SECTION 7 - DECOMMISSIONING AND REHABILITATION

MARINUS LINK

7. Decommissioning and rehabilitation

Decommissioning would occur at the end of the life of the project, currently proposed to be for a minimum of 40 years.

There would be two main stages of rehabilitation for the proposal, the first during and immediately after construction and the second at decommissioning or the end of the operational life of the project. Decommissioning has been considered as part of the assessment of various environmental impacts of the proposal.

7.1 Assessment guidelines

The relevant sections of the EIS guidelines for the Heybridge Converter Station, and where these have been addressed in the EIS, are outlined in Table 7-1.

Table 7-1 Relevant EIS guidelines

Decommissioning and rehabilitation – EIS guidelines	Section
Describe an on-going, staged approach to decommissioning and rehabilitation throughout the proposal life, including consideration of both post-construction and potential future decommissioning of the project.	Sections 7.2 and 7.3.
A preliminary decommissioning and rehabilitation plan or closure plan should be outlined.	Section 7.3 and 7.4

7.2 Construction

Typical activities that would be carried out on the proposal site at the completion of construction activities include:

- Removal of all plant and machinery, and temporary buildings not required for a subsequent stage of construction.
- Clean-up of site including removal of rubbish and excess construction materials.
- Rehabilitation of land that has been occupied temporarily (and that would not be used for the operational asset) which would involve the application of soil ameliorate (if necessary) and seeding to establish a ground cover.
- Treatment and removal of any weed infestations.

The CEMP will provide detailed information on the demobilisation and rehabilitation of the proposal site at completion of construction.

7.3 Operation

The project is anticipated to operate for a minimum of 40 years and at this time it would be decommissioned or upgraded to extend its operational life. Therefore, only an outline of what would be included in a decommissioning plan are provided in the EIS with a Decommissioning and Rehabilitation Plan to be provided to the Director of the EPA for approval within 3 years of completion of construction of Stage 2. This allows the time required to prepare a sufficiently detailed plan.

The objective of decommissioning is to provide a final land use and landform that does not impede any other future uses of the land and is consistent with the current adjacent land use. The landform is to be safe, stable and non-polluting.

It is anticipated that decommissioning of the proposal at the end of its life would involve the following:

- Deenergise, decommission, dismantle and remove the above ground buildings and equipment associated with the converter stations including the transformers, reactors, steel structures, converter modules and valves, cooling systems, cables and diesel generator, tanks and pumps. These materials would likely be recycled and/or reused. Materials such as batteries and firefighting equipment that cannot be recycled or reused would be disposed of at an appropriate disposal facility.
- Deenergise, decommission, dismantle and remove the above ground buildings and equipment associated with the switching station including the insulated switchgear and other support equipment and associated infrastructure. These materials would likely be recycled and/or reused. The electrical high voltage infrastructure would likely be disposed of at an appropriate disposal facility.
- Removal of accessible underground structures, tranches, covers, cables and pipes.
- Cutting and filling of the structural slabs.
- Removal of internal access roads/tracks and fencing, lighting and CCTV (if not required to remain in-situ) and these materials would likely be disposed of and/or recycled/reused.
- Backfill and compression including minor earthworks, shaping and installation of site drainage (if necessary).
- Installation of any long-term erosion and sediment controls.
- Site rehabilitation including the application of soil ameliorate and seeding to establish a ground cover.
- Treatment and removal of any established weed outbreaks.
- A monitoring and maintenance regime.

A Decommissioning and Rehabilitation Plan would be provided to the Director of the EPA within three years of completion of construction of Stage 2.

7.4 Management, mitigation and monitoring

Proposed measures to minimise potential impacts associated with decommissioning and rehabilitation are presented in Table 7-2. Mitigation measures in other sections that are relevant to the management of decommissioning and rehabilitation include:

- Section 6.6 (Waste management) specifically measures which address minimisation of waste.

Together, these measures will minimise the potential decommissioning and rehabilitation impacts.

Table 7-2 Decommissioning and rehabilitation – mitigation measures

Ref	Mitigation measure	Proposal stage
DR01	Reinstatement of the proposal site on completion of construction, including: • Removal of all plant and machinery, and temporary buildings not required for a subsequent stage of construction. • Clean-up of site including removal of rubbish and excess construction materials. • Reinstatement (including backfill) of the land that has been occupied temporarily (and that would not be used for the operational asset) which would involve the application of soil ameliorate (if necessary) and seeding to establish a ground cover. • Treatment and removal of any weed infestations. These requirements will be included in the CEMP. Ongoing rehabilitation and/or monitoring requirements will be detailed in the OEMP.	Construction
DR02	A Decommissioning and Rehabilitation Plan would be provided to the Director of the EPA within three years of completion of construction of Stage 2.	Decommissioning

SECTION 8 - MANAGEMENT, MITIGATION AND MONITORING

MARINUS LINK

8. Management, mitigation and monitoring

8.1 Environmental management

The proposal would be delivered in accordance with the mitigation measures described in this EIS, any conditions of approval issued under the EMPC Act and the LUPA Act, the applicable EPRs in the Commonwealth and Victorian combined EIS/EES as well as any other permits or licences required for the proposal, including the EPBC Act.

MLPL would design, construct, operate and decommission the proposal under an EMS that has been developed in accordance with the requirements of AS/NZS ISO 14001:2016 *Environmental Management Systems – Requirements with guidance for use*. The EMS has been developed to manage MLPL's environmental responsibilities and seek continual improvement in environmental performance through planning, implementation, evaluation and review. The EMS applies to all geographic components and phases of the project, including the proposal.

The project would be constructed in stages by multiple construction contractors/principal contractors. MLPL and principal contractors (and their subcontractors) are responsible for complying with the requirements of the project approvals. MLPL will engage with TasNetworks to ensure compliance with MLPL's approvals, this relates to the switching station, which is proposed to be constructed and operated by TasNetworks.

The final detailed design and construction methodology would be completed following project approvals and appointment of a principal contractor/s. It is noted that the final design would be required to be substantially in accordance with the proposal description in this EIS. The contractors' design and construction methods must comply with the approvals including mitigation measures and management plans approved by the EPA.

An allocation of responsibility of all project approval requirements between MLPL and principal contractors would be defined via the MLPL EMS.

In summary, environmental management of the proposal would be addressed through:

- The proposal would be designed as described in Section 2 and would incorporate best practice mitigation measures, alternatives and technologies that avoid and minimise environmental impacts.
- The proposal, and the project, would be subject to MLPL's EMS. The EMS would be used to manage the proponent's environmental responsibilities and environmental performance. Specifically, the EMS would provide the framework for tracking compliance of EMPs developed for construction, operation and decommissioning, and any conditions of approvals, licences and/or permits.
- The proposal would be subject to a CEMP for the construction phase. These CEMP would set out the environmental governance arrangements, and obligated parties for environmental protection, together with requirements for review.
- The proposal would be conditional on the implementation of mitigation measures (consolidated in Table 8-1). Where applicable, these would be included in CEMP sub-plans.

- Principal contractors would be required to have an EMS certified under AS/NZS ISO 14001:2016 or equivalent and would be contractually required to design, construct, and operate the proposal in accordance with planning approvals, approved management plans and applicable legislation.
- Environmental performance during operation of the proposal, would be managed by the implementation of an OEMP (MM Gen03). The plan would detail how the mitigation measures and applicable EPRs would be implemented and achieved during operation and would specify the environmental management practices and procedures to be followed.
- A Decommissioning and Rehabilitation Plan would be provided to the Director of the EPA within three years of completion of construction of Stage 2.

8.2 Mitigation measures

A consolidated list of mitigation measures and monitoring requirements identified throughout this EIS is included in Table 8-1.

