policies and management procedures for recording, managing, and resolving complaints. The complaints management system must be consistent with Australian Standard AS/NZS 10002: 2014 Guidelines for Complaints Management in Organisations. Principal contractors must prepare a community and stakeholder engagement management plan in accordance with the framework for their works package. The community and stakeholder engagement framework and contractors community and stakeholder engagement management plan must be updated annually to reflect any project or stakeholder changes and improvements identified. The community and stakeholder engagement framework must be implemented during construction.	**Construction** **Operation**
S05 Tas	**Develop an industry participation plan** Prior to the commencement of project works, develop an industry participation plan to integrate First Peoples, females, youth and socially vulnerable groups into the project workforce. The purpose of industry participation plan is to stimulate entrepreneurship, business and economic development, providing First Peoples and vulnerable groups with more opportunities to participate in the economy. The plan must: • Set out an employment and supplier-use participation target within the project's locality.	**Construction**

EPR ID	Environmental Performance Requirements	Project phase

	• Outline the project's social procurement policies and local procurement policies considering each component and phase of construction.
	• Be developed in conjunction with the requirements under the Indigenous Employment and Supplier-use Infrastructure Framework (February 2019).
	• Identify a range of potential opportunities for job-seekers and businesses to be involved in the project across the construction supply chain.
	  • Set employment targets with reference to the local First Peoples working age population within the project area and consistent with the 'locals first principle'.
	  • Identify opportunities for females, youth and other socially vulnerable groups to be involved in the project workforce.
	The plan must be implemented during construction and operation.	

9.3.1.7 Residual impact

The residual impacts are detailed later at the end of this section (see Table 9-15) and summarised briefly below:

Employment and workforce

The project's construction is expected to support the short-term employment of approximately 45 % of the total construction workforce within the local and regional study area. The residual magnitude of impact is unchanged and the measures in place to support the short-term employment of the workforce from the local and regional study area will have a positive residual impact of **moderate**.

The project's construction is expected to support the short-term employment of approximately 30% of the total construction workforce from the state and national workforce. The residual magnitude of impact is unchanged and existing measures in place to support the short-term employment of the project's construction workforce from the state, national and international workforce will have a positive residual impact of **low**.

The project may contribute to a diversity of longer-term and secure employment opportunities and skills training opportunities for residents across a range of skill levels. The residual magnitude of impact is unchanged. The demand for labour in the construction sector may require the training and development of the local and regional workforce, which has the potential to create a positive residual impact of **moderate**.

The project will also increase the demand for employees and potentially drawing them from other industries and local sectors. Whilst a workforce and accommodation strategy will be prepared for the project, the community expressed concerns about an existing workforce shortage for construction and that this shortage would increase with the number of energy projects being proposed in northern Tasmania including the project. The residual magnitude of moderate remains unchanged resulting in a residual **high** impact.

Industry and business

Through the application of the industry participation plan for all its own corporate purchases and through the contracts and tenders it manages, the residual magnitude of impact has increased to moderate and will create a positive residual impact of **high**.

Housing affordability and availability

The project's non-residential and short-term construction workforce will contribute to the demand for rental housing in the regional study area and exacerbate existing rental availability and affordability issues, disproportionally affecting very low- and low-income households. The implementation of the \workforce and accommodation strategy could reduce the residual magnitude of impact to moderate and lead to a negative residual impact that is **high**.

Socio-economic dis/advantage

Application of the industry participation plan, alongside the indirect employment opportunity, may create a **moderate** positive impact.

9.3.2 Operation

The converter stations will not be manned 24/7 and will only be attended to during normal working hours (Monday to Saturday, 7:00 am to 4:00 pm). Outdoor spaces will be unlit at night unless activated by a security system or sensors. Operation and maintenance vehicles entering and exiting the converter station site per day will be a maximum of five light vehicles per day (for operational employees). On some days, it may be as low as two vehicles per day.

Given that the operational phase employment is expected to be minimal, the project workforce will not result in workforce draw or affect workforce availability or availability or affordability of housing. Therefore, this has not been considered further.

Summary of the potential impact

Fewer than five employees will be required to help operate the converter stations. There will also be planned outages up to twice a year which will involve 15-20 employees for up to two weeks. Revenue of an estimated $762 million will flow on to local, state and federal government over the anticipated 25 years of operations (SGS Economics & Planning, 2023).

Table 9-8 Pre-mitigated impact assessment economy and livelihoods (operations)

Affected social value	Potential impact	Pre-mitigated impact assessment			Justification for magnitude rating
		Sensitivity	Magnitude	Impact	
Employment and workforce	**Positive**: Jobs during operations	Very sensitive	Negligible	Low (positive)	Fewer than five employees will be required to help operate the converter stations and therefore, a mitigation of negligible has been provided.
Industry	**Positive**: The project is expected to result in large taxation receipts ($762 million in total from 2025 to 2050) from the economic activity generated by Marinus Link, which will flow to local, state and the Australian Government.	Very sensitive	Moderate	High (positive)	Economic prosperity is of significance to the study area and the contribution of revenue over a significance duration to national, state and local governments will result in a magnitude rating of moderate.

No environmental performance requirements, and therefore, the residual impact rating remains unchanged.

9.4 COMMUNITY INFRASTRUCTURE AND SERVICES

As detailed in Section 7.5.1, the project's anticipated construction workforce is expected to peak at approximately 180 persons per day for converter stations. It is expected that around 45 % of the workforce will be sourced locally within North West Tasmania. The remainder of the workforce is expected to be sourced from other areas of Tasmania and from outside of Tasmania.

With the increased workforce, this is likely to result in impacts on the study area's community infrastructure and services, including:

- Community health and emergency services
- Childcare availability
- Traffic and transport.

9.4.1 Construction

The project's construction activities will result in temporary changes to the environment, which have the potential to affect the community services and infrastructure values of the local study area. These changes are considered in the technical studies and include changes to:

- Access to healthcare and emergency services;
- Access to childcare services; and
- Traffic and transport.

9.4.1.1 Community health and emergency services

An increase in population has the potential to result in an increase in demand for health and emergency services. Where this demand is greater than the capacity of these services, service provision for the existing community may be compromised.

It is probable that the increased demand for GPs associated with the non-resident workforce may result in the referral of more patients to hospitals and health centres within the region to help meet the demand. This will increase the demand for existing service provision. It is expected that demand from the non-resident workforce for health services will be directed towards regional centres.

Hospital services may be required in the event of an accident. Any increase in demand associated with potential accidents or other health services will be directed towards a regional service centre. Consequently, the increase in demand could affect regional service provision.

Should an accident occur, local emergency services (e.g., ambulance, police and fire services) will be required to respond. In some parts of the regional study area, there is limited emergency services infrastructure and personnel. This means that when an ambulance is occupied, it may be the only ambulance in that area. Country Fire Association (CFA) services are staffed entirely by volunteers; any additional impost upon the demands upon volunteers may render the service unmanageable. This indicates that additional demand by the project(s) may place additional stress on the capacity of emergency services.

In summary, the project's non-resident workforce will result in a small population increase during the construction phase, and this may have an associated short-term increase in demand for health and emergency services. At the emergency services level, particularly in rural areas, capacity is limited or affected by high levels of existing demand.

9.4.1.2 Childcare provision

An increase in population has the potential to result in an increase in demand for childcare services. Where this demand is greater than the capacity of these services, service provision for the existing community may be compromised. Feedback from a local government association during the SIA consultation indicated that a barrier to workforce participation is a result of "limited and low-quality childcare options".

A recent report by Victoria University: *Deserts and Oasis: How accessible is childcare in Australia* defines a childcare desert as a populated area where there are more than three children per childcare place, or less

than 0.333 places per child aged four or under. In the study area, there is a shortage of childcare, with 0.2 spaces available for every child aged under four, making it a desert for children.

9.4.1.3 Traffic and transport

The stakeholders interviewed for this SIA expressed concern that the traffic network may be affected by additional use during the construction phase of the project. Concerns were raised about the capacity of the road network to cope with the movement of construction vehicles.

Connectivity

Traffic and transport assessment (Stantec, 2023) indicates that both Minna Road and the Bass Highway will continue to operate well below capacity with the addition of project-generated traffic. There are two intersections primarily impacted by site-generated traffic to access the site. The intersections will operate in accordance with industry standards. The site access point operates well under its capacity in the AM and PM peak hours. However, the study did note that during construction scenarios, the delay increases at the Minna Road approach; however, the intersection continues to operate well under capacity.

Safety and capacity

An increase in the number of heavy vehicles on the road network may give rise to perceptions of reduced road safety for users and wide loads may result in an increase in travel times. It is expected that all bridges within the study can accommodate vehicles up to and including a 19 m semi-trailer, given they are all contained within the approved B double road network. Traffic and transport assessment (Stantec, 2023) also provides recommendations for any road or intersection upgrades.

Pedestrian activity within the study area and along the construction traffic routes is primarily limited to the townships. The heavy movements through townships are primarily constrained to the Bass Highway and are therefore operating in line with expectations and existing use. Vehicle movements may occur through smaller townships in the event of a road closure on the Bass Highway. When construction vehicles pass through these locations, there is potentially an increased risk of crashes with a more significant consequence due to the increased number of pedestrians that are present within the townships.

Transformer

The transformer transporter is a 6 m high and approximately 130 m long vehicle. The movement of the transformer transporter will require permanent traffic management personnel to supervise. This will include operations to block traffic during periods of time when the transformer transporter is travelling down the centre of the carriageway or completing turning movements. Moving warnings will be provided for approaching vehicles that a large, slow-moving vehicle is on the approach.

