PROPOSED ROUTE OVERVIEW TO SUPPORT COMMUNITY INPUT

DECEMBER 2020

MARINUS LINK

Responsibilities

This document is the responsibility of Marinus Link Pty Ltd, ABN 47 630 194 562 (hereafter referred to as "Marinus Link").

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PROJECT MARINUS

MARINUS LINK

Marinus Link is a proposed 1500 megawatt (MW) capacity underground and subsea electricity interconnector between Victoria and Tasmania. It will increase energy exchange throughout the National Energy Market (NEM), as Australia continues its transition to cleaner energy. Marinus Link will also incorporate significant optical fibre capacity, strengthening telecommunications and data connectivity between Victoria and Tasmania.

The Australian Energy Market Operator (**AEMO**) manages electricity and gas systems and markets across Australia, helping to ensure Australians have access to affordable, secure and reliable energy. As part of its role, AEMO forecasts customer energy needs and carries out transmission planning for the NEM, producing a blueprint to support Australia's evolving power system; the biennial *Integrated System Plan* (**ISP**). The 2020 ISP identifies a second electricity interconnector between Victoria and Tasmania as a key component of Australia's continuing transition to renewable energy.

Marinus Link is a critical enabler of renewable energy, supporting renewable energy targets in Tasmania and Victoria. Marinus Link enables the NEM to save at least 70 million tonnes of CO_2 by 2040[1].

1 The emission saving is calculated based on the current carbon emission intensity of the NEM. Commissioning of Marinus Link unlocks the achievement of the 200 per cent Tasmanian Renewable Energy Target (10,500 megawatt hours of additional renewable generation by 2040).

WHO ARE TASNETWORKS AND MARINUS LINK PTY LTD?

TasNetworks plans, owns and operates the electricity transmission and distribution networks in Tasmania. TasNetworks also provides telecommunications services to customers within and beyond the electricity sector in Tasmania.

Marinus Link is being progressed by TasNetworks, with financial support from the Australian and Tasmanian Governments.

TasNetworks completed a full feasibility and business case assessment for Marinus Link with funding support from the Australian Renewable Energy Agency. This analysis showed that the link was technically and commercially viable.

TasNetworks has worked with AEMO, as the Victorian transmission network planner and national electricity market operator, to undertake project analysis. AEMO reinforced the importance of Marinus Link as a key component of the future energy grid, with the link playing a role in Australia's affordable and reliable renewable energy transition.

TasNetworks is now undertaking the Design and Approval phase of the project, via its subsidiary Marinus Link Pty Ltd. Environment, planning and cultural heritage approvals for the high voltage direct current (**HVDC**) interconnector project are planned to be progressed by Marinus Link Pty Ltd.

For simplicity, in this document we will refer to Marinus Link Pty Ltd, and the TasNetworks team supporting the Marinus Link work, as "Marinus Link". We are working with landowners, communities, businesses and authorities in Victoria, Tasmania and beyond, to deliver a successful project, with long lasting relationships.

THE PURPOSE OF THIS DOCUMENT

This document provides an overview of the route selection process and the proposed route for Marinus Link, with a focus on the land section. It is a resource to inform the community and to outline opportunities to provide input into the project and development of the preferred route. The document also provides background information on the project. A full Route Options Report will be made publicly available on our website in early 2021, to coincide with an online engagement webinar to discuss the route selection process.

A range of route corridors and potential route options were identified and evaluated, leading to the proposed route for Marinus Link, as detailed in this overview. The route selection process seeks to minimise local impact on communities and the environment whilst balancing other key project objectives such as cost efficiency and constructability.

Feedback received from landowners and the community will help to test the information used to identify the proposed route. Community input will be carefully considered to help inform design and construction considerations and reduce impacts of the preferred route.

Marinus Link will only progress to construction once necessary approvals and funding arrangements are in place. These developments must, and will, follow a rigorous economic assessment process and land use planning and environmental approvals and cultural heritage processes at a local, state and national level.

WHY IS MARINUS LINK NEEDED?

The national electricity market is changing

As coal-fired power generation continues to retire, variable renewable energy generation such as large scale wind and solar is increasingly taking its place. To support these variable energy sources, the NEM also needs energy capacity that is available on-demand, known as 'dispatchable' energy, from forms such as batteries, pumped hydro long duration energy storage and existing hydroelectricity resources.