Table 8-1 Consolidated list of proposed mitigation measures

Environmental aspect	Ref	Mitigation measure	Proposal stage
General	**Gen01**	Develop, implement, and maintain an Environmental Management System (EMS) that conforms to AS/NZS ISO 14001:2016 Environmental Management Systems – Requirements with guidance for use. The EMS will be in implemented during construction, operation and decommissioning of the project. Principal contractors must also have an EMS that is certified to AS/NZS ISO 14001:2016 or equivalent standard.	Construction Operation Decommissioning
	Gen02	Prior to construction commencing, prepare a Construction Environmental Management Plan (CEMP). The CEMP will be developed in accordance with the scope of works and will include the applicable approval conditions, requirements of other permits and licences, the Principal Contractor's certified EMS and applicable Marinus Link EMS documents. At a minimum, the CEMP will include: • An environment and sustainability policy. • A description of activities to be undertaken during construction. • Accountabilities and responsibilities. • A procedure for identifying, managing and monitoring environmental risks. • A process for inspections including daily observations of the proposal site and weekly environmental inspections. • A schedule for audits (MM Gen04). • Awareness and competency requirements in relation to environmental management for works for all personnel working on the project. • Communication requirements. • Procedures for identifying non-conformance and implementing corrective actions. • A protocol for incident notification and management in accordance with the environmental duty under the Section 23A EMPC Act. The CEMP will be implemented for the duration of construction, or where staged, for the duration of the staged construction. The CEMP sub-plans specific to environmental aspects will include a matrix of relevant approval conditions. Each sub-plan will set objectives and targets and key performance indicators. CEMP sub-plans may be developed for separate stages or work packages or sites, as appropriate.	Construction
	Gen03	Prior to the commencement of operation, develop an Operation Environmental Management Plan (OEMP). The OEMP will: • Be developed in consultation with relevant stakeholders or as required by project approvals, legislation or guidelines. • Address waste management in accordance with the waste hierarchy.	Operation

Environmental aspect	Ref	Mitigation measure	Proposal stage
		• Consider the management plans implemented during construction and apply and adapt any measures that are relevant for operation. The OEMP will outline the framework for ongoing engagement with stakeholders consistent with the community and stakeholder engagement framework (MM S03). The OEMP will be implemented for the duration of operations.	
	Gen04	Develop an Environmental Audit Program for independent environmental auditing against the terms of the approval. The environmental auditor must be appropriately qualified and will verify compliance with the mitigation measures. The auditor will prepare an audit report after each audit. The audit report will be provided to the EPA Tasmania upon request.	Construction Operation
	Gen05	Prior to construction commencing, prepare an emergency response plan for the proposal, which addresses, at a minimum: • Emergency contact details and details of all shelter in place and offsite evacuation procedures. • A quantitative analysis of all major hazards associated with electrical, chemical, contamination and other environmental risks (including risks to receiving aquatic waterbodies and ecosystems). This can be performed through a Hazard and Operability Study (HAZOPS) workshop and be develop into a safe work method statement. • Procedures/protocols for the ongoing identification and assessment of risks. • Management of pollution incidents (e.g., water runoff and air emissions). • Site personnel induction and training in emergency response in accordance with the requirements of AS 3745:2010 *Planning for emergencies in facilities*. • Responses to extreme or chronic weather events such as bushfires, heavy rainfall events and extreme wind speeds, including to the potential impact on safety of employees, accessibility, and operation of infrastructure. The emergency response plan will be implemented for the duration of construction.	Construction
	Gen06	Co-ordinate and undertake consultation with other nearby projects where required, to manage the interface of projects under construction at the same time (i.e. North West Transmission Development project). Co-ordination and consultation with these stakeholders will include: • Provision of regular updates of the construction program and haul routes. • Identification of key potential cumulative impacts with other construction projects. • Developing mitigation strategies in order to manage cumulative impacts. Depending on the nature of the impact, this could involve collaboration on data collection or adjustment to the construction program or construction activities of the proposal or the other construction projects.	Construction
	CL01	**Manage excavated soil, contaminated soils and potential risks to the environment due to contamination during construction.**	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
Potentially contaminated material	**CL01-1**	Undertake a detailed site investigation prior to disturbance (in accordance with guidance from the Assessment of Site Contamination NEPM – including as a minimum schedules B1 and B2) to define the nature and extent of potential contamination in soils (including asbestos and ASS).	
	CL01-2	Identify options to manage surplus soils in accordance with the waste hierarchy.	
	CL01-3	Sample and classify all soils surplus to project requirements in accordance with EPA Tasmania's Information Bulletin 105 – Classification and Management of Contaminated Soil for Disposal, Australian Standards AS4482.1 (2005) and AS4482.2 (1999), and Tasmanian Acid Sulfate Soil Management Guidelines (DPIPWE 2009) to identify the waste classification of the soils.	
	CL01-4	Any waste soils that are classified as Level 1 (fill material), must be responsibly managed and disposed to a site where the soils do not result in impacts to the environment, or result in pollution (as defined in the EMPC Act), which may include disposal to a Solid Inert (Category A) Landfill. Level 1 soils may be reused on the site.	
	CL01-5	Any waste soils that are classified as Level 2 (low level contaminated soil) and surplus to project requirements are likely to be Controlled Wastes (depending on contaminants) and require disposal to a Category B (Putrescible Landfill). There are opportunities for Level 2 soils to be reused on the site, depending on the nature of the contamination and how they are proposed to be used. The reuse of Level 2 soils on the site will be assessed on a case-by-case basis in consultation with EPA.	
	CL01-6	All transport of contaminated soils must be undertaken by a licensed waste transporter.	
	CL01-7	Any temporary storage of soils must: • Be stored in appropriately sited stockpiles away from surface drainage lines with bunding. • Depending on the nature of the contamination in the material to be stockpiled, on a lined or impermeable surface. • Have surface covering if odorous. • Be sprayed during periods of dry weather with water or suitable dust suppressant.	
	CL01-8	Any asbestos containing materials to be disturbed must be removed from the site by an appropriately qualified and licensed removalist.	
	CL01-9	Develop an unexpected finds protocol for contamination, asbestos and odour management of excavated soils.	
	CL01-10	Develop and implement contingency and emergency response procedures to manage fuel, chemical or contamination spills.	
	CL01-11	Manage all contaminated materials, chemicals, fuels and hazardous materials to mitigate potential environmental harm via:	