9.4.1.4 Summary of potential impacts

The SIA consultation found that residents highly value their laid-back lifestyle, which includes easy connection and no delays. The consultation highlighted that community services are in demand and childcare, in particular, is low on vacancies.

Therefore, during construction activities, the project may impact community services and traffic infrastructure for residents. Table 9-9 details the pre-mitigated assessment and provides justification for each magnitude rating.

Table 9-9 Pre-mitigated impact assessment on community infrastructure and services

Affected social value	Potential impact	Pre-mitigated impact assessment			Justification for magnitude rating
		Sensitivity	Magnitude	Impact	
Health and wellbeing	**Negative:** The project's construction workforce may increase demand for health and emergency service providers, compromising service provision to the existing local and regional community.	Sensitive	Moderate	Moderate (negative)	The project's non-resident workforce will result in a small population increase during the construction phase, and this may have an associated short-term increase in demand for health and emergency services. At the emergency services level, particularly in rural areas, capacity is limited or affected by high levels of existing demand. The moderate magnitude is based on the criteria that there will be a noticeable change, it will affect a notable proportion of the community and it will be medium term (longer than six months).
Childcare	**Negative:** The project's construction workforce may increase demand for childcare providers, compromising service provision to the existing local and regional community.	Very sensitive	Moderate	High (negative)	The project's non-resident workforce will result in a small population increase during the construction phase and this may have an associated short-term increase in demand for childcare services. This has been flagged as a present issue during consultation.
Connectivity	**Negative:** The performance of the road network in the project area during construction creates delays for existing road users, reducing the efficiency of in the study.	Very sensitive	Minor	Moderate (negative)	The level of traffic generated on the local road network will increase the relative traffic in the area. This minor magnitude reflects a small but measurable change from the baseline and that it affects a small but notable proportion of people within the community. Also, it will be intermittent in nature.
Safety and capacity	**Negative:** Disruption from the movement of the transformer transporter will have on the road network's condition, design and operation to perform safely.	Very sensitive	Major	Major (negative)	This rating is of a major magnitude in alignment with the Traffic and Technical study, given the considerable change from baseline conditions and could affect a large number of people. However, it is a one-off activity.
	Negative: General road safety with an increase in construction vehicles and the potential to impact traffic and pedestrian safety.	Very sensitive	Moderate	High (negative)	A moderate magnitude has been allocated based on a noticeable change to the baseline, the potential to affect notable proportions of the community.

Affected social value	Potential impact	Pre-mitigated impact assessment			Justification for magnitude rating
		Sensitivity	Magnitude	Impact	
	Negative: Reduced road safety, including the road safety of vulnerable, particularly school bus routes.	Very sensitive	Moderate	High (negative)	The rating of high was provided based on the movement of construction vehicles on the alignment of school bus routes.
	Negative: Increased safety risk due to poor road lighting for shore crossing works at night.	Very sensitive	Major	Major (negative)	This rating has been determined based on the potential consequences on health and livelihood and the long-term effect an accident could cause.

9.4.1.5 Environmental performance requirements

EPRs have been recommended in the following technical studies:

- Traffic and transport assessment (Stantec, 2023).

Proposed EPRs to manage and mitigate the impacts related to community services and infrastructure for the project are listed in Table 9-10.

Table 9-10 EPRS for community infrastructure and services

EPR ID	Environmental Performance Requirements	Project phase
Health, emergency services and childcare services		
S01 Tas	**Develop and implement a social impact management plan** Prior to commencement of project works develop a social impact management plan. The plan must be developed in consultation with relevant government and local government agencies, key stakeholders, and directly affected parties to minimise social impacts across the project during construction. The social impact management plan should be location specific and address key components of the construction program, including the staging of land cable trenching and installation. The plan should be a public document and be readily available on the project website. The plan must include: • A high-level summary of community baseline conditions, a summary of the anticipated social impacts (positive and negative), potential residual impacts and consideration for cumulative impacts. The plan will be reviewed and updated to address any shifts in the socio-economic environment on the baseline and impacts and consider the ongoing cumulative impacts of projects in the region. • Incorporate key strategies, their objectives for managing social impacts and the responsibilities for implementation of the strategies including the workforce and accommodation strategy (EPR S02 Tas), community and stakeholder engagement framework (EPR S03 Tas), community benefits sharing scheme (EPR S04 Tas), and industry participation plan (EPR S05 Tas). • An employment and training performance strategy with a focus on providing local opportunities • Describe the requirement for first response medical capabilities on-site for both local and non-local employees and contractors to minimise the impact on local health services. • Outline of a protocol to be developed for engaging with community and managing social impacts during an emergency that must be developed in consultation with local	Design

EPR ID	Environmental Performance Requirements	Project phase
	emergency response providers and referenced in the project's emergency response plan. The social impact management plan must be implemented during construction.	
All (advanced notification, understanding and impacts on community infrastructure and services)		
S03 Tas	**Develop and implement a community and stakeholder engagement framework** Prior to commencement of project works, develop a community and stakeholder engagement framework to outline the approach to engagement with community, stakeholders and First Peoples will be undertaken for project and by all contractors. The community and stakeholder engagement framework must: • Identify key community and stakeholder groups across the project. • Describe the approach for engaging the community, stakeholders and First Peoples. • Establish communication protocols and tools for communication. • Outline complaints policies and management procedures for recording, managing, and resolving complaints. The complaints management system must be consistent with *Australian Standard AS/NZS 10002: 2014 Guidelines for Complaints Management in Organisations*. Principal contractors must prepare a community and stakeholder engagement management plan in accordance with the framework for their works package. The community and stakeholder engagement framework and contractors community and stakeholder engagement management plan must be updated annually to reflect any project or stakeholder changes and improvements identified. The community and stakeholder engagement framework must be implemented during construction.	Construction Operation

Other technical studies will also contribute to addressing EPRS and are detailed below.

Traffic and transport

T01: Develop a Transport Management Plan.

9.4.1.6 Residual impact

The residual impacts are detailed later at the end of this section (see Table 9-15) and summarised briefly below**.**

Health and wellbeing and childcare services

The impact on health care and emergency service providers is expected to be reduced to a minor impact due to the short-term increase in demand for services and results in a negative residual impact of **low.** The social impact management plan will provide an emergency response plan developed in consultation with local emergency response providers.

There is no change to the residual magnitude of the impact on childcare services in the study area due the already constrained supply of services and the rating stays as a negative residual rating of **high**.

Traffic and transport

The technical study has indicated that no arterial roads identified will exceed their capacity and the implementation of the TMP will provide further measures to minimise and monitor any traffic impacts. As a result the magnitude has reduced to negligible and the residual impact to **low**.

With respect to the capacity of the road network and its condition, traffic management will be used during the movement of the transformer transporter, which is a one-off movement. This will reduce the residual magnitude to minor and result in a negative residual impact of **low**.

Reduced road safety of vulnerable, particularly school children, in line with the EPR construction vehicles will not travel on school bus routes during pick-up /drop-off times and therefore the residual magnitude has reduced to negligible, and the rating is a negative residual of **low**.

General road safety with the increase in construction vehicles will be managed and monitored as part of the transport management plan. As a result, the residual magnitude has reduced to minor with an over residual impact of **moderate**.

Increased safety risk due to poor road lighting for shore crossing works at night will be mitigated by the provision of temporary lighting at required intersections this will reduce the magnitude to **minor** and a **moderate** residual impact rating.

9.4.1 Operation

No expected impacts during operations.

9.5 PEOPLE'S PRODUCTIVE CAPACITY

The uncertainty associated with transmission line developments can create fears and concerns about the impact of the proposed change on communities and the environment in which they live. The concerns (described below) that were expressed by community members in the SIA consultation and the community engagement are consistent with those identified in the literature about transmission line placement (see, for instance, Elliott and Wadley 2012 and Wadley et al. 2019).

Potential impacts on wellbeing associated with the planning, construction and operation phases of the project include health and wellbeing and skills development and training.

9.5.1 Construction

People's productivity and livelihoods describe the skills, knowledge, and experience that are vital to survival and participation in society and its economy. This section considers the impacts of the project on the study area. Changes are considered in the technical studies that relate to health and wellbeing (mental and physical) and skills development and training.

9.5.1.1 Health and wellbeing

Noise

As outlined in section 9.2.1.2 noise from construction will occur at the converter stations six days per week, between 7:00 am and 4:00 pm. The predicted noise levels are above the daytime background noise levels presented, indicating that construction noise will likely be clearly audible. The noise levels are expected to reflect a common outcome for construction work in urban areas, particularly for a major infrastructure project. However, the results indicate the noise assessment indicated there is a risk of community disturbance from construction noise, particularly given the duration of the construction program, which could be up to 36 months.

The primary consideration for works outside normal working hours is the shore crossing shore crossing works which could occur 24 hours per day, seven days per week, for a period of up to 12 months in total. MLPL advises that these works will need to be continuous to ensure the stability of the boreholes. The margin of the predicted noise levels above the reference level for works conducted during the night indicates a risk of sleep disturbance to multiple residential properties around the project.

These ongoing disturbances may result in mental and health impacts on residents in neighbouring residential areas.