UP TO **19,000** MW OF **COAL-FIRED** GENERATORS ARE EXPECTED TO **RETIRE BY 2040**

=

UP TO **32,000** MW OF NEW **GRID-SCALE RENEWABLES** TO REPLACE COAL-FIRED GENERATORS

+

UP TO **12,000** MW OF NEW **DISPATCHABLE RESOURCES** TO FIRM THE GRID-SCALE RENEWABLES

Source: Central scenario, AEMO's 2020 Integrated System Plan

Marinus Link will support Tasmanian and Victorian renewable energy development: for example, with Marinus Link in operation, excess energy generated by Victorian renewables can be transferred to Tasmania and stored in pumped hydro energy storage facilities, ready to be used when needed.

Marinus Link and supporting transmission developments can help the national transition to renewable energy by providing greater market access to Tasmania's world class wind and hydro power, and proposed pumped hydro long duration energy storage resources. By increasing energy exchange between Victoria and Tasmania, Marinus Link will unlock renewable energy generation opportunities and cost-effective energy storage, and support affordable, reliable and clean energy in Victoria, Tasmania and beyond.

Marinus Link also includes increased optical fibre capacity, providing additional bandwidth and route paths between regional Victoria and Tasmania.

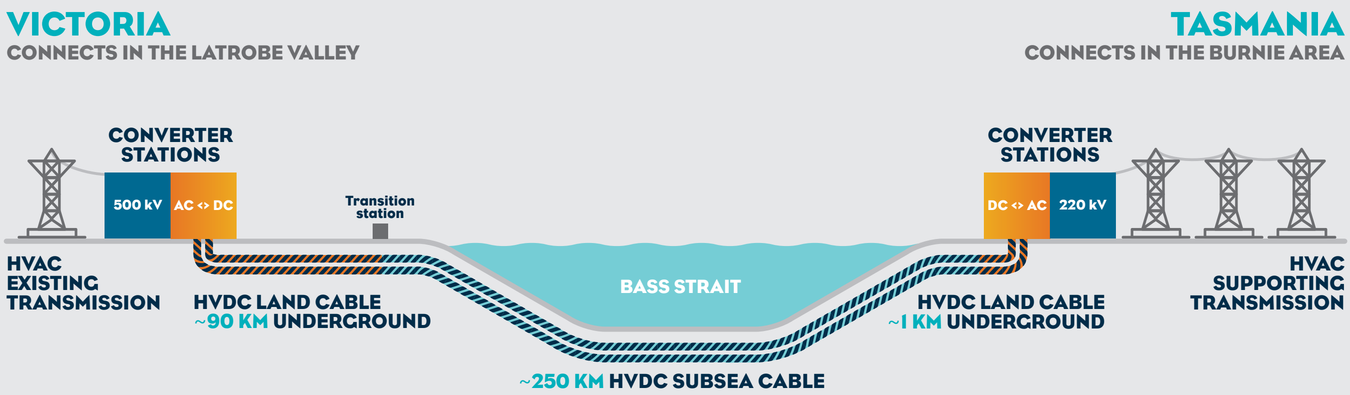
Did you know?

A megawatt (**MW**) is approximately equal to the energy needed to power 1000 homes at a given point in time. This means that Marinus Link will have the capacity to supply low cost, reliable and clean power to approximately 1.5 million homes.

Marinus Link will deliver an additional 1500 MW capacity connection between Tasmania and Victoria. This is more than triple the capacity currently provided by Basslink, the existing undersea connection across Bass Strait, bringing the total dispatchable energy between Victoria and Tasmania to around 2000 MW.

WHAT IS PROPOSED TO BE BUILT?