Environmental aspect	Ref	Mitigation measure	Proposal stage
		• All dangerous goods or environmentally hazardous materials will be stored in appropriately bunded containers within the proposal site, in accordance with relevant Australian Standards and state regulations. • Fuel storage on site during construction will be via tankers (between 20,000 L and 50,000 L in size) that will be parked in bunded hardstands within the proposal site, or temporary containerised, self-bunded, above-ground fuel storage systems. Machinery and equipment will then either be refuelled within the site or in-situ via a refuelling truck, which will have on board spill kits and temporary bunding equipment. • Hydrocarbon and chemical spill kits will be stored within the proposal site and wherever dangerous goods and environmentally hazardous materials are used throughout the site.	
	CL01-12	The construction contractor will maintain records of waste soil volumes generated, disposal locations, and disposal facility receipts.	
	CL02	***Refer to Water quality (surface and groundwater) for MM CL02.***	
	CL03	**Develop and implement measures to manage potential contamination impacts in operation.**	Operation
	CL03-1	Fuel storage on site during operation will be in above-ground fuel storage tanks on an impermeable concrete surface (with bunding) designed in accordance with Australian Standard AS1940 *The storage and handling of flammable and combustible liquids*. Fuel deliveries will be via tankers that will be parked in designated refuelling areas designed to contain any potential spills. The fuel storage areas and refuelling areas will contain spill kits and temporary bunding equipment.	
	CL03-2	Develop and implement contingency and emergency response procedures to manage fuel, chemical or contamination spills.	
	CL03-3	Manage all contaminated materials, chemicals, fuels and hazardous materials to mitigate potential environmental harm via: • All dangerous goods, environmentally hazardous materials or fuels will be stored in appropriately bunded containers at the site, in accordance with relevant Australian Standards and state regulations. • Fuel and chemical spill kits will be maintained within close proximity to dangerous goods, hazardous materials or fuel storage areas.	
Terrestrial natural values	**EC01**	Develop and implement measures to protect the area of *Eucalyptus amygdalina*, coastal forest and woodland, present on the proposal site, primarily by implementing a no-go zone.	Construction Operation
	EC02	Prior to construction commencing, prepare a biodiversity management plan. Measures will include as a minimum: • Pre-works inspection of proposal site to confirm protection of the area of *Eucalyptus amygdalina* and to detect for presence of threatened fauna species, undertaken by a suitably qualified ecologist. • Salvage and re-location of fauna, if required, prior to construction. • Procedures for the management of injured fauna.	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
		• Procedures if unexpected threatened species are identified. • Measures detailing the identification and management of weeds, developed in accordance with the *Weed and Disease and Planning and Hygiene Guidelines* (DPIPWE 2015b), the relevant Statutory Weed Management plans associated with the declared weeds on site, and the Tasmanian *Biosecurity Act 2019*. • Adopt measures to minimise roadkill in MM T01, as appropriate. The biodiversity management plan will be implemented for the duration of construction.	
	EC03	Prior to construction commencing and every year during construction, confirm that there are no active Tasmanian wedge-tailed eagle nor White-bellied sea-eagle nests within a distance of 500 m of the site boundary, or within 1 km line-of-sight of the site boundary, using eagle nest search data collected within one year of construction commencing. At any time prior to or during construction, if an eagle nest is observed within 500 m, or within 1 km line-of-sight, works will cease until activity checks and other measures have been implemented in accordance with the Tasmanian Forest Practices Authority's *Fauna Technical Note No. 1 Eagle nest searching, activity checking and nest management* (FPA 2023), the *Threatened Tasmanian Eagles Recovery Plan 2006-2010,* and the EPA *Guide to Eagle Nest Searches and Activity Checks*. If activity checks are required, the following measures will be implemented: • Activity checks are to be conducted between mid-October and the end of December by a suitably qualified, FPA/NRE accredited assessor. • Activity checks are considered likely to disturb a breeding pair, potentially leading to breeding failure and would only be conducted under exceptional circumstances following consultation with NRE Tasmania and EPA Tasmania. Construction will be deferred until outside of the eagle nest management constraint period if a nest within 500 m, or within 1 km line-of-sight is determined to be active as per FPA *Fauna Technical Note No. 1*.	Construction
	EC04	Prepare and implement an eagle nest management strategy if a new eagle nest is identified within 500 m or 1 km line-of-sight of the site boundary during construction, in accordance with FPA *Fauna Technical Note No. 1*, the *Threatened Tasmanian Eagles Recovery Plan 2006-2010,* and the EPA *Guide to Eagle Nest Searches and Activity Checks*. This strategy will be prepared in consultation with NRE Tasmania and EPA Tasmania.	Construction
Noise and vibration emissions	**NV01**	Prior to construction commencing, conduct additional background noise monitoring at noise affected sensitive receptors in the vicinity of the proposal site. The background noise monitoring data will: • Inform the assessment of construction noise (MM NV02 and MM NV03) and operational noise (MMs NV04, NV05 and NV06). • Be conducted at a selection of locations which are representative of the receptors that could be impacted by construction and operation of the proposal.	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
		The background noise monitoring and results analysis will be conducted, where relevant, in accordance with procedural guidance detailed in: • *Noise Measurement and Procedures Manual 2008*. Australian Standard 1055:2018 *Acoustics - Description and measurement of environmental noise.*	
	NV02	Prior to commencement of construction, develop a construction noise and vibration management plan in consultation with EPA Tasmania. The construction noise and vibration management plan will document: • A description of all noise generating construction activities and their locations. This must include a schedule of equipment types and numbers for each activity and location. • A description of the construction program including timing and duration of construction activities. • The results of additional background monitoring conducted under MM NV01. • Detail the reasonable and feasible work practices and mitigation measures to be applied to minimise noise and vibration associated with both on-site and off-site sources of construction activities (including heavy vehicle movements on local roads), including: - Requirement for the selection major plant items with low noise emissions, characterised by sound power levels that are equivalent to, or lower than, the values/ranges indicated in AS 2436 *Guide to Noise and Vibration Control on Construction, Demolition and Maintenance Sites (Reconfirmed 2016)*, unless it can be demonstrated that adhering to these values would not be reasonably practicable. - Measures for the control of potentially annoying characteristics such as tonality, impulsive and low-frequency. - Scheduling protocols for minimising the potential disruption caused by high noise levels as a result of transient construction activities which occur near to receptors for brief periods. - Details of any locations where temporary screens or enclosures are identified as a reasonably practicable control measure, informed by updated construction noise modelling. • Requirements for monitoring including verification noise testing (if warranted) to assess the effectiveness of the noise controls before commencing continuous night works. • Communication protocols for notifying affected receptors in advance of the works occurring. • Protocols for providing respite in circumstances where residents are affected by prolonged exposure to elevated noise levels as a result of construction works out of hours. • Complaint handling and response protocols. The construction noise and vibration management plan will address the requirements of: • *Environmental Management and Pollution Control (Noise) Regulations 2016*. • *Environment Protection Policy (Noise) 2009*.	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
		• Australian Standard AS 2436. The construction noise and vibration management plan will be a sub plan to the CEMP and implemented for the duration of construction.	
	NV03	Conduct construction noise monitoring in accordance with the requirements of the construction noise and vibration management plan prepared in accordance with MM NV02. The results of the construction noise monitoring must be documented in accordance with the timeframe and reporting requirements established in the construction noise and vibration management plan. The report must identify if changes to the construction noise mitigation and management measures are warranted to minimise the impact of noise as far as reasonably practicable.	Construction
	NV04	Prior to installing the converter station and any enclosing structures, prepare a design noise assessment report for the final converter station design. The report will: • Include predicted noise levels based on the final design of the converter station and representative noise emission data for the final equipment selections for the proposal. • Provide a schedule of the measures that have been incorporated into the design for the control of environmental noise levels, demonstrating that all reasonable and practical measures would be implemented to minimise the impact of operational noise. • Present the results of updated background noise monitoring conducted to for the nearest receptors to the proposal site (MM NV01). • Provide details of the noise frequency characteristics of key items of plant such as the transformers and valve coolers, and assessment of whether character adjustments are warranted. • Demonstrate that noise levels for the final design and equipment selections during typical operations (normal full-power operation during elevated temperatures, excluding emergency standby generators and overload conditions), when assessed in accordance with the procedures of the *Tasmanian Noise Measurements Procedures Manual*, Second Edition dated 2008, are predicted to comply with: - Day (Monday to Saturday 0700 – 1800 hrs): 45 dB $L_{Aeq,30\text{-}min}$ - Evening (Monday to Saturday 1800 – 2200 hrs, and 0700 – 2200 hrs on Sundays and public holidays): 40 dB $L_{Aeq,30\text{-}min}$ - Night (Monday to Sunday 2200 – 0700 hrs): 35 dB $L_{Aeq,30\text{-}min}$ • Demonstrate that noise levels for the final design and equipment selections during testing of the emergency standby generators, when assessed in accordance with the procedures of the *Tasmanian Noise Measurements Procedures Manual*, Second Edition dated 2008, are predicted to comply with a level of 55 dB $L_{Aeq,30\text{-}min}$ (testing to occur during the day on weekdays for a period of not more than one hour every three months). The design noise assessment report will be made available to EPA Tasmania on request.	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
	NV05	As part of the OEMP, develop an operational noise management plan for the converter station in consultation with EPA Tasmania. The operational noise management plan will: • Document the noise mitigation and management measures developed in design (MM NV04) that apply to the operation and maintenance of the converter station. • Procedures for, and timing of, noise monitoring to be carried out to assess compliance with the applicable noise limits when the converter station commences operation. • Details and timing of noise compliance reporting to be submitted to EPA Tasmania. • Details of any maintenance and monitoring measures that are required to maintain ongoing compliance. • Procedures for routine operational testing of plant that is used solely for emergencies (e.g. regularity, days, and times of testing). • Procedures to investigate noise complaints or suspected noise compliance issues. The operational noise management plan will be made available to EPA Tasmania on request. The operational noise management plan will be a sub plan to the OEMP and implemented during operation.	Operation
	NV06	Prepare an operational noise compliance assessment report based on: • An inspection of the converter station to confirm that the noise mitigation and management measures documented in the operational noise management plan (MM NV05) have been fully implemented. • The results of noise monitoring conducted in accordance with the operational noise management plan (MM NV05), to assess compliance with the applicable noise limits. The report will be submitted to EPA Tasmania within six months of each stage of the converter station becoming fully operational.	Operation
Water quality (surface and groundwater)	**SW01**	Minimise flood risk due to permanent infrastructure by applying the following key design measures to the proposal, which will be fully documented in the final Design Report, to be submitted to the EPA for review and approval prior to construction: • All permanent infrastructure will be designed to take flood risk into account, the requirements outlined in the *Floodplain Risk Assessment Guidelines for Municipal Councils in Tasmania* (White 2019). • Roads/access ways will be designed with suitable drainage, including appropriate camber and natural drainage swales, and any concentrated discharges will pass through water mitigation infrastructure such as rock filters. • All permanent infrastructure will be designed to take storage locations of all environmentally hazardous materials into account, as is required by the building code.	Design
	SW02	Prior to construction commencing, a progressive sediment and erosion control plan for the proposal will be developed (either as a standalone document or part of the CEMP) and submitted to the EPA for approval. The plan will:	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
		• Be implemented throughout construction. • Identify all major drainage lines and waterways and site-specific management and mitigation to be implemented, including controls such as sandbags, sediment fences, sediment traps and diffusion paths to ensure stormwater is suitably contained, managed and released to avoid and minimise sediment release, pollution and erosion. The plan must describe sediment and erosion controls and monitoring requirements in accordance with: • EPA Tasmania fact sheets: Soil and Water Management on Large Building and Construction Site; Erosion Control Matts and Blankets; Scour Protection – Stormwater Pipe Outfalls and Check Dams; Stabilised Access and Sediment Fences and Fibre Rolls. • IECA Best Practice Erosion and Sediment Control Guidelines 2008. • EPA Tasmania Bunding and Spill Management Guidelines 2015.	
	SW03	Prior to construction commencing, a flood risk management plan for the proposal will be developed (either as a standalone document or part of the CEMP) in line with the requirements outlined in the *Floodplain Risk Assessment Guidelines for Municipal Councils in Tasmania* (White 2019).	Construction
	SW04	Prior to construction commencing, a surface water monitoring program for the proposal will be developed in consultation with EPA Tasmania and must include, as a minimum: • Parameters, frequency, durations of water quality monitoring, and flow paths and drainage channels condition inspections. • Monitoring locations at suitable distances both upstream and downstream of works to establish baseline conditions prior to construction, where required. • Requirements for daily visual monitoring of active construction areas for visible water quality issues including high sediment loads or erosion.	Construction
	SW05	As part of the OEMP, develop and implement measures to avoid or minimise impacts to surface water during the operation in accordance with requirements from EPA Tasmania. These measures must include: • Controls for management of sites and materials to prevent erosion, runoff of contamination and sediments entering flow paths and drainage channels. • Ongoing surface water quality monitoring program requirements, as outlined in the surface water monitoring program (MM SW04).	Operation
	CL02	Develop and implement ASS management controls during construction.	Construction
	CL02-1	Design excavation and soil disturbance works to avoid ASS where practicable.	
	CL02-2	ASS risk and management will be addressed through the development of an ASS Management Plan in accordance with the *Tasmanian Acid Sulfate Soil Management Guidelines* (DPIPWE 2009).	