EMF impacts

During the SIA consultation, concerns regarding the potential for electric and magnetic fields (EMF) to impact the health of nearby residents were expressed. Independent scientific studies examining the potential health effects of exposure to EMF have been undertaken around the world for more than 50 years. Based on the findings of credible public health authorities, the body of scientific research on EMF does not establish that exposure to EMF at levels below the recognised guidelines cause or contribute to any adverse health effects (Energy Networks Association 2016). WHO has also undertaken extensive research into EMF and has advised that current evidence does not confirm the existence of any health consequences from exposure to low levels of EMF. However, it is recognised that some members of the public attribute a range of psychological reactions to exposure to EMF, including headaches, anxiety, suicide and depression (World Health Organisation 2021).

The maximum calculated EMF at the Heybridge, Driffield and Hazelwood converter stations will be below the reference levels for people, livestock and wildlife at the property boundary for each site. The operating impacts of the converter stations on human health, livestock and wildlife will therefore be negligible. Mitigation and controls will not be required at the installations.

The maximum calculated EMF along the subsea HVDC cables will be below the reference levels for people throughout the study area. It was concluded from the subsea cable impact assessment that the calculated field levels are below the applicable reference levels, and there will be no operating impacts on human health. Mitigation and controls will not be required at the installations. Similarly, the subsea cables will not impact the normal functioning of marine vessels and systems in the study area.

Clean energy development

The community's concerns regarding projects in the study area have been emphasised in both the SIA consultation and project consultation outcomes. Among these projects, the North Transmission Upgrades Project, which will connect to Marinus Link, is a significant cause for concern among the community, especially for the landowners directly affected by it. Our understanding is the community view the projects as one and the same and, therefore, may be higher levels of anxiety, stress and frustration from the community as Marinus Link progresses.

9.5.1.2 Skill development and training

During consultation for this SIA, concern was raised about the skill capacity of the residential workforce to meet the project demand for workers.

In the absence of any affirmative action undertaken by the industry sector or state government, First People, women and youth will continue to experience high levels of unemployment in the region, despite the significant opportunities presented by the cumulative increase in demand for skilled labour from this and the other energy-related projects.

9.5.1.3 Summary of potential impacts

The SIA consultation found that residents highly value their quiet coastal lifestyle; however, it also highlighted higher levels of youth unemployment and barriers to workforce participation. The project may result in some negative impacts on people's productive capacities as well as benefits to those more vulnerable with a range of employment opportunities and potential training and education.

Table 9-11 details the pre-mitigated assessment and provides justification for each magnitude rating.

Table 9-11 Pre-mitigated impact assessment on people's productive capacity values

Affected social value	Potential impact	Pre-mitigated impact assessment			
		Sensitivity	Magnitude	Impact	Justification for magnitude rating
Physical and mental health	**Negative:** Construction fatigue causing mental and health impacts, given night works, are expected to occur seven days a week for up to 12 months and are expected to exceed average noise levels that result in sleep disturbance at the Devonshire Drive Hamlet. While standard works will be ongoing for up to 36 months, six days a week**.**	Very sensitive	Major	Major (negative)	The magnitude rating of major has been determined based on the considerable change to baseline conditions and potential impact on health and livelihoods due to the duration of 36 months.
	Negative: Lack of understanding of the project's scope, cumulative impacts of projects in the areas and not seeing local benefit. The reliance of Marinus Link on the North Transmission Upgrades.	Very sensitive	Major	Major (negative)	A magnitude rating of high has been determined based on it affected a large group of people across the community and the longevity of the project.
	Negative: Potential human health impacts from contaminated material exposure from construction disturbance from the former industrial site.	Very sensitive	Moderate	High (negative)	In line with the technical study, a rating of moderate magnitude has been determined as it will potentially affect a notable proportion of people in the community and be a noticeable change from baseline conditions.
	Negative: Transporting hazardous goods and materials.	Very sensitive	Severe	Major (negative)	In line with the technical study, a rating of severe magnitude has been determined as it will be a fundamental change from baseline conditions and would have a permanent impact.
Education, training, and skills	**Positive:** Employment opportunities for First People, females, youth and socially vulnerable groups in the regional construction workforce are made available.	Very sensitive	Negligible	Low (positive)	Given the marginal change from baseline conditions and the effect of a small number of individuals, a magnitude of negligible has been assigned.

9.5.1.4 Environmental requirements

EPRs have been recommended in the following technical studies:

- Noise and vibration assessment (Marshall Day, 2023);

- Traffic and Transport Assessment (Stantec, 2023).

Proposed EPRs to manage and mitigate the impacts related to noise and vibration, landscape and visual amenity, community safety and terrestrial ecology for the project are listed in Table 9-12.

Table 9-12 EPRs for people's productivity capacity values (construction)

EPR ID	Environmental Performance Requirements	Project stage
S03 Tas	**Develop and implement a community and stakeholder engagement framework** Prior to commencement of project works, develop a community and stakeholder engagement framework to outline the approach to engagement with community, stakeholders and First Peoples will be undertaken for project and by all contractors. The community and stakeholder engagement framework must: • Identify key community and stakeholder groups across the project. • Describe the approach for engaging the community, stakeholders and First Peoples. • Establish communication protocols and tools for communication. • Outline complaints policies and management procedures for recording, managing, and resolving complaints. The complaints management system must be consistent with *Australian Standard AS/NZS 10002: 2014 Guidelines for Complaints Management in Organisations*. Principal contractors must prepare a community and stakeholder engagement management plan in accordance with the framework for their works package. The community and stakeholder engagement framework and contractors community and stakeholder engagement management plan must be updated annually to reflect any project or stakeholder changes and improvements identified. The community and stakeholder engagement framework must be implemented during construction.	**Construction** **Operation**
S04 Tas	**Develop and implement a community benefits sharing scheme** Prior to the commencement of project works, develop a community benefits sharing scheme in consultation with communities and First Peoples in the local study area. The community benefits sharing scheme should be developed having regard to *Renewable energy development in Tasmania: A guideline for community engagement, benefit sharing and local procurement (Draft 2022, Department of State Growth).*	**Construction** **Operation**
S05 Tas	**Develop an industry participation plan** Prior to the commencement of project works, develop an industry participation plan to integrate First Peoples, females, youth and socially vulnerable groups into the project workforce. The purpose of industry participation plan is to stimulate entrepreneurship, business and economic development, providing First Peoples and vulnerable groups with more opportunities to participate in the economy. The plan must: • Set out an employment and supplier-use participation target within the project's locality. • Outline the project's social procurement policies and local procurement policies considering each component and phase of construction. • Be developed in conjunction with the requirements under the Indigenous Employment and Supplier-use Infrastructure Framework (February 2019). • Identify a range of potential opportunities for job-seekers and businesses to be involved in the project across the construction supply chain. • Set employment targets with reference to the local First Peoples working age population within the project area and consistent with the 'locals first principle'.	**Construction**

EPR ID	Environmental Performance Requirements	Project stage
	• Identify opportunities for females, youth and other socially vulnerable groups to be involved in the project workforce. The plan must be implemented during construction and operation.	

Other technical studies will also contribute to addressing EPRs and are detailed below.

Noise and Vibration

NV02: Develop and implement a construction noise and vibration management plan (CNVMP)

Traffic and Transport

T01: Develop a Transport Management Plan.

Contaminated Land

CL01: Manage excavated soil, contaminated soils and potential risks to the environment due to contamination during construction.

CL02: Develop and implement acid sulfate soils (ASS) management controls

CL04: Develop and implement measures to manage potential contamination impacts in operation

9.5.1.5 Residual impact

The residual impacts are detailed later at the end of this section (see Table 9-15) and summarised briefly below:

Physical and mental health

Working hours, will be critical in helping to mitigate this impact. The residual rating has through the implementation of measures to comply with EPRs, the noise impacts may be mitigated to some extent. Should residents be adversely affected for prolonged periods due to out-of-hours works, respite or compensation may be offered in accordance with the CNVMP. Furthermore, communication protocols outlining the situations and types of activities which will warrant notification of neighbouring residents in advance of the work occurring, including unavoidable works outside of normal reduced from major to **high.**

Ongoing project engagement and communications will help to dispel concerns and provide clarity on the project scope. Additionally, providing opportunities for the community to help shape local benefits will be key in mitigating this impact and reducing it from major to a **high** residual impact.

With respect to the potential for human health impacts from exposure to contaminated materials, the EPRs will help mitigate these impacts and reduce the residual rating from a high rating to a residual rating of **moderate.**

With regards to transporting hazardous materials, the implementation of a transport management plan will ensure adherence to requirements and reduce the impact of this activity to a residual rating of **moderate**.

Education, training, and skills

Through the adoption of the recommended measures to comply with EPRs, there is the opportunity to increase employment opportunities and therefore increase the magnitude of this potential benefit. This will see a positive residual rating increased to **moderate**.

9.5.1 Operation

9.5.1.1 Potential impacts – health and wellbeing

From a positive impact perspective, SGS Economics & Planning, 2023 anticipates the delivery of the project will generate economic activity across the regions and states and has the potential to contribute to a higher standard of living, wages and employment opportunities. Among other anticipated benefits to the community are potential lower energy and telecommunications costs.

In terms of lower energy (electricity) costs for consumers, the project assists in securing cost-effective Tasmanian dispatchable generation as the national energy market transitions. The capacity introduced by the project could assist to exert downward pressure on wholesale electricity prices by facilitating the replacement of marginal and coal-powered generators with additional dispatchable capacity.

Under the current circumstances of high and escalating energy costs, downward pressure is a relevant and material benefit to residents and the community. In terms of telecommunications, the project will also expand opportunities for optical fibre routes across the Bass Strait, supporting greater telecommunication diversity and security between Tasmania and mainland Australia. Such an outcome may also translate into opportunities for local innovators and entrepreneurs.