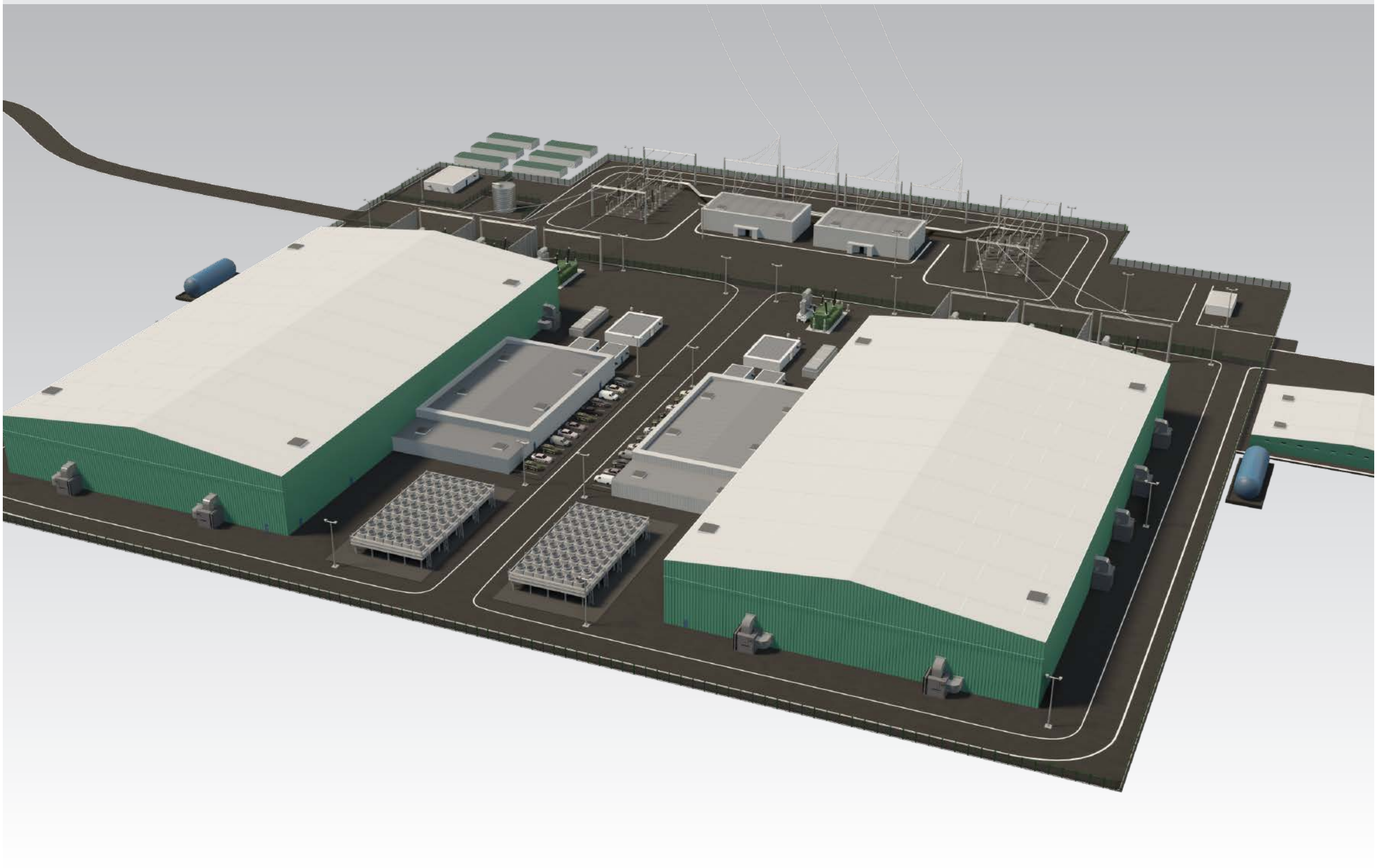
Marinus Link involves approximately 250 km of subsea HVDC cables and approximately 90 km of underground HVDC cables. A set of HVDC cables between Heybridge in North West Tasmania and the Latrobe Valley in Victoria, with a converter station site at each end, has been identified as best suited to manage the energy transfer capacity of Marinus Link. It is proposed that the link is built in two 750 MW capacity stages, and that the land cables for each stage are located in a common easement.



CONVERTER STATIONS

Marinus Link will use Voltage Source Conversion (**VSC**) technology, with two converters for each 750 MW stage: four in total for the 1500 MW capacity. VSC is a newer technology than was used for Basslink. This offers a range of advanced power system stability and security features to meet the challenges of the future energy grid, like frequency and voltage control, and black start capability, among other services.

VSC stations typically occupy two hectares with dimensions 100 metres by 200 metres. As two converter stations are required at each end of Marinus Link, at least four hectares are required. Up to six hectares in total are required when construction requirements are taken into consideration.