Environmental aspect	Ref	Mitigation measure	Proposal stage
		The ASS Management Plan will be developed in consultation with EPA Tasmania.	
	CL02-3	Where disturbance of ASS cannot be avoided, develop management measures to reduce the potential impact from ASS in accordance with the *Tasmanian Acid Sulfate Soil Management Guidelines* (DPIPWE 2009) and the *National Acid Sulfate Soils Guidance* (Sullivan et al., 2018) as follows: • Design and appropriately locate ASS stockpile areas to avoid and otherwise minimise impacts from acid generation including lining, covering and runoff collection to prevent release of acid. • Where ASS is identified and disturbed, it must be treated to ensure neutralisation of potential acid generation. Treatment (via liming) is to be at the rates identified during the further ASS assessment to be undertaken in the proposed detailed site investigations for MM CL01. • Any treatment must be designed with consideration of Tasmanian regulations and guidance and include sufficient neutralising capacity to mitigate acid generation. • Manage any odours that may be generated during handling of potential ASS. • Prevent oxidation of disturbed ASS so far as reasonably practicable via: - Scheduling works to limit exposure of ASS to oxidising conditions. - Ensuring ASS or acid sulfate rock is not retained in on-site stockpiles for long periods (i.e. greater than 48 hours) without treatment. - Designing and implementing ASS treatment to neutralise ASS prior to other management measures applied. • Identify suitable sites for re-use, management or disposal of ASS and acid sulfate rock that may be generated by the proposal.	
	GW01	Conduct a pre-construction hydrogeological assessment at the proposal site to inform appropriate detailed design and construction methods. The hydrogeological assessment must include: • Installing additional groundwater monitoring wells. • Performing aquifer hydraulic testing. • Monitoring groundwater levels and quality to address identified data gaps and be sufficient to support development of further mitigation measures for MMs GW02, GW04, and GW05. It should include a preliminary groundwater dewatering and drawdown assessment for areas where dewatering is anticipated, based on the engineering design and anticipated earthworks available at the time, using a revised hydrogeological conceptual model. The assessment should be completed by a suitably qualified hydrogeologist, and it should review whether the predicted impacts of the proposal on groundwater may be greater than those originally assessed.	Design

Environmental aspect	Ref	Mitigation measure	Proposal stage
		The assessment results should be documented in a hydrogeological interpretive report that is made available prior to detailed design, and be suitable to support development of other management and mitigation measures. Relevant conclusions should be presented as part of the groundwater management plan, that will be prepared prior to, and implemented during construction.	
	GW02	Minimise groundwater inflow into excavations, limit groundwater level drawdown, avoid mobilising contaminated or saline groundwater, and prevent groundwater acidification. Consider scheduling earthworks to reduce the duration of dewatering, so far as reasonably practicable, and assess the need for engineering controls such as sheet pile walls, aquifer injection, and decommissioning infrastructure, to ensure potential impacts to groundwater are avoided, and perform hydrogeological assessments to ensure the effectiveness of these controls. These measures must be informed by the ASS management procedure (MM CL02) and consider acidification risk in areas of predicted groundwater level drawdown defined by MM GW01. These measures must be documented in a groundwater management plan that includes design specifications, monitoring requirements, and contingency plans.	Construction
	GW03	*Not relevant to this proposal*	
	GW04	Develop and implement a groundwater management plan to manage, monitor, reuse, treat, and dispose of groundwater during construction dewatering. The groundwater management plan will: • Prioritise groundwater reuse (such as for construction water supply, dust suppression, or reinjection for hydraulic control, where feasible). • Specify approved disposal options (e.g., discharge to surface water, sewer, or stormwater). • Document agreed water quality discharge criteria and action trigger levels. • Outline suitable treatment technologies that will be implemented or reserved as contingency measures should unforeseen contamination be encountered.	Construction
	GW05	Develop and implement a construction groundwater monitoring plan to establish baseline and background groundwater conditions prior to construction and monitor potential proposal impacts during construction. The construction groundwater monitoring plan should: • Include an initial review of the groundwater monitoring network (developed for MM GW01). • Assess its suitability to establish baseline and background conditions prior to construction. Adequate monitoring should be completed prior to construction commencing to characterise groundwater quality and levels, including seasonal changes. The plan should recognise the potential requirement for the monitoring network to change over time in response to the proposal's progress through design and construction.	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
		For construction impact monitoring, the plan should include: • Groundwater quality and level triggers. • Mitigation measures to be implemented in response to a trigger exceedance to prevent impacts to groundwater values during construction. The monitoring plan must be developed in consultation with EPA Tasmania and be documented in a groundwater management plan.	
	GW06	Develop and implement an operational groundwater management plan to detect and minimise potential contamination impacts during the proposal's operation. The operational groundwater monitoring plan should: • Include an initial review of the adequacy of the available groundwater monitoring network remaining at the end of construction to monitor and validate the effectiveness of mitigation measures to detect and respond to proposal-related groundwater contamination that may occur during operation. • Recognise the potential requirement new wells to be installed that are suitable to detect groundwater contamination from project operational activities. • Include groundwater quality and level triggers and actions to be taken in response to a trigger exceedance to prevent impacts to groundwater values during construction and operation. • Include ongoing groundwater monitoring requirements and verification of groundwater level (and quality if relevant) recovery post-construction. The operational groundwater monitoring plan must be developed in consultation with EPA Tasmania and be documented in a groundwater management plan as part of the OEMP.	Operation
Air quality	**AQ01**	The following best-practice dust management measures will be implemented during construction: • Regular wetting down of exposed and disturbed areas including stockpiles, in dry and windy weather. • Adjust the intensity of construction activities based on observed dust levels and weather forecasts (MM AQ02). • Minimise the amount of materials stockpiled and position stockpiles away from proposal site boundary (where practicable). • Regularly inspect dust emissions (MM AQ02) and apply additional controls as necessary.	Construction
	AQ02	Conduct construction air quality monitoring including: • Daily monitoring of wind/weather forecasts and temperature and humidity using data from nearby automatic weather station and/or BoM. • Hourly monitoring of rainfall using data from nearby automatic weather station and/or BoM. • Daily monitoring of odour when odour generating works are being carried out, or when a complaint is made.	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
		• Daily visual surveillance to confirm effectiveness of dust control mitigation and that there are no visible dust emissions beyond the boundary of the proposal site. • Investigations as required in response to a complaint. This may require review of monitoring data, frequency, and effectiveness of mitigation.	
	AQ03	Plant and equipment will be maintained in a proper and efficient manner. Visual inspections of emissions from plant will be carried out as part of pre-acceptance checks.	Construction Operation
	AQ04	The following best-practice odour management measures will be implemented during relevant construction works: • The extent of opened and disturbed contaminated soil at any given time will be minimised. • Temporary coverings or odour supressing agents will be applied to excavated areas where appropriate. • Monitoring as outlined in MM AQ02.	Construction
Waste management	**WM01**	Prior to construction commencing, develop and implement a waste management plan, for the identification of waste management strategies, in accordance with the waste management hierarchy. The waste management plan will include (at a minimum): • The waste mitigation measures in this EIS. • Identification of a designated waste area on site, where all waste (and recyclables) would be stored or stockpiled. • Responsibilities of the key personnel implementing this plan. • Waste area inspection frequency.	Construction
	WM02	All waste will be assessed, classified, managed, transported and disposed of in accordance with the *Environmental Management and Pollution Control (Waste Management) Regulations 2020*.	Construction
	WM03	If hazardous waste, controlled waste (e.g., asbestos containing materials) or contaminated soil is encountered, it will be handled and managed in accordance with relevant legislation, codes of practice and Australian standards.	Construction
	WM04	Construction waste will be minimised by accurately calculating materials brought to the site and limiting materials packaging, and maximising reuse where feasible and reasonable.	Construction
	WM05	Waste streams will be segregated, using appropriately labelled and managed bins, to avoid cross-contamination of materials and maximise reuse and recycling opportunities.	Construction
	WM06	A materials tracking system will be implemented for material transferred between the proposal site and offsite licensed waste management facilities.	Construction
	WM07	The generation of waste will be minimised and reused where possible, in accordance with the waste management hierarchy, and the MLPL Sustainability Framework. Waste management in operation would include: • Segregation and storage of waste in designated areas/receptacles.	Operation