However, there may be ongoing concerns regarding EMF exposure and noise from the converter station during operations. There is a risk that during operations of the converter station, tones could be audible or characterised as a low frequency. If this were to occur, the noise levels will be above the design targets at the Devonshire Drive Hamlet.

As outlined in 9.2.2.1, these impacts may result in increased stress and anxiety for people in the study area, particularly for residential developments in close proximity to the Heybridge converter station.

Table 9-13 Pre-mitigated impact assessment on people's productive capacity (operations)

Affected social value	Potential impact	Pre-mitigated impact assessment			Justification for magnitude rating
		Sensitivity	Magnitude	Impact	
Health and wellbeing	**Negative:** Concern about the project's potential impacts (e.g. EMF, operational noise) may result in feelings of stress, anxiety and frustration for surrounding residents and communities	Very sensitive	Moderate	High (negative)	A high rating has been assigned based on the potential for a noticeable change to the baseline conditions and impact on health and livelihood. Also, the effect will potentially be long term.
Operation	**Positive:** The project may add to the health and wellbeing of residents in the study area through investments in community infrastructure, the potential for downward pressure to be placed on the	Very sensitive	Moderate	High (positive)	The very sensitive rating has been determined by consultation and the baseline which rates health and wellbeing as very sensitive. Also, cost of living pressures is currently a considerable concern.

Affected social value	Potential impact	Pre-mitigated impact assessment			Justification for magnitude rating
		Sensitivity	Magnitude	Impact	
	market regarding energy prices, as well as greater telecommunication security through expansion of the supply-side infrastructure.				

Other technical studies will contribute to addressing EPRS and are detailed below.

Noise and Vibration

NV05: Prepare an operational noise management plan

9.5.1.2 Residual impact

With the implementation of measures to comply with EPRs, the residual magnitude of impact remains high and therefore a residual rating of **high** remains for the potential noise and EMF concerns.

9.6 DECOMMISSIONING

The operational lifespan of the project is anticipated to be a minimum 40 years. At the end of its operational lifespan, the project will either be decommissioned or upgraded to extend the operational lifespan.

In the event that the project is decommissioned, all above-ground infrastructure will be removed, and associated land returned to the previous land use or as agreed with the landowner. All underground infrastructure will be decommissioned in accordance with the requirements of the time. This may include removal of infrastructure or some components remaining underground where it is safe to do so. It is generally considered less impactful from an air quality perspective to leave underground and submarine infrastructure in place rather than remove it. All metal removed will be recycled and concrete broken down for recycling or disposal.

As a result of the timescale and the flexible nature of decommissioning at this stage it has been concluded that a detailed assessment of decommissioning risk will be conducted at the end of the project life when decommissioning is confirmed.

9.7 ENVIRONMENT PERFORMANCE REQUIREMENTS

A fundamental shift has occurred in the last ten years in the domain of focus for SIA. Current leading practice, both in Australia and internationally, is for the adoption and implementation of SIMPsfor large-scale projects in the infrastructure and resources space (Esteves, Franks and Vanclay, 2012; Franks and Vanclay, 2013; Vanclay, Esteves and Franks 2015). This management tool better facilitates the monitoring and management of predicted social impacts but also permits a proactive approach to unintended consequences and residual impacts. A further leading practice tool is ongoing project community and stakeholder engagement.

Technical studies that have informed this assessment outlined a variety of mitigation measures to support the EPRs. For this assessment, EPRs have been identified that will support in mitigating the impacts of the project; however, no standalone mitigation measures have been identified. The purpose of adhering to the

EPRs is to minimise the project's impacts and the risk of harm to the environmental, social and cultural values to within reasonable limits having regard to contextual factors and the practical delivery of the project.

The EPRs listed in Table 9-14 will be critical to reduce the social impacts of the project.

Table 9-14 Environmental Performance Requirements

EPR ID	Environmental Performance Requirements	Project phase
S01 Tas	**Develop and implement a social impact management plan** Prior to commencement of project works develop a social impact management plan. The plan must be developed in consultation with relevant government and local government agencies, key stakeholders, and directly affected parties to minimise social impacts across the project during construction. The social impact management plan should be location specific and address key components of the construction program, including the staging of land cable trenching and installation. The plan should be a public document and be readily available on the project website. The plan must include: • A high-level summary of community baseline conditions, a summary of the anticipated social impacts (positive and negative), potential residual impacts and consideration for cumulative impacts. The plan will be reviewed and updated to address any shifts in the socio-economic environment on the baseline and impacts and consider the ongoing cumulative impacts of projects in the region. • Incorporate key strategies, their objectives for managing social impacts and the responsibilities for implementation of the strategies including the workforce and accommodation strategy (EPR S02 Tas), community and stakeholder engagement framework (EPR S03 Tas), community benefits sharing scheme (EPR S04 Tas), and industry participation plan (EPR S05 Tas). • An employment and training performance strategy with a focus on providing local opportunities • Describe the requirement for first response medical capabilities on-site for both local and non-local employees and contractors to minimise the impact on local health services. • Outline of a protocol to be developed for engaging with community and managing social impacts during an emergency that must be developed in consultation with local emergency response providers and referenced in the project's emergency response plan. The social impact management plan must be implemented during construction.	**Design**
S02 Tas	**Develop and implement a workforce and accommodation strategy** Develop a workforce and accommodation strategy to address the potential social impact from the project's workforce and accommodation requirements during construction. The strategy must: • Be developed in consultation with government, industry and other relevant providers. • Include a protocol for the identification and management of impacts due to accommodation requirements. • Address cumulative impacts on accommodation due to other large-scale construction and infrastructure projects in the identified local study areas. The outcomes of the strategy must be considered during construction planning.	**Construction**
S03 Tas	**Develop and implement a community and stakeholder engagement framework** Prior to commencement of project works, develop a community and stakeholder engagement framework to outline the approach to engagement with community, stakeholders and First Peoples will be undertaken for project and by all contractors. The community and stakeholder engagement framework must: • Identify key community and stakeholder groups across the project.	**Construction** **Operation**

EPR ID	Environmental Performance Requirements	Project phase
	• Describe the approach for engaging the community, stakeholders and First Peoples. • Establish communication protocols and tools for communication. • Outline complaints policies and management procedures for recording, managing, and resolving complaints. The complaints management system must be consistent with Australian Standard AS/NZS 10002: 2014 Guidelines for Complaints Management in Organisations. Principal contractors must prepare a community and stakeholder engagement management plan in accordance with the framework for their works package. The community and stakeholder engagement framework and contractors community and stakeholder engagement management plan must be updated annually to reflect any project or stakeholder changes and improvements identified. The community and stakeholder engagement framework must be implemented during construction.	
S04 Tas	**Develop and implement a community benefits sharing scheme** Prior to the commencement of project works, develop a community benefits sharing scheme in consultation with communities and First Peoples in the local study area. The community benefits sharing scheme should be developed having regard to *Renewable energy development in Tasmania: A guideline for community engagement, benefit sharing and local procurement (Draft 2022, Department of State Growth).*	**Construction** **Operation**
S05 Tas	**Develop an industry participation plan** Prior to the commencement of project works, develop an industry participation plan to integrate First Peoples, females, youth and socially vulnerable groups into the project workforce. The purpose of industry participation plan is to stimulate entrepreneurship, business and economic development, providing First Peoples and vulnerable groups with more opportunities to participate in the economy. The plan must: • Set out an employment and supplier-use participation target within the project's locality. • Outline the project's social procurement policies and local procurement policies considering each component and phase of construction. • Be developed in conjunction with the requirements under the Indigenous Employment and Supplier-use Infrastructure Framework (February 2019). • Identify a range of potential opportunities for job-seekers and businesses to be involved in the project across the construction supply chain. • Set employment targets with reference to the local First Peoples working age population within the project area and consistent with the 'locals first principle'. • Identify opportunities for females, youth and other socially vulnerable groups to be involved in the project workforce. The plan must be implemented during construction and operation.	**Construction, Operation**

9.8 RESIDUAL IMPACT SUMMARY

The summary of residual impact aims to comprehend the lasting consequences and possible risks or advantages linked to the identified impacts after taking mitigation or enhancement measures into account. The sensitivity rating remains constant as it reflects the importance placed on community values. However, the actual magnitude of the impact might vary as a result of implementing measures to comply with EPRs. We have included explanations below to justify any changes in the impact's magnitude. To ensure caution in evaluating the residual impact, we have adopted a conservative approach, modifying magnitudes only when there is a reasonable level of certainty.