Environmental aspect	Ref	Mitigation measure	Proposal stage
		• Waste to be collected by a licensed waste contractor for off-site recycling or disposal at a licensed waste facility. These operation mitigation measures would be incorporated into the OEMP as per MM Gen03.	
Dangerous goods and environmentally hazardous materials	**DG01**	Ensure spill prevention and clean up equipment is readily available and accessible in the vicinity of all plant and machinery, including mobile and fixed fuel storages. Spill prevention and clean up procedures will be in accordance with the following principles: • Adequate training and site induction for personnel for the handling of dangerous goods and environmentally hazardous materials. • Install trays, thick plastic mats or similar beneath stationary machinery and equipment to protect the soil from oil/fuel spills and leaks. • Install spill trays immediately if there is any potential or, evidence of, leakage. • Maintain a supply of oil-absorbent material.	Construction Operation
	DG02	The transport of dangerous goods will be in accordance with the *Australian Code for the Transport of Dangerous Goods by Road and Rail*, and the *Dangerous Goods (Road and Rail Transport) Act 2010*, including, but not limited to measures for: • Classification. • Documentation. • Safety equipment and procedures.	Construction Operation
Greenhouse gases and ozone depleting substances	**GHG01**	Identify opportunities to reduce Scope 1 and Scope 2 GHG emissions (as defined in the *National Greenhouse and Energy Reporting Act 2007*) so far as reasonably practicable and in accordance with the Marinus Link Sustainability Framework. Consideration will be given to: • Use of low emission fuels. • Maintenance of equipment and vehicles. • Minimising vegetation clearance. • Purchase of green energy. • Procurement of energy efficient machinery. • Use of low carbon emission concrete. • Use of recycled materials. The design must include measures to avoid SF_6 leakage so far as reasonably practicable. During project design, encourage the selection of materials that reduce Scope 3 GHG emissions where appropriate and reasonably practicable.	Design Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
	GHG02	During operations, identify opportunities to reduce operational Scope 1 and Scope 2 GHG emissions (as defined in the *National Greenhouse and Energy Reporting Act 2007*) so far as reasonably practicable and in accordance with Marinus Link Sustainability Framework. Consideration will be given to: • Management and maintenance of SF_6 insulated equipment in accordance with Australian Standard IEC 62271.4: 2015 – *high-voltage switchgear and control gear – Part 4: Handling procedures for sulphur hexafluoride (SF6) and its mixtures* and the *Energy Network Australia Industry Guideline for SF6 Management* (Document 022-2008) and prevention of release of SF_6 by using a closed cycle during installation, maintenance and decommissioning of equipment where practicable. • Use of low emission fuels. • Maintenance of equipment and vehicles. • Purchase of green energy. • Procurement of energy efficient machinery. Scope 1 and Scope 2 emissions from operations will be reported annually on the Marinus Link website.	Operation
	CC01	Design the proposal to address potential impacts from climate change across the life of the proposal, considering: • Increased ambient temperatures/soil temperatures/sea temperatures and their potential impact on the operation of high voltage infrastructure. • Sea level rise and coastal erosion and its potential impact on accessibility, and function of coastal infrastructure. The design will be informed by a risk assessment completed to identify climate change risks and management measures based on: • AS/NZS ISO 31000:2018 *Risk management – Principles and guidelines*. • AS 5334-2013 *Climate change adaptation for settlements and infrastructure – A risk-based approach*. • IPCC 2013 *Managing the risks of extreme events and disasters to advance climate change adaptation*.	Design
Socio-economic issues	**S01**	Prior to construction commencing, in preparing the project's worker health and safety plan, include: • Requirements and measures for responding to health, medical and safety incidents of construction personnel during the construction phase. • Strategies for provision of first response medical capabilities on-site for both local and non-local employees and contractors to minimise the impact on local health services.	Construction
	S02	Develop a workforce and accommodation strategy to address the potential social impact from the workforce and accommodation requirements during construction. The strategy will: • Be developed in consultation with government, industry and other relevant providers.	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
		• 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 will be considered during construction planning.	
	S03	Prior to construction commencing, develop a community and stakeholder engagement framework for the whole project, which outlines the approach to engagement with community, stakeholders, First Peoples and the Tasmanian Aboriginal Community that will be undertaken for the project, including the proposal, and by all contractors. The community and stakeholder engagement framework must: • Be consistent with IAP2 principles and guidance in the National guidelines Community engagement and benefits for electricity transmission projects (ECMC 2024), and Renewable energy development in Tasmania: A guideline for community engagement, benefit sharing and local procurement (Department of State Growth 2024). • Identify key community and stakeholder groups across the project, including for the proposal, with a likely interest such as property owners, local residents, business owners, business and industry associations road users, and local Council. • Describe the approach for engaging the community, stakeholders, First Peoples and the Tasmanian Aboriginal Community. • Establish communication protocols and tools for communication that provide: - Early and ongoing information and notification to local communities and stakeholders about timing and duration of works, potential impacts and proposed management measures. - Information on issues of community concern and proposed management measures such as project scope, construction noise (including out of hours works), construction air quality, construction traffic, operational noise and EMF). • Outline complaints policies and management procedures for recording, managing, and resolving complaints. The complaints management system will be consistent with Australian Standard AS/NZS 10002: 2014 *Guidelines for Complaints Management in Organisations*. Principal contractors will prepare a community and stakeholder engagement management plan in accordance with the framework for their works package, including tailored to the proposal. The community and stakeholder engagement framework and contractors' community and stakeholder engagement management plan will be updated annually to reflect any project or stakeholder changes and improvements identified. The community and stakeholder engagement framework will be implemented during construction.	Construction
	S04	Prior to construction commencing, develop a Tasmanian community benefits sharing scheme in consultation with communities and the Tasmanian Aboriginal Community in the identified local study area. The Tasmanian	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
		community benefits sharing scheme will be developed having regard to *Renewable Energy Development in Tasmania: A guideline for community engagement, benefit sharing and local procurement* (Department of State Growth 2024).	
	S05	Prior to construction commencing, develop an industry participation plan to integrate First Peoples, the Tasmanian Aboriginal Community, women, youth and socially vulnerable groups into the project workforce. The purpose of the industry participation plan is to stimulate entrepreneurship, business and economic development, providing First Peoples, the Tasmanian Aboriginal Community and vulnerable groups with more opportunities to participate in the economy. The plan will: • 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 local First Peoples or the Tasmanian Aboriginal Community working age population within the project area and consistent with the 'locals first principle'. • Identify opportunities for women, youth and other socially vulnerable groups to be involved in the project workforce.	Construction Operation
	S06	Prior to construction commencing, engage with local emergency service providers in the preparation, planning, monitoring and review of the project's emergency response plan and procedures. The project's emergency response plan must outline protocols for: • Ongoing engagement with emergency services about changes to local access and project activities that have potential to cause delay or disruption to emergency response. • Engaging with the community and managing social impacts during an emergency incident. The protocols will form part of the project's emergency response plan and will be implemented during construction.	Construction
Fire risk	**BF01**	Prior to construction commencing, develop and implement a bushfire protocol as part of the emergency response plan to: • Provide a description of the site and facility. • Reference all relevant emergency procedures and information, including contact details. • Restrict high risk activities with ignition risk in the open on Total Fire Ban Days. • Ensure activities with ignition risk undertaken in the open on other days are accompanied by a fire extinguisher.	Design Construction Operation