Table 9-15 Residual Impact summary

Project phase	Potential impact	Type of impact: Positive or negative	Social value	Pre-mitigated impact assessment			Recommended EPR	Residual impact assessment		
				Sensitivity	Magnitude	Impact		Magnitude	Justification for change in magnitude	Impact
Community identity										
Construction	Noise, vibration and visual disturbances causing amenity impacts (standard hours).	Negative	Community identity: Landscape and amenity	Very sensitive	Moderate	High	NV02: Develop and implement a construction noise and vibration management plan (CNVMP) S03 Tas: Develop and implement a community and stakeholder engagement framework	Minor	Through the development and implementation of a construction noise and vibration plan, a range of mitigation measures will assist in reducing the impact on amenity. Civil and infrastructure works will be restricted to regular working hours generally. Exceptions to this will be unavoidable works for atypical tasks which occur infrequently.	Moderate
Construction	Amenity impacts for nearby residents due to dust from construction activities.	Negative	Community identity: Landscape and amenity	Very sensitive	Minor	Moderate	AQ01: Develop and implement a construction dust management plan S03 Tas: Develop and implement a community and stakeholder engagement framework	Negligible	Through the development and implementation on construction dust management plan, air quality will be monitored and measured to minimise dust from construction activities will be implemented.	Low
Construction	Construction activity undertaken outside of regular working hours to complete shore crossing works with noise levels exceeding sleep disturbance measure.	Negative	Community identity: Landscape and amenity	Very sensitive	Major	Major	NV02: Develop and implement a construction noise and vibration management plan (CNVMP) S03 Tas: Develop and implement a community and stakeholder engagement framework	Moderate	Implementing measures such as avoiding or limiting shore crossing works at night; selecting plant equipment with the lowest available noise emissions; scheduling works to reduce late evening disruptions; noise barriers; restricting heavy vehicle movements; compensation for prolonged exposure outside regular working hours; ongoing noise monitoring; and advanced notification to residents and the community will help minimise the impacts on residents.	High
Construction	Noise from construction activities may affect the study area's enjoyment of recreational spaces.	Negative	Community identity: Landscape and amenity	Very sensitive	Minor	Moderate	NV02: Develop and implement a construction noise and vibration management plan (CNVMP). S03 Tas: Develop and implement a community and stakeholder engagement framework	No change	Through the development and implementation of a construction noise and vibration plan, a range of mitigation measures will assist in reducing the impact on amenity.	Moderate
Construction	Impact on fauna and flora, with consideration for roadkill as a result of construction vehicle movements.	Negative	Community identity: Natural resources and ecology	Very sensitive	Minor	Moderate	EC01 (TAS): Minimise vegetation removal and implement and implement vegetation protection measures EC02 (TAS): Implement measures to protect fauna EC03 (TAS): Implement measures to protect raptors	Negligible	Through the implementation of measures to comply with EPRs, including proactive monitoring of raptors via a nest survey ahead of construction and minimising vegetation removal, it anticipated that the magnitude of this impact can be reduced to minor.	Low

Project phase	Potential impact	Type of impact: Positive or negative	Social value	Pre-mitigated impact assessment			Recommended EPR	Residual impact assessment		
				Sensitivity	Magnitude	Impact		Magnitude	Justification for change in magnitude	Impact
									While the traffic increases may be minor for the project, there is the possibility of increased roadkill because of construction vehicle movement; this is considered negligible in the technical study.	
Construction	Impact on marine environment with the cable installation on nearshore Tasmanian seabed habitats.	Negative	Community identity: Natural resources and ecology	Very sensitive	Minor	Moderate	MERU01: Monitor HDD activities for the shore crossing to avoid impacts to the marine environment MERU02: Placement of final subsea project alignment to avoid or minimise impacts on benthic habitats	Negligible	This is based on a nearshore seabed habitat being frequently exposed to naturally mobile sediments, and a negligible magnitude, given the very small areas and short-term nature of disturbed seabed sediments.	Low
Operation	Ongoing 24/7 operations may result in after-hours noise concerns for neighbouring residents, including the new residential development at Devonshire Drive Hamlet in the Heybridge Residential Nature Reserve.	Negative	Community identity: Landscape and amenity	Very sensitive	Moderate	High	NV05: Prepare an operational noise management plan NV06: Prepare an operational noise compliance assessment report	Minor	With the implementation of the noise management and the magnitude has been reduced to minor for the long-term operation of the project. However, in the short term, with the commissioning of stages, the noise will remain at a medium magnitude.	Moderate
Operation	Visual amenity: View of the converter stations from the southern edge of the Bass Highway and the converter stations will be a dominant view from the exit of the tioxide beach foreshore reserve, the only visitor access point and informal parking area.	Negative	Community identity: Landscape and amenity	Very sensitive	Major	Major	LV01: Design converter station buildings to minimise visual impacts from public locations; LV02: Implement measures to establish and maintain a vegetative screen for public views of above-ground components LV03: Design of enabling works to minimise visual impacts from public locations.	Moderate	The implementation of measures to comply with EPRs will assist in reducing the magnitude of the impact. These measures such as vegetation screening, colour choice of the building and the ability for future road upgrades to further mitigate the visual impact upon entry to tioxide beach have contributed to the lower magnitude rating.	High
Operation	Ongoing impacts on flora and fauna in line with maintenance activities and operation of the converter station from roadkill impacting on Tasmanian devils and spotted tail quolls.	Negative	Community identity: Natural resources and ecology	Very sensitive	Negligible	Low	EC06 Tas: Operational implementation of vegetation protection measures EC05 Tas: Operational implementation of measures to protect raptors	No change	Through the implementation of the EPRs, impacts on threatened species can be minimised or avoided. Specific management measures will be determined by the contractors undertaking maintenance works.	Low
Economy and livelihood										
Construction	The project's construction is expected to support the short-term employment of approximately 45% of the total construction workforce within the local and regional study area.	**Positive**	Economy and livelihood: Employment and workforce	Very sensitive	Minor	Moderate	S01 Tas: Develop and implement a social impact management plan S02: Develop and implement a workforce and accommodation strategy S04 Tas: Develop and implement a community benefits sharing scheme S05 Tas: Develop an industry participation plan	No change		Moderate
Construction	The project's construction is expected to support the short-term employment of approximately 30% of the total construction workforce from the state and national workforce.	**Positive**	Economy and livelihood: Employment and workforce	Sensitive	Negligible	Low		No change		Low
Construction	The project may contribute to a diversity of longer-term and secure employment opportunities and skills training opportunities for residents across a range	**Positive**	Economy and livelihood: Employment	Very sensitive	Minor	Moderate		No change	The magnitude is minor as it will result in a small but measurable change from the baseline condition and will	Moderate

Project phase	Potential impact	Type of impact: Positive or negative	Social value	Pre-mitigated impact assessment			Recommended EPR	Residual impact assessment		
				Sensitivity	Magnitude	Impact		Magnitude	Justification for change in magnitude	Impact
	of skill levels. There might also be jobs created in related industries who benefit from the economic activity, including retail, administrative services and accommodation and food.		and workforce						affect a small section of the community.	
Construction	The project's construction will generate demand for construction workers, potentially drawing employees from other construction projects, industry sectors and local businesses. Due to this potential constraint on the workforce, there may be longer lead times for other construction projects and possible workforce shortages in the study area.	Negative	Economy and livelihood: Employment and workforce	Very sensitive	Moderate	High		No change		High
Construction	The project's construction may contribute to existing and predicted demand for the construction sector, which may require formalised workforce training and development in the study area.	**Positive**	Economy and livelihood: Employment and workforce	Very sensitive	Minor	Moderate		No change		Moderate
Construction	The project's construction will support local businesses through the goods and services required to support the project's development.	**Positive**	Economy and livelihood: Industry and business	Very sensitive	Minor	Moderate		Moderate	The project will procure goods and services in accordance with the project's industry participation plan to support local businesses (including compliance by suppliers and contractors).	High
Construction	The project's workforce may contribute to the demand for rental housing in the regional study area and exacerbate existing rental availability and affordability issues, disproportionally affecting very low- and low-income households.	Negative	Economy and livelihood: Housing affordability and availability	Very sensitive	Major	Major	S01 Tas: Develop and implement a social impact management plan S02 Tas: Develop and implement a workforce and accommodation strategy	Moderate	A comprehensive workforce accommodation and strategy and plan will be developed to address both the demand from the project construction workforce and the cumulative impact of other large-scale construction and infrastructure projects in the region. This will help mitigate the magnitude of the impact.	High
Construction	The project's workforce may provide job opportunities directly and indirectly that help to help improve the socio-economic outcomes of the study area.	**Positive**	Economy and livelihood: socio-dis/advantage	Very sensitive	Negligible	Low	S04 Tas: Develop and implement a community benefits sharing scheme S05 Tas: Develop an industry participation plan	Minor	MLPL aims to address existing social issues, including local employment opportunities, particularly for younger people. MLPL has a focus on delivering high-quality jobs, not simply a high number of jobs. Good job quality considers economic (pay and benefits) and social factors like workplace social support and cohesion, voice and representation, health, safety, wellbeing, and work-life balance. Jobs are projected to be created across a range of industry categories and occupational classifications. The construction phase will lead to employment for technicians and trades workers (e.g., electricians, architectural, building and	Moderate