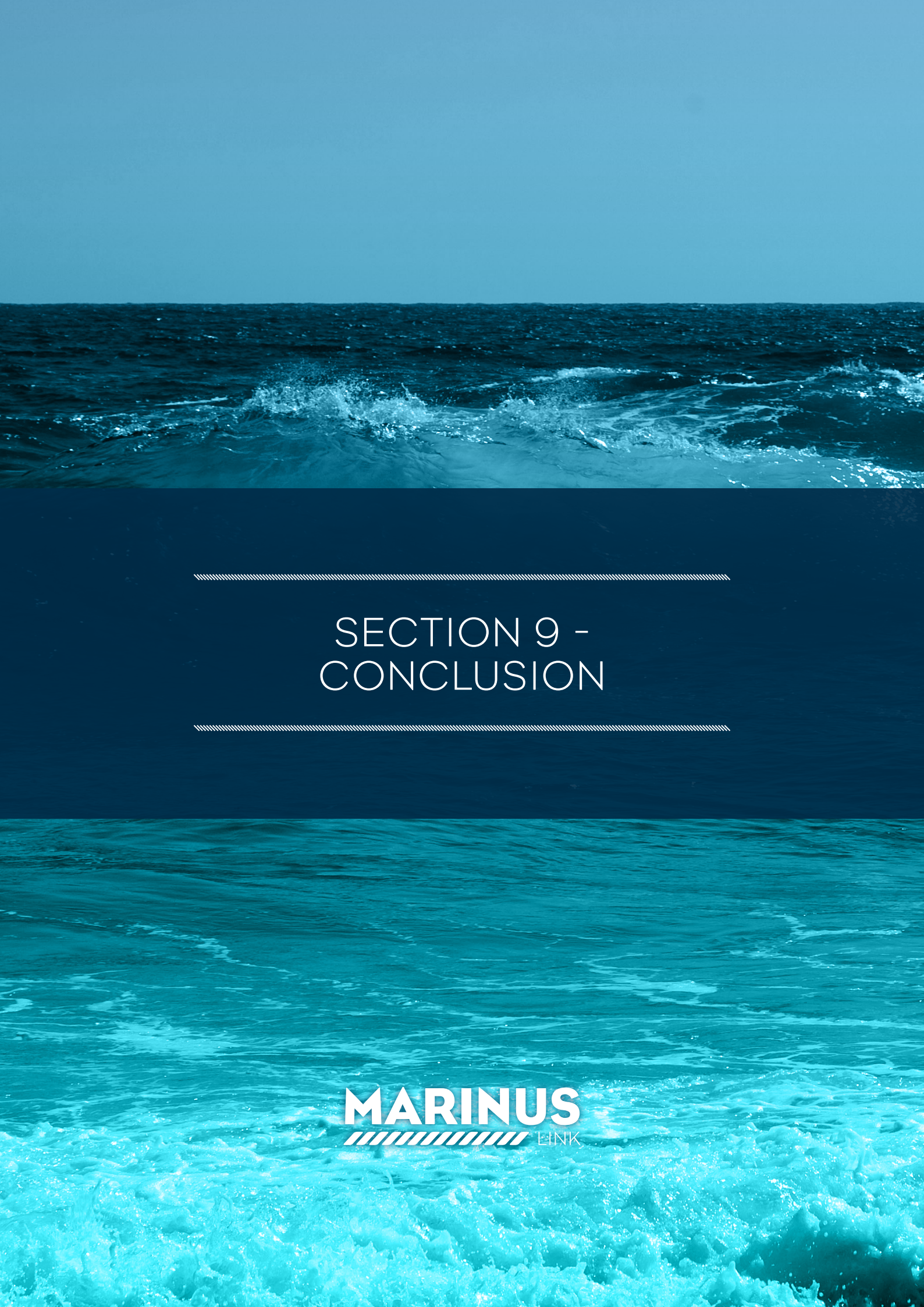
Environmental aspect	Ref	Mitigation measure	Proposal stage
		• Maintain vegetative fuels and other combustibles to low levels (i.e. grass slashed to <100mm height) within the site prior to and during the bushfire danger periods. • Maintain vehicles, plant and machinery in accordance with relevant specifications to prevent fire ignition from their operation. • Maintain firefighting systems and water tank capacity. • Provide trained personnel and fire suppression equipment. • Mitigate ignition risks from electrical faults infrastructure (e.g., fault management, system monitoring, fire detection and suppression) by ensuring design and construction meets applicable standards and guidelines (e.g., fault management, system monitoring, fire detection and suppression). • Establish and maintain vehicle access to the site and surrounds, including an alternative emergency access for fire suppression activities by firefighting authorities. • Detail bushfire emergency preparedness arrangements and response procedures. • Document control and coordination arrangements for personnel inductions, training, plan review and liaison with external stakeholders. • Detail all shelter in place and offsite evacuation procedures. The protocol should be prepared to be consistent with (to the extent required) the *Bushfire Emergency Planning Guideline* (TFS 2021) and endorsed by the TFS or an accredited person. Operational emergency response requirements will be detailed in the OEMP.	
	BF02	As part of the Emergency Response Plan, develop measures for the provision of dedicated onsite water supply tanks or alternative water sources for firefighting in high fire risk areas. The measures will include: • Provision of tanks that are non-combustible tanks and incorporate with appropriate firefighting fittings, for emergency services to access the water supply. • Maintaining clear access to tanks or water sources for fire fighting vehicles. • Providing sufficient water capacity to undertake adequate fire suppression as per the provisions of AS2419.1-2023: *Fire hydrant installations, Table 2.2.5(D) for open yards*.	Construction Operation
Infrastructure and off-site ancillary facilities	**T01**	Prior to construction commencing, prepare and implement a transport management plan in consultation with Burnie City Council. The transport management plan will include: • Requirements for maintaining transport capacity and appropriate performance for all travel modes in the peak travel demand periods, particularly at the key intersections of Bass Highway / Minna Road and Minna Road / the proposal site access point. • Management of full or partial traffic lane closures. • Requirements that construction vehicles use identified vehicle routes or nominate alternatives as required, obtaining road authority approvals where necessary.	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
		• Containment of construction worker car parking within the proposal site. • Identification of methods to reduce impact of project generated traffic where practicable. • Driver training requirements, with drivers required to undertake project training that addresses site specific road safety risks along haulage routes. • Measures to minimise heavy vehicle movements through designated school zones when these zones are in operation (8:00am to 9:30am, 2:30pm to 4:00pm, school days). • Mitigation measures to address potential roadkill, developed in accordance with *Tasmanian Devil Survey Guidelines and Management Advice for Development Proposals*, including, but not limited to: - Protection measures for the Tasmanian devil and Spotted-tailed quoll with a focus on construction traffic and awareness regarding roadkill included in site inductions. - Establishing and implementing a recording and reporting process for roadkill on Minna Road between intersection with Bass Highway and the entry to site, where vehicles associated with the proposal will travel, especially for reporting Tasmanian devils and spotted-tail quoll roadkill incidents to NRE. - Construction vehicles to maintain low speeds between dusk and dawn. - Removing roadkill mortalities off the road within a specified distance of the site to reduce attracting carnivorous fauna during the construction period.	
	T02	Prior to construction commencing, engage with the Department of State Growth and prepare and implement an oversize and over mass vehicle protocol addressing: • Controls and supervision requirements for the movement of the transformer transporter from the Port of Burnie to the proposal site. • Inspection requirements for bridges and culverts supporting the movement of oversize or over mass loads. • The identification of changes to road or infrastructure, including road furniture, required for the movement of oversize and over mass loads. • Height requirements of overhead powerlines on the transformer transporter path of travel, with particular focus on the movements around Minna Road. • The identification of changes to road or infrastructure, including road furniture, required for the movement of oversize and over mass loads. • Height requirements of overhead powerlines on the transformer transporter path of travel, with particular focus on the movements around Minna Road.	Construction
Decommissioning and rehabilitation	**DR01**	Reinstatement of the proposal site on completion of construction, including: • Removal of all plant and machinery, and temporary buildings not required for a subsequent stage of construction. • Clean-up of site including removal of rubbish and excess construction materials.	Construction

Environmental aspect	Ref	Mitigation measure	Proposal stage
		• Reinstatement (including backfill) of the land that has been occupied temporarily (and that would not be used for the operational asset) which would involve the application of soil ameliorate (if necessary) and seeding to establish a ground cover. • Treatment and removal of any weed infestations. These requirements will be included in the CEMP. Any ongoing rehabilitation and/or monitoring requirements will be detailed in the OEMP.	
	DR02	• A Decommissioning and Rehabilitation Plan would be provided to the Director of the EPA within three years of completion of construction of Stage 2.	Decommissioning

8.3 Monitoring and review

Particular aspects of the environment would be subject to monitoring programs during construction and operations. These are for the purpose of ensuring compliance with emissions standards and for the purpose of responsive environmental management (e.g., to halt earthworks during hot and very windy conditions to avoid dust). Details of monitoring (parameters and frequency) are included in the mitigation measures in Table 8-1.



SECTION 9 - CONCLUSION

MARINUS LINK

9. Conclusion

This EIS satisfies the requirements of the EIS guidelines (refer to Appendix A) and the information required by Section 74(9) of the EMPC Act. Throughout the EIS:

- The environmental impacts of the proposal have been identified and assessed.
- The benefits of the proposal and the project have been explained.
- Controls and mitigation measures for the proposal have been recommended.

This section provides an overall conclusion as to the environmental acceptability of the proposal. It demonstrates compliance with principles of ecologically sustainable development (ESD) drawn from intergovernmental policy and the objectives and requirements of the EMPC Act.

9.1 The project is environmentally acceptable

The proposal involves the construction, operation and decommissioning of the Heybridge Converter Station, which is an essential part of the Marinus Link Project (the project). The project would support Australia's transition to renewable energy by providing the NEM with greater market access to Tasmania's wind and hydro power and proposed pumped hydro long duration energy storage resources. Once operational, together with the NWTD project, the project will enable the flow of electricity between Tasmania and Victoria, delivering low-cost, reliable and clean energy for customers in the NEM. The project would contribute to a shift away from Australia's dependence on fossil fuels, so would help governments achieve their goals of renewable energy uptake and climate mitigation.

The proposal has been designed to minimise potential environmental impacts to the environment and to the local community. Adverse impacts have been avoided through selection of the proposal site as a former industrial site with limited sensitivities. Comprehensive investigations have been carried out in the preparation of this EIS to assess the environmental, economic and social impacts.

Some potential environmental and social impacts from the proposal, if not managed, include potential risk of disturbing contaminants and soils which may lead to contaminants entering waterways, potential for additional roadkill due to an increase in vehicles using the road network, dust impacts to sensitive receptors associated with construction activities, strain on support services, local infrastructure and rental accommodation (refer to Section 6).

However, the proposal would also provide social and economic benefits through creation of jobs, and contribution to the local and regional economy (refer to Section 6.11).