Project phase	Potential impact	Type of impact: Positive or negative	Social value	Pre-mitigated impact assessment			Recommended EPR	Residual impact assessment		
				Sensitivity	Magnitude	Impact		Magnitude	Justification for change in magnitude	Impact
									surveying technicians, welders and metal fitters and machinists), labourers and machinery operators. Other opportunities include professionals (e.g., electrical engineers), tradespeople (e.g., electricians), managers and clerical and administration for operations.	
Operation	The project is expected to result in large taxation receipts ($762 million in total from 2025 to 2050) from the economic activity generated by Marinus Link, which will flow to local, state and the Australian Government.	**Positive**	Economy and livelihood	Very sensitive	Moderate	High		No change		High
Operation	Jobs during operations	**Positive**	Economy and livelihood: socio-dis/advantage	Very sensitive	Negligible	Low	S05 Tas: Develop an industry participation plan	No change	Fewer than five employees will be required to help operate the converter stations and therefore, a mitigation of negligible has been provided.	Low
Community infrastructure and services										
Construction	The project's construction workforce may increase demand for health and emergency service providers, compromising service provision to the existing local and regional community.	Negative	Infrastructure and services: Health and wellbeing	Sensitive	Moderate	Moderate	S01 Tas: Develop and implement a social impact management plan	Minor	Measures to comply with EPRs will reduce the magnitude to negligible. This is reflective of the fact there will be marginal change; it will impact a small number of individuals, and the effect will not be long term. Furthermore, no compromise to service provision to the existing local and regional community is expected due to the project.	Low
Construction	The project's construction workforce may increase demand for childcare providers, compromising service provision to the existing local and regional community.	Negative	Infrastructure and services: Childcare	Very sensitive	Moderate	High	S01 Tas: Develop and implement a social impact management plan	No change	There is no change to the residual impact on childcare services in the study area because there is already a shortage of childcare.	High
Construction	The performance of the road network in the project area during construction creates delays for existing road users, during the movement of the transformer transporter	Negative	Infrastructure and services: Connectivity	Very sensitive	Minor	Moderate	T01: Develop a Transport Management Plan.	Negligible	No arterial roads identified will exceed their capacity and the implementation of the TMP will provide further measures to minimise and monitor any traffic impacts.	Low
Construction	Disruption from the movement of the transformer transporter will have on the road network's condition, design and operation to perform safely.	Negative	Infrastructure and services: Safety and capacity	Very sensitive	Major	Major	T01: Develop a Transport Management Plan. S03 Tas: Develop and implement a community and stakeholder engagement framework	Minor	Traffic management is required to manage the movement of the transformer transporter. Bridges and culverts should be upgraded to align with the recommendations of a suitably qualified civil engineer.	Low
Construction	Reduced road safety, including the road safety of vulnerable, particularly school bus routes.	Negative	Infrastructure and services: Safety and capacity	Very sensitive	Moderate	High	T01: Develop a Transport Management Plan. S03 Tas: Develop and implement a community and stakeholder engagement framework	Negligible	Heavy construction vehicles will not travel on school bus routes during pick-up /drop-off times.	Low

Project phase	Potential impact	Type of impact: Positive or negative	Social value	Pre-mitigated impact assessment			Recommended EPR	Residual impact assessment		
				Sensitivity	Magnitude	Impact		Magnitude	Justification for change in magnitude	Impact
Construction	General road safety with an increase in construction vehicles and the potential to impact traffic and pedestrian safety.	Negative	Infrastructure and services: Safety and capacity	Very sensitive	Moderate	High	T01: Develop a Transport Management Plan. S03 Tas: Develop and implement a community and stakeholder engagement framework	Minor	Through the implementation of measures to comply with EPRs, the magnitude has been reduced to minor. This is based on training and monitoring of drivers as part of the TMP, road/intersection upgrades (as required) and notifying communication should detours through towns be required. Predominantly there will be minimal interaction with pedestrian traffic.	Moderate
Construction	Increased safety risk due to poor road lighting for shore crossing works at night.	Negative	Infrastructure and services: Safety and capacity	Very sensitive	Major	Major	T01: Develop a Transport Management Plan.	Minor	Provision of temporary construction lighting at required intersections	Moderate
People's productive capacities										
Construction	Construction fatigue causing mental and health impacts, given night works are expected to occur seven days a week for up to 12 months, are expected to exceed average noise levels that result in sleep disturbance at the Devonshire Drive Hamlet.	Negative	People's productive capacities: Physical and mental health	Very sensitive	Major	Major	NV02: Develop and implement a construction noise and vibration management plan (CNVMP) S03 Tas: Develop and implement a community and stakeholder engagement framework	Moderate	Through the implementation of measures to comply with EPRs, the noise impacts may be mitigated to some extent. Should residents be adversely affected for prolonged periods due to out-of-hours works, respite or compensation could be offered. Furthermore, communication protocols outlining the situations and types of activities which will warrant notification of neighbouring residents in advance of the work occurring, including unavoidable works outside of normal working hours, will be critical in helping to mitigate this impact.	High
Construction	Lack of understanding of the project's scope, cumulative impacts of projects in the areas and not seeing local benefit.	Negative	People's productive capacities: Physical and mental health	Very sensitive	Major	Major	S03 Tas: Develop and implement a community and stakeholder engagement framework S04 Tas: Community benefits sharing scheme	Moderate	Ongoing project engagement and communications will help to dispel concerns and provide clarity on the project scope. Additionally, providing opportunities for the community to help shape local benefits will be key in mitigating this impact.	**High**
Construction	Potential human health impacts from contaminated material exposure from construction disturbance from the former industrial site.	Negative	People's productive capacities: Physical and mental health	Very sensitive	Moderate	High	CL01: Manage excavated soil, contaminated soils and potential risks to the environment due to contamination during construction. CL02: Develop and implement acid sulfate soils (ASS) management controls CL03: Develop and implement measures to manage potential contamination impacts in operation	Minor	Through the implementation of measures to comply with EPRs, requiring the management of all material generated from excavation including contaminated material), the risk to human health or ecological receptors is low.	Moderate

Project phase	Potential impact	Type of impact: Positive or negative	Social value	Pre-mitigated impact assessment			Recommended EPR	Residual impact assessment		
				Sensitivity	Magnitude	Impact		Magnitude	Justification for change in magnitude	Impact
Construction	Transporting hazardous goods and materials.	Negative	People's productive capacities : Community safety	Very sensitive	Severe	Major	T01: Develop a Transport Management Plan.	Minor	The transportation of any hazardous goods/materials shall be done so in adherence to any standard requirements by the road authority as it relates to that specific material.	Moderate
Construction	Employment opportunities for First Peoples people, females, youth and socially vulnerable groups in the regional construction workforce are made available.	**Positive**	People's productive capacities: Education, training, and skills	Very sensitive	Negligible	Low	S04 Tas: Develop and implement a community benefits sharing scheme S05 Tas: Develop an industry participation plan	Minor	Through the adoption of the recommended EPRs, there is the opportunity to increase employment opportunities and therefore increase the magnitude of this potential benefit.	Moderate
Operation	Negative: Concern about the project's potential impacts (e.g. EMF, operational noise) may result in feelings of stress, anxiety and frustration for surrounding residents and communities.	Negative	People's productive capacities: Physical and mental health	Very sensitive	Moderate	High	NV05: Prepare an operational noise management plan S03 Tas: Develop and implement a community and stakeholder engagement framework	No change		High
Operation	The project may add to the health and wellbeing of residents in the study area through investments in community infrastructure, the potential for downward pressure to be placed on the market regarding energy prices, as well as greater telecommunication security through expansion of the supply-side infrastructure.	**Positive**	People's productive capacities: Physical and mental health	Very Sensitive	Moderate	High	N/A	No change		High

10. CUMULATIVE IMPACTS

A cumulative impact assessment has been completed for the project per the impact assessment method outlined in section 5.7.7. Projects that might potentially affect social values in close proximity to the Heybridge converter station and shore crossing were identified. lists the timeframe, status and job creation (where available) for projects relevant to the cumulative impact assessment.

Cumulative social impacts will likely arise due to the proximity of projects, as this may create ongoing concern around disruption to amenity for the local community. Furthermore, with construction programs overlapping, cumulative social impacts would most likely arise through changes to demand for accommodation and housing, as well as through disruption to access and travel delays caused by the increased movement of workers' vehicles and construction vehicles.

The other driver of social impacts will be the workforce requirements during the construction phase, with the identified projects having overlapping construction periods. The study area may benefit from improved livelihoods through increased patronage and access to employment associated with the combined work. Considering the limited community infrastructure and services in the study area, it is likely that negative cumulative social impacts may arise, especially around healthcare.

Mitigation and management measures implemented for individual projects will assist in managing cumulative impacts on the identified values. Cumulative impacts are most effectively addressed by collaboration between industry, state and local government and other stakeholders in project planning, design and delivery.

Table 10-1 Projects identified for cumulative assessment

	Project	Timeframe and status	Project job creation (where information is available)
1	Guildford Wind Farm / Ark Energy	• Notice of intent submitted in 2020 • EPA EIS Guidelines issued in 2020 • Construction to commence 2024.	
2	Robbins Island Renewable Energy Park / UPC Robbins Island Pty Limited	• Approved by the Commonwealth Government and EPA assessment underway • Construction proposed to commence in 2023-2025.	Construction workforce: 250 personnel
3	Jim's Plain Renewable Energy Park / UPC Robbins Island Pty Limited	• All approvals finalised • Construction to commence in 2023.	Construction workforce: over 150 personnel Operations workforce: 15 personnel
4	Robbins Island Road to Hampshire Transmission Line / UPC Robbins Island Pty Limited	• Detailed planning and environmental approvals underway • Construction to commence in 2023.	Construction workforce: up to 100 personnel over 24 months
5	NWTD Transmission Line / TasNetworks	• Detailed planning and environmental approvals underway • Construction to commence in 2025.	
6	Hellyer Wind Farm / Ark Energy	• Notice of intent issued • EPA EIS Guidelines issued in 2022.	

	Project	Timeframe and status	Project job creation (where information is available)
7	Table Cape Luxury Resort / Table Cape Enterprises	• Approved by Waratah-Wynyard Council.	
8	Lake Cethana Pumped Hydro / Hydro Tasmania	• Final feasibility stage • Construction to commence 2026-2031	
9	Youngman's Road Quarry / Railton Agricultural Lime Pty Limited	• EPA approval granted in 2021 • Kentish Council is reviewing land permit.	
10	Port Latta Wind Farm / Nekon Pty Limited	• EPA approval granted in 2020 • Construction status uncertain.	Construction workforce: 15 people over six months
11	Port of Burnie Shiploader Upgrade / TasRail	• Onsite works commenced in 2022 • Commissioning expected in 2023.	Design and construction workforce: 140 personnel
12	Bass Highway – Cooee to Wynyard / Department of State Growth	• Construction commenced in 2021 • Completion expected in 2025.	
13	QuayLink – Devonport East Redevelopment / TasPorts	• Early works commenced in 2022 • Expected completion in 2027.	Design and construction workforce: 1060 direct and indirect jobs in North West Tasmania, and a further 655 broader Tasmanian jobs during construction

These developments, taken together, are anticipated to place significant demands on construction workforce availability and related issues of workforce accommodation.

Mitigation and management measures implemented for individual projects will assist in managing cumulative impacts on the identified values. Cumulative impacts are most effectively managed by collaboration between industry, state and local government and other stakeholders in the planning, design and delivery of the projects. Some cumulative impacts are most effectively managed by the Tasmanian Government through the development of policies, guidelines and state-wide planning criteria particularly related to the renewable energy sector in the north west region of Tasmania.

10.1 SOCIAL VALUES

10.1.1 Economy and livelihoods

This social value considers the cumulative impact of the projects using indicators such as the availability and affordability of housing, the cost of goods and services and income levels. Table 10-2 provides an overview of the cumulative impact (beneficial or adverse) to the communities, businesses and government.

Table 10-2 Cumulative impacts to the communities, businesses and government

Impact	Type	Overview
Income levels	Beneficial	Construction expenditure is anticipated to result in increased purchases of goods and services between sectors in the construction supply chain and results in increased employment outcomes and associated wages and salaries. The combined capital and operating expenditure associated with the projects will contribute significantly to increased gross regional and gross state product.

Impact	Type	Overview
Housing availability and affordability	Adverse	Housing affordability was reported as a widespread community concern during consultation for this project. Some of the towns in the local and regional study area are experiencing a shortage of rental accommodation, and most have recorded a rental vacancy rate under 2.0% for some time. Rental availability affects affordability and exacerbates the financial and housing vulnerability of disadvantaged people. Disadvantaged persons (measured by the Index of Relative Socio-Economic Advantage/Disadvantage) are concentrated in the urban areas within the north west region of Tasmania. Accommodating such a large construction workforce poses a significant impact on regional housing affordability if not mitigated appropriately.
Cost of goods and services	Beneficial	Downstream businesses and broader supply chains are expected to benefit from both supplying the construction and operating activity of the projects, as well as through reduced electricity prices. Service providers to Marinus Link (such as those businesses required for construction, maintenance, operations and decommissioning/ rehabilitation) will service the needs of the project through the flow of impacts in the supply chain. These businesses will benefit due to higher levels of activity, which can lead to increased profits. The associated incomes and profits can also lead to increased investment, production and consumption by businesses and households, further supporting the supply chain.
Workforce participation	Beneficial	In general, the unemployment rate in the region has remained above the Tasmanian unemployment rate for the past ten years. This has been attributed to industry structural reforms and the redundancies that followed. The proposed developments will provide a range of direct and indirect employment opportunities, which should increase participation in the workforce.
Demand and competition for construction workers	Adverse	Some businesses/ industries may experience small reductions in growth relative to what would otherwise be expected to occur without the projects due largely to competition for constrained resources. This is primarily anticipated for industries that require similar skill sets to those used in the construction of projects (such as road construction, agriculture, and manufacturing). These sectors may experience higher costs due to competition for constrained labour resources and increased costs of business as competition for resources drives input prices up (including labour). During operations, the competition for labour resources such as engineers and trades workers may impact industries requiring similar skill sets.
Benefits to the supply chain	Beneficial	Construction expenditure is anticipated to result in increased purchases of goods and services between sectors in the construction supply chain and results in increased employment outcomes and associated wages and salaries. Service providers to the various projects (such as those businesses required for construction, maintenance, operations and decommissioning/ rehabilitation) will service the needs of the project through the flow of impacts in the supply chain. These businesses will benefit due to higher levels of activity, which can lead to increased profits. The associated incomes and profits can also lead to increased investment, production and consumption by businesses and households, further supporting the supply chain.
Government revenue	Beneficial	The broader economic activity supported through the range of projects will create additional government revenues for the Tasmanian Government. Given the considerable economic impact of the projects, the implications for government revenues will likely be significant.

Environmental performance requirements

Rental availability: The current demand for rental housing is high and the availability is constrained throughout the north west region of Tasmania. To mitigate the impacts of this project, Marinus Link will develop a workforce and accommodation strategy to address its potential impact on the rental housing market within the region. However, the cumulative impacts of the other projects will be severe if they are not mitigated appropriately. Furthermore, despite the mitigations implemented by MLPL, rental availability and affordability is likely to remain an issue for the community.

Competition for construction workers: The construction workforce will consist of a mix of local hires within the region and specialists who will be recruited from other parts of Tasmania and Australia. However, it is noted that any skills development associated with the project's employment will be an indirect impact (i.e., not undertaken for the project) and largely associated with cumulative demand for employees in the construction sector.

Procurement of goods and services by MLPL is governed by the industry participation plan, which seeks to maximise opportunities for local businesses. MLPL also expects that its suppliers and contractors will undertake their procurement activities (i.e., with sub-suppliers and sub-contractors) in a manner that is consistent with this guideline. MLPL will encourage local employment and training through the evaluation of the primary contractor's approach to local employment during the tendering phase.

The relevant EPRs which will manage cumulative impacts are shown in the table below (EPR S01 Tas, EPR S02 Tas). The full EPRs are provided in Section Table 9-15.

Table 10-3 EPRs for economy and livelihood impacts (cumulative)

EPR ID	Environmental Performance Requirements	Project phase
S01 Tas	**Develop and implement a social impact management plan** Prior to commencement of project works develop a social impact management plan. The plan must be developed in consultation with relevant government and local government agencies, key stakeholders, and directly affected parties to minimise social impacts across the project during construction. The social impact management plan should be location specific and address key components of the construction program, including the staging of land cable trenching and installation. The plan should be a public document and be readily available on the project website. The plan must include: • A high-level summary of community baseline conditions, a summary of the anticipated social impacts (positive and negative), potential residual impacts and consideration for cumulative impacts. The plan will be reviewed and updated to address any shifts in the socio-economic environment on the baseline and impacts and consider the ongoing cumulative impacts of projects in the region. • Incorporate key strategies, their objectives for managing social impacts and the responsibilities for implementation of the strategies including the workforce and accommodation strategy (EPR S02 Tas), community and stakeholder engagement framework (EPR S03 Tas), community benefits sharing scheme (EPR S04 Tas), and industry participation plan (EPR S05 Tas). • An employment and training performance strategy with a focus on providing local opportunities • Describe the requirement for first response medical capabilities on-site for both local and non-local employees and contractors to minimise the impact on local health services. • Outline of a protocol to be developed for engaging with community and managing social impacts during an emergency that must be developed in consultation with local	**Design**

EPR ID	Environmental Performance Requirements	Project phase
	emergency response providers and referenced in the project's emergency response plan. The social impact management plan must be implemented during construction.	
S02 Tas	**Develop and implement a workforce and accommodation strategy** Develop a workforce and accommodation strategy to address the potential social impact from the project's workforce and accommodation requirements during construction. The strategy must: • Be developed in consultation with government, industry and other relevant providers. • Include a protocol for the identification and management of impacts due to accommodation requirements. • Address cumulative impacts on accommodation due to other large-scale construction and infrastructure projects in the identified local study areas. The outcomes of the strategy must be considered during construction planning.	**Construction**

Residual cumulative impacts

Rental availability: Despite the implementation of the workforce and accommodation strategy for the project, it is anticipated that the changes to demand for rental housing in the regional study area will remain high. A collaborative (government and industry) approach to regional workforce accommodation is required to reduce the cumulative impact from **Major** to predevelopment levels (Table 10-4).

Competition for construction workers: Despite the mitigation measures that the Tasmanian government, industry collaborations and MLPL apply, the cumulative demand for construction workers will remain very high throughout the region. This is attributed to the demand by other industries requiring similar skill sets that will remain throughout the construction stages of the projects. It is anticipated that the cumulative residual impact of **Major** (Table 10-4).

Table 10-4 Assessment of the cumulative residual impact on communities, businesses and government

Potential impact	Residual impact assessment for Marinus Link	Cumulative residual impact assessment		
		Sensitivity	Magnitude	Impact
The cumulative impact of the project workforce will contribute to the demand for rental housing in the regional study area and exacerbate existing rental availability and affordability issues, which will affect very low and low-income households disproportionally.	Major (negative)	Very sensitive	Major	Major (negative)
The demand and competition for skilled labour resources may impact industries requiring similar skill sets **and potentially draw from other industries and local businesses within the study area.**	High (negative)	Very sensitive	Moderate	High (negative)

10.1.2 Infrastructure and services

This social value considers the cumulative impact of the projects using indicators of community services. Table 10-5 provides an overview of the cumulative impact to health and emergency services in the region.

Table 10-5 Cumulative impacts to health and emergency service provision in the region

Impact	Type	Overview
Demand for health and emergency services	Adverse	The cumulative construction workforce will increase the demand for health and emergency services. The combined demand may be greater than the capacity of these services, particularly given that the General Practitioners within the region have already closed their books to new patients. In the event of an accident, local emergency services such as ambulance, police and fire services will be required to respond and workers to be treated at the local community health care centres or the Latrobe Regional hospital facility.