Mitigation and management measures as detailed in this EIS (refer to Section 8) would further avoid or minimise any adverse impacts, and with these measures in place, the overall environmental impact would be managed to an acceptable level. The proposal would be constructed in accordance with a CEMP, which would outline all environmental management, mitigation and monitoring required to be implemented. The ongoing management and monitoring requirements would be detailed in an OEMP.

The EIS clearly demonstrates that the proposal should proceed and that the residual impacts can be managed appropriately.

9.2 Ecologically sustainable development (ESD)

The National Strategy for Ecologically Sustainable Development (1992) (NSESD) describes ESD as *"development which aims to meet the needs of Australians today, while conserving our ecosystems for the benefit of future generations. To do this, we need to develop ways of using those environmental resources which form the basis of our economy in a way which maintains and, where possible, improves their range, variety and quality. At the same time we need to utilise those resources to develop industry and generate employment."*

The proposal, together with the project that it is a component of, has a relatively small footprint and a limited scale and duration of adverse impacts, yet has the potential to contribute to significant environmental, health and climatic improvements at a broader scale and longer timeframe as the proposal and project are a critical part of the transition to renewable energy and away from fossil fuel energy.

The objectives of ESD focus on economic improvement across generations, environmental protection, and responsible resource use. The NSESD further explains that an ESD approach to development requires:

- Integrating economic, social and environmental implications of our decisions and actions for Australia, the international community and the biosphere.
- Adopting a long-term rather than short-term view when taking those decisions and actions.

This EIS lays out the necessary information to support a decision that considers the environmental, social and economic consequences of the proposal and distinguishes between temporary impacts associated with the construction of the proposal, the minimal long-term effects that the proposal would have on the landscape, and the lasting benefits for the economy and the people of North West Tasmania.

The general principles of ESD in the NSESD are:

- Decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations (**the integration principle**).
- Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation (**the precautionary principle**).
- The global dimension of environmental impacts of actions and policies should be recognised and considered (**the global dimension**).
- The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised (**a strong economy**).
- The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised (**international competitiveness**).

- Cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms (**improved valuation, pricing and incentive mechanisms**).
- Decisions and actions should provide for broad community involvement on issues which affect them (**the public participation principle**).

Schedule 1 of the EMPC Act sets out the objectives of the resource and management planning system of Tasmania. This includes "*to promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity*". Sustainable development is defined in the EMPC Act as managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety while:

- Sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations (**intergenerational equity**).
- Safeguarding the life-supporting capacity of air, water, soil and ecosystems (**biodiversity conservation principle**).
- Avoiding, remedying or mitigating any adverse effects of activities on the environment (**environmental management principle**).

The following discussion identifies how the proposal and its environmental assessment complies with these principles of ESD. As recognised by the NSESD, these principles must be balanced. No one principle dominates over the others, and not all principles are as relevant as others to all projects.

9.2.1 Integration principle

Project planning and design has considered the potential social, economic and environmental impacts that may occur during construction, operation and decommissioning. The objective of the route and site selection was to identify the 'shortest, technically feasible route between connection points that minimises environmental, land use and cultural heritage impacts' (Marinus Link 2021).

The project involved a route and site selection process that considered technical, environmental, cultural and social constraints. Desktop assessments of ecological values, cultural heritage values and geomorphology were completed to inform the route selection process, with detailed consideration of options occurring since 2018. Consultation activities with a range of stakeholders was carried out to inform the route and site selection process.

Based on economic analysis of potential capacity options of 600 MW up to 1500 MW, a transmission capacity of 1500 MW was identified as delivering the highest net economic benefit (TasNetworks 2021).

An integrated assessment of the technical requirements and potential impacts, considering both short and long terms impacts, was completed to determine the preferred project alignment. It has also informed the development of the proposal concept design assessed in this EIS.

In comprehensively responding to the EIS guidelines (refer to Appendix A), the assessment of the proposal has considered economic, social and economic considerations. In the preparation of this EIS the various impacts and mitigation measures have responded in a holistic way to the different positive and negative impacts of the proposal. Importantly, mitigation measures have been developed with input from technical specialists and shared across technical disciplines.

9.2.2 Precautionary principle

This principle was considered during the site selection process (refer to Section 3) and in the design of the project, which has sought to avoid environmental impacts. Additionally, the precautionary principle has guided the risk-based assessment of environmental impacts for this EIS (refer to Section 6) and has been a key objective of the development of mitigation and management measures. These measures would be implemented during construction and operation of the proposal and would be supported by key monitoring protocols. No measures have been postponed out of any lack of scientific certainty. Rather, where uncertainty as to the likelihood or magnitude of risk exists, management for worst-case scenarios has been adopted.

A CEMP would be prepared before construction starts. This requirement would ensure the proposal achieves a high level of environmental performance. No mitigation measures or management mechanisms would be postponed because of lack of information.

9.2.3 Inter-generational equity

The proposal would not result in any impacts that are likely to adversely impact on the health, diversity or productivity of the environment for future generations. Almost all residual and cumulative environmental impacts of the proposal are temporary and confined to the construction period. While the proposal would have some adverse social impacts, they are not considered to be of a nature or extent that would result in disadvantage to any specific section of the community or to future generations.

The proposal would benefit future generations by helping to facilitate connection of the project to the North West Tasmania transmission network, supporting the expansion of green employment opportunities in the region for decades to come.

Should the proposal (and therefore the project) not proceed, the principle of intergenerational equity may be compromised, as future generations would not experience higher amounts of renewable energy in the NEM and mitigation of climate change, an improvement in Tasmania's energy security, wholesale energy cost reductions, economic benefits (including direct and indirect jobs), and an increase in Tasmania's telecommunications capacity.

9.2.4 Conservation of biological diversity and ecological integrity

A thorough assessment of the existing local environment was undertaken to identify and manage any potential impacts of the proposal on local biodiversity (refer to Section 6.2).

The proposal site is largely cleared, having previously been the site of a tioxide plant and then a timber yard. There is 1.5 ha of native vegetation community *Eucalyptus amygdalina* coastal forest and woodland (DAC)

however this would not be impacted by the proposal. Mitigation measures have been developed for managing potential indirect impacts such as spread of introduced weeds and pests, increased roadkill as a result of construction traffic generation and disturbance of protected eagle species during breeding seasons.

9.2.5 Improved valuation, pricing and incentive mechanisms

This principle requires that environmental factors should be included in the valuation of assets and services.

The value placed on the environment was inherent in the development and assessment of the proposal. The concept design has been developed with an objective of minimising potential impacts on the surrounding environment. The impact assessment of the proposal started from a position of understanding the existing features and human and ecological benefits of the environment.

This EIS has examined the environmental consequences of the proposal and identified mitigation measures to manage the potential for adverse impacts. The requirement to implement these mitigation measures would result in an economic cost to MLPL and would increase the capital and operating costs of the proposal. This further represents the commitment to the recognition of the value of protecting environmental resources.

9.2.6 Public participation

The NSESD explains that the participation of government, business, workers and the community is essential to the realisation of ESD. This is because of the knowledge and interests all stakeholders bring to deliberations about policies, programs and projects.

MLPL has undertaken a comprehensive program of community and stakeholder engagement and consultation prior to and during preparation of this EIS. Engagement with the communities interested in the project has been extensive and would be ongoing throughout the EIS exhibition where the proponent would respond to concerns and suggestions that emerge through the publication of the EIS. This will continue throughout the development, construction, and operation of the project. Refer to Section 4 for more information on the engagement and public participation process for the proposal (and the project more broadly).

9.2.7 The global dimension

This principle requires a consideration of the global context and impacts of a project.

At the 28th Conference of Parties to the UNFCCC in Dubai, Australia was one of 118 nations that promised to triple global renewable energy capacity by 2030. Australia would be better placed to contribute to this global goal once Marinus Link is operational by end 2030.

9.2.8 Strong economy

This principle seeks to advance a future where economic benefits can be realised alongside protecting the environment. This principle is consistent with the project's rationale. The project would directly contribute to the growth of the Tasmanian economy, job diversification and the expansion of the renewables industry across the country, all the while facilitating the retirement of fossil fuel powered electricity generation.

9.2.9 International competitiveness

This principle stands as a reminder that local projects exist in an international economy and that lessening environmental standards to increase profits should be discouraged. The principle is reflected in the concept of non-regression of environmental standards (the idea that environmental laws and policies should always increase environmental protection, not lessen it).

This project has been subject to rigorous assessment of environmental and social values, with three environmental impact assessments carried out across three jurisdictions and multiple environmental protection laws. Further, numerous commitments have been made through proposed mitigation and monitoring measures (Tasmania) and EPRs (Victoria) so that the project is delivered and operated in accordance with the expectation of stakeholders and the relevant planning approvals.

9.2.10 Environmental management

This principle requires an understanding of the environment and a system to prevent adverse impacts to the environment. The dual approaches of environmental assessment and environmental management, through both mitigation measures and governance-level environmental management systems are recognised by lawmakers, including in the EMPC Act, as effective approaches to achieve environmental management.