Environmental performance requirements

If additional demand were placed on medical and health services because of the combined construction workforce, it will most likely relate to primary health care services. The current demand for GPs within the region is high. To minimise any potential increase in demand, MLPL will mitigate the impact of their predicted workforce upon the demand for health and emergency services by:

- Providing first-response medical capabilities on-site for both local and non-local employees and contractors.
- Collaborating with government, industry and other providers to develop programs to mitigate the impact on health services in local communities.

Management measures to address cumulative impacts relating to health and emergency provision will form part of the SIMP (EPR S01 Tas). EPRs are listed in Table 10-6 with full EPRs provided in Table 9-15.

Table 10-6 EPRs for infrastructure and services impacts (cumulative)

EPR ID	Environmental Performance Requirements	Project phase
S01 Tas	**Develop and implement a social impact management plan** Prior to commencement of project works develop a social impact management plan. The plan must be developed in consultation with relevant government and local government agencies, key stakeholders, and directly affected parties to minimise social impacts across the project during construction. The social impact management plan should be location specific and address key components of the construction program, including the staging of land cable trenching and installation. The plan should be a public document and be readily available on the project website. The plan must include: • A high-level summary of community baseline conditions, a summary of the anticipated social impacts (positive and negative), potential residual impacts and consideration for cumulative impacts. The plan will be reviewed and updated to address any shifts in the socio-economic environment on the baseline and impacts and consider the ongoing cumulative impacts of projects in the region. • Incorporate key strategies, their objectives for managing social impacts and the responsibilities for implementation of the strategies including the workforce and accommodation strategy (EPR S02 Tas), community and stakeholder engagement framework (EPR S03 Tas), community benefits sharing scheme (EPR S04 Tas), and industry participation plan (EPR S05 Tas). • An employment and training performance strategy with a focus on providing local opportunities	**Design**

EPR ID	Environmental Performance Requirements	Project phase
	• Describe the requirement for first response medical capabilities on-site for both local and non-local employees and contractors to minimise the impact on local health services. • Outline of a protocol to be developed for engaging with community and managing social impacts during an emergency that must be developed in consultation with local emergency response providers and referenced in the project's emergency response plan. The social impact management plan must be implemented during construction.	

Residual cumulative impacts

By implementing the recommended management measures, it is anticipated that MLPL could reduce the residual impact of its workforce and the demand placed on health and emergency services to a **low** impact (Table 10-7). Reducing the cumulative residual impact created by the other projects will require a collaborative (government and industry) approach to regional healthcare provision. Consequently, the **cumulative impact of Moderate**.

However, there is no change to the magnitude of the impact on childcare services in the study area and the **cumulative residual impact** stays as a negative rating of **High**.

Table 10-7 Cumulative residual impact assessment of childcare, health and emergency service provision in the region

Potential impact	Residual impact assessment for Marinus Link	Cumulative residual impact assessment		
		Sensitivity	Magnitude	Impact
The cumulative impact of the project workforce will contribute to the demand for health and emergency service providers, which may compromise the service provided to the existing regional population.	Low (negative)	Very Sensitive	Moderate	High (negative)
The cumulative impact of increased construction workforce on demand for childcare providers, compromising service provision to the existing local and regional community.	High (Negative)	Very Sensitive	Moderate	High (Negative)

10.1.3 People's productive capacities

This social value considers the cumulative impact of the project on the capacity to participate in society and its economy. Table 10-8 provides an overview of the cumulative impact of the projects upon the inclusion of First Peoples, women, youth and other socially vulnerable populations from construction workforce participation.

Table 10-8 Cumulative impacts of the exclusion of First Peoples, women, youth and socially vulnerable populations in the construction workforce

Impact	Type	Overview
High levels of unemployed	Adverse	If regional unemployment trends continue as they have for the past ten years for both females and youth, then these will be exacerbated with the introduction of a large and predominantly male construction workforce. In the absence of affirmative action, First

women and youth in the region		People, females, youth, and socially vulnerable groups will be excluded from construction workforce participation.

Environmental performance requirements

The civil construction industry workforce in Tasmania is predominantly male and ageing, which places the sustainability of the industry at risk. However, the explicit involvement of females and youth in the industry could address this risk. MLPL will develop an industry participation plan that assesses ways of integrating First Peoples, females, youth and other socially vulnerable groups into the workforce. MLPL will make provision for the integration of the industry participation plan within their contracts and tenders to increase the participation of under-represented groups. This is specified as an EPR (S05 Tas). The full EPRs are provided in Table 9-14.

EPR ID	Environmental Performance Requirements	Project phase
S05 Tas	**Develop an industry participation plan** Prior to the commencement of project works, develop an industry participation plan to integrate First Peoples, females, youth and socially vulnerable groups into the project workforce. The purpose of industry participation plan is to stimulate entrepreneurship, business and economic development, providing First Peoples and vulnerable groups with more opportunities to participate in the economy. The plan must: • Set out an employment and supplier-use participation target within the project's locality. • Outline the project's social procurement policies and local procurement policies considering each component and phase of construction. • Be developed in conjunction with the requirements under the Indigenous Employment and Supplier-use Infrastructure Framework (February 2019). • Identify a range of potential opportunities for job-seekers and businesses to be involved in the project across the construction supply chain. • Set employment targets with reference to the local First Peoples working age population within the project area and consistent with the 'locals first principle'. • Identify opportunities for females, youth and other socially vulnerable groups to be involved in the project workforce. The plan must be implemented during construction and operation.	**Construction**

Residual impacts

Following the implementation of an industry participation plan by MLPL, the residual impact is **Moderate (positive)** for the project. Targeted training and workforce skill development is required to address the inclusion of First Peoples, women, youth and socially vulnerable groups in the regional construction workforce. In the absence of a collaborative (government and industry) approach to regional gender equality and social inclusion to increase workforce participation of under-represented groups, it is anticipated cumulative residual impact will be **Moderate (positive)** impact (Table 10-9).

Table 10-9 Assessment of the cumulative residual impact on female and youth unemployment

Potential impact	Residual impact assessment for Marinus Link	Cumulative residual impact assessment		
		Sensitivity	Magnitude	Impact
Employment pathways for First Peoples, females, youth and socially vulnerable groups in the regional construction and operations workforce are made available.	Moderate (positive)	Very sensitive	Minor	Moderate (positive)

10.2 INSPECTION, MONITORING AND REVIEW

Monitoring, reporting and review will be a requirements of the SIMP (EPR S01 Tas), workforce and accommodation strategy (EPR S02 Tas), community and stakeholder engagement framework (EPR S03 Tas), community benefits sharing scheme (EPR S04 Tas), develop an industry participation plan (EPR S05 Tas)

11. CONCLUSION

The project is a significant project supporting Australia's energy transition and a net zero future. The project will unlock Tasmania's renewable energy and storage resources to deliver low-cost, reliable, clean energy for customers in the National Electricity Market.

Through extensive consultation and engagement with the local community, valuable insights have been gained regarding the areas and places that hold significance to them. This feedback has helped identify community concerns and social impacts associated with the project, informing the impact assessment and the development of EPRs. Additionally, potential benefits of the project have been identified, including the creation of employment and training opportunities for regional and local communities.

However, it is important to acknowledge that the construction phase of the project will have some adverse social impacts. These include disturbances caused by noise and dust, changes in visual aesthetics, environmental effects, potential disruption to infrastructure and services, and implications on housing availability that may impact low-income households disproportionately. Additionally, the demand for construction workers in the study area may lead to challenges in other industries and for local businesses with limited workforce availability.

Despite these potential challenges, the project offers benefits to the study area, mainly during the construction phase. These include short-term employment opportunities, training and development prospects, and improved socio-economic outcomes for the region. Additionally, employment opportunities for marginalised groups, such as First Peoples, females, youth, and socially vulnerable individuals, can be created through the regional construction workforce.

Throughout the project's 40-year operation, it is expected to generate substantial tax revenue, benefiting the local, state, and national government. Additionally, potential investments in community infrastructure have the potential to enhance the health and wellbeing of residents in the study area. Moreover, the delivery of the project may exert downward pressure on energy prices and enhance telecommunication security, further contributing to the overall welfare of the community.

The assessment emphasises the importance of mitigating impacts across multiple aspects. This includes effectively managing construction-related challenges, addressing concerns related to rental availability and affordability, ensuring sufficient childcare services, and evaluating the capacity and safety of the road network. It is crucial for project stakeholders and local governments to collaborate closely in order to minimise these impacts in a cumulative manner and safeguard the quality of life and values of the local community.

To address visual and noise impacts stemming from the converter station during the project's operational phase, continuous efforts should be undertaken. The SIA provides a range of mitigation measures and management strategies outlined in various impact management plans and schemes. These include the SIMP (EPR S01 Tas), workforce and accommodation strategy (EPR S02 Tas), community and stakeholder engagement framework (EPR S03 Tas), community benefits sharing scheme (EPR S04 Tas), and an industry participation plan (EPR S05 Tas).

The SIA emphasises the cumulative impact on rental housing, which necessitates a collaborative approach between the government and industry to manage accommodation requirements for the regional workforce. Additionally, addressing the demand for construction workers and local services like childcare and healthcare will require a coordinated effort between the two sectors.

In summary, the SIA demonstrates that by implementing the EPRs, the adverse impacts of the project can be effectively managed. It is essential to recognise that all potential social impacts will be continuously monitored, evaluated, and revaluated as the project advances. Sustained consultation with local communities, Traditional Owners, residents, and community groups within the study area will be crucial in harnessing the local benefits

of the project and efficiently addressing potential impacts through knowledge sharing, collaborative actions, and the development of strong relationships.

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