As already discussed, a suite of environmental mitigation measures has been developed for the proposal, and the implementation of these would be governed by the overarching project compliance strategy and MLPL's environmental management systems. Refer to Section 8 for further information.

9.3 Objectives and requirements of the EMPC Act

The proposal has been developed with consideration to **best practice environmental management**, so that construction, operation and decommissioning of the proposal can be done so in a manner that minimises environmental harm. Section 3 discusses how the planning, consultation, technologies and waste management have all been embedded into the route and site selection process.

Comprehensive technical studies have been prepared to understand existing environmental and site conditions and to identify the potential risks and impacts of the proposal on the environment, social values and the economy. A suite of measures would be implemented to mitigate and manage any potential adverse impacts and in doing so would ensure that the **environmental duty** to prevent or minimise harm to the environment is met. A comprehensive **public participation** process has also been carried out which has informed development of the project to date, and this would continue throughout the development, construction, and operation of the project.

The proposal supports the need for **sustainable development**, which protects natural values whilst also supporting a reliable and clean energy source, to benefit current and future generations. The proposal would be managed under the proponent's **Environmental Management System**, of which an Environment and Sustainability Policy is a key element of the proponent's **environmental governance**.

Table 9-1 demonstrates how the proposal complies with the objectives of Part 1 and Part 2 of the Schedule of the EMPC Act.

Table 9-1 Compliance with the EMPC Act objectives – Part 1 and 2

Objectives of part 1 and part 2 of the schedule of the EMPC Act	Compliance details
Part 1	
(a) to promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity	The proposal fulfils the principles of ESD as comprehensively explained in Section 9.2.
(b) to provide for the fair, orderly and sustainable use and development of air, land and water	The proposal has been in planning for many years and would only commence operation after thorough assessments of impacts on air, land and water, with conclusions that all parts of the environment would not be adversely affected in the long-term, and in accordance with an environmentally managed construction process. The project, in all its parts, would only proceed if environmental risks are managed and market conditions demand it.
(c) to encourage public involvement in resource management and planning	The EIS has involved, and as the proposal develops, the proponents would continue to involve the community in the proposal (refer to Section 9.2 and Section 4).
(d) to facilitate economic development in accordance with the objectives set out in (b) and (c)	The proposal is a significant economic development with substantial economic benefits at local, state and national scales (refer to Section 6.11).
(e) to promote the sharing of responsibility for resource management and planning between the different spheres of Government, the community and industry in the State	Through the EIS process, the proponent has taken primary responsibility in assessing the impacts of the proposal and has done so with the guidance and contribution of government, community members and industry stakeholders, and in particular the Tasmanian Aboriginal Community. The proponent has considered and responded to community and stakeholder interests and concerns in the proposal and the project (refer to Section 4).
Part 2	
(a) to protect and enhance the quality of the Tasmanian environment	The components of the project in Tasmania, including this proposal, would have no long-term impacts on the quality of the Tasmanian environment. While the buildings on the proposal site would alter local views, the Tasmanian components of the project are located on industrial land and where they traverse sensitive landscapes, go underground. The impacts associated with construction activities would not continue long-term. The operation of the project would not create any offensive or harmful effects.
(b) to prevent environmental degradation and adverse risks to human and ecosystem health by promoting pollution prevention, clean production technology, reuse and recycling of materials and waste minimisation programmes	The proposal would implement mitigation and monitoring measures (refer to Section 8). These have been designed to prevent pollution and minimise harm. The risks of pollution from the proposal are related to the reuse of an industrial and contaminated site: the former tioxide plant. The construction of the proposal would result in a less contaminated environment. The proposal would facilitate clean technology and the waste management approach of the construction of the project prioritises waste minimisation principles (refer to Section 6.6).
(c) to regulate, reduce or eliminate the discharge of pollutants and hazardous substances to air, land or water consistent with maintaining environmental quality	The proposal would likely uncover contaminated soils, generate dust, and create noise. The environmental management regime for the proposal responds to the potential for these impacts (refer to Section 8). Dust and noise would be temporary while the construction of the project would reduce the presence of contaminants on the former tioxide plant site.

Objectives of part 1 and part 2 of the schedule of the EMPC Act	Compliance details
(d) to allocate the costs of environmental protection and restoration equitably and in a manner that encourages responsible use of, and reduces harm to, the environment, with polluters bearing the appropriate share of the costs that arise from their activities	The proponent would be responsible for the costs of environmental management and ongoing environmental clean-up of a contaminated site. In the unexpected event that the project requires the removal of disused outfall pipelines, to insure against the release of contaminants into the marine environment, the proponent would undertake that work at its cost. The original polluters would not bear those costs. In this sense the proponent is not responding to the polluter pays principle, rather a principle of proponent and landholder responsibly.
(e) to require persons engaging in polluting activities to make progressive environmental improvements, including reductions of pollution at source, as such improvements become practicable through technological and economic development	The proposal would not create any new pollution source. The proposal would result in less pollutants in the environment than presently exists.
(f) to provide for the monitoring and reporting of environmental quality on a regular basis	The proponent's environmental management regime includes monitoring and reporting protocols (refer to Section 8).
(g) to control the generation, storage, collection, transportation, treatment and disposal of waste with a view to reducing, minimizing and, where practicable, eliminating harm to the environment	The operation of the proposal would create only very small volumes of waste (refer to Section 6.6). The construction of the proposal involves processes to treat and reuse soils among other management and design measures to limit waste generation.
(h) to adopt a precautionary approach when assessing environmental risk to ensure that all aspects of environmental quality, including ecosystem sustainability and integrity and beneficial uses of the environment, are considered in assessing, and making decisions in relation to, the environment	This EIS has adopted the precautionary principle in its assessment of environmental impacts (Section 9.2). Environmental assessment (refer to Section 6) has been preceded by a discussion of existing environmental conditions and, where appropriate sensitivities and environmental values, to ensure that the assessment of impacts considers the complexity and importance of each aspect of the environment.
(i) to facilitate the adoption and implementation of standards agreed upon by the State under inter-governmental arrangements for greater uniformity in environmental regulation	This EIS responds to the NSESD (refer to Section 9.2), and adopts multiple regulatory standards as performance criteria throughout, including relating to aspects as varied as contaminated soils and vessel lighting. The EIS has considered an expanse of laws and policies (refer to Section 1.6) and the proposal and its assessment has complied with widely accepted environmental principles, including intergenerational equity, best practice environmental management and good environmental governance (Section 9.2).
(j) to promote public education about the protection, restoration and enhancement of the environment	The consultation for this EIS (Section 4) included processes of two-way learning. Interested Tasmanians were able to share their concerns and learn from the proponent about its approach to environmental management and its reuse of a disused industrial site. The proponent is committed to maintaining an ongoing dialogue with local communities and stakeholders to demonstrate environmental compliance and respond to environmental concerns. Various strategies and polices are identified in Section 8.
(k) to co-ordinate all activities as are necessary to protect, restore or improve the Tasmanian environment	This EIS has been a co-ordinating exercise. The proponent has commissioned technical specialists across a range of disciplines to investigate and share with each other the state of the environment and how to protect the proposal site and its surrounding environment. The list of mitigation

Objectives of part 1 and part 2 of the schedule of the EMPC Act	Compliance details
	measures for the proposal represents an ongoing commitment to co-ordinate the proposal through a systemic environmental management approach.

9.4 Conclusion

As coal-fired power generation decreases, Australian communities increasingly need reliable 'on-demand' electricity and long-term energy storage. The project, of which the proposal is one part, plays a crucial role in Australia's transition from a fossil fuel-dependent national electricity system to a low-emissions power system. It would enable the bidirectional flow of electricity between Tasmania and Victoria, providing reliable, cost-efficient clean energy to customers in the NEM. Additionally, it would ensure that excess low-cost, clean energy is available when demand across the NEM exceeds supply, thereby increasing the reliability of power supply during peak demand periods for individuals, businesses and communities throughout Australia.

The proposal is subject to assessment under the EMPC Act. This EIS has been prepared in accordance with the EIS guidelines and assesses all matters affecting or likely to affect the environment from construction through to decommissioning of the proposal.

A consultation program with community and government stakeholders has been carried out throughout project development, and would continue through EIS display, response to submissions, detailed design and construction, to ensure that all stakeholder interests are understood, documented and addressed.

The project alignment and construction methods have been selected to minimise impacts during construction and operation. Ongoing and detailed design together with specific issue-based management plans would represent further commitment to the protection of environmental resources. The environmental performance of the proposal would be managed by the implementation of the EMS. With the implementation of the proposed mitigation and management measures, the potential environmental impacts of the proposal can be adequately managed.

On the basis of the findings detailed in the assessments within this EIS and with the implementation of the proposed environmental mitigation and management measures, the proposal could be carried out without any significant long-term impacts on the local environment. On balance, the proposal is considered to provide a net environmental, economic, and social benefit to Tasmania.

SECTION 10 - REFERENCES

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