Indicative converter station site layout – Victorian and Tasmanian sites schematic, artist's impression for illustrative purposes only.

CONVERTER STATION SITE SELECTION

Marinus Link is supported by approximately 220 km of high voltage alternating current (**HVAC**) transmission network developments in North West Tasmania that will be progressed by TasNetworks. The site of converter stations needs to be carefully selected, including taking into account energy transfer requirements, and whether other generation and load sources may wish to connect to the transmission network.

The best balance of energy transfer and the efficient connection of forecast new energy generation and load in North West Tasmania will be provided by locating the Tasmanian converter station site near a landfall at Heybridge, east of Burnie, and a new connection to an upgraded HVAC North West Tasmanian transmission network.

In Victoria, engagement with AEMO as the Victorian transmission network planner and AusNet Services as the transmission asset owner indicates that bringing the HVDC cable right into the Latrobe Valley represents the best balance between energy transfer, and connection of forecast new generation and load. This reflects that in the Latrobe Valley, Hazelwood Terminal Substation and the adjacent transmission network have sufficient capacity to accommodate forecast generation, storage and load in the area. It is therefore more efficient to transport energy with HVDC right into the Latrobe Valley, and then convert to HVAC.

High voltage direct current (**HVDC**) cables connect to the alternating current (**AC**) electricity grid at converter stations. Preferably, these converter stations are close to the existing AC transmission network, to reduce the length of new transmission connections.

WHY HVDC UNDERGROUND AND SUBSEA CABLES?

Underground cables have been selected for the sea and land sections of Marinus Link due to a range of factors, including:

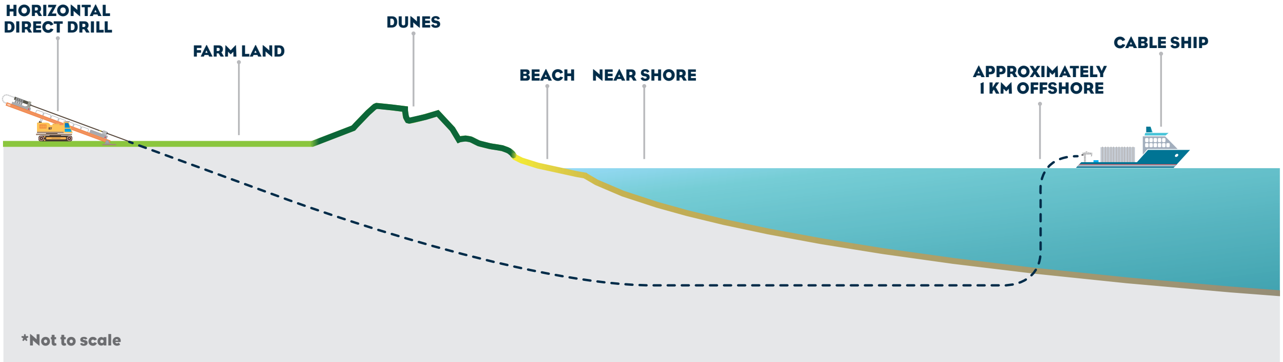
- HVDC uses fewer and more compact cables to transfer large volumes of energy over long distances of land and sea, compared to HVAC cables. However, it is expensive to connect new energy generation and customer load projects into HVDC cables, with converter stations required for each connection. HVDC cables therefore tend to be used to transport energy from 'point to point' at high volume over long distances.
- HVDC is the only viable technology for the approximately 250 km of subsea cable required for the Bass Strait crossing. It is viable to use on land as well, however a choice needs to be made as to where the converter stations connect it to the HVAC transmission network.
- In Tasmania, it has been assessed that the best balance of energy transfer and the efficient connection of forecast new energy generation projects and load will be provided by locating the converter station near the landfall at Heybridge, and a new connection to an upgraded HVAC transmission network.
- It is more efficient to transport energy at HVDC from the Victorian coast right into the Latrobe Valley, and convert to HVAC there, as this represents the best balance between energy transfer, and connection of forecast new generation and load.
- For the Victorian HVDC land section, use of overhead HVDC transmission lines was considered, however would require more expensive VSC converter lightning protection schemes, and wider easements. Analysis therefore shows that underground HVDC cables, rather than overhead cable, is the preferred option for this section of the route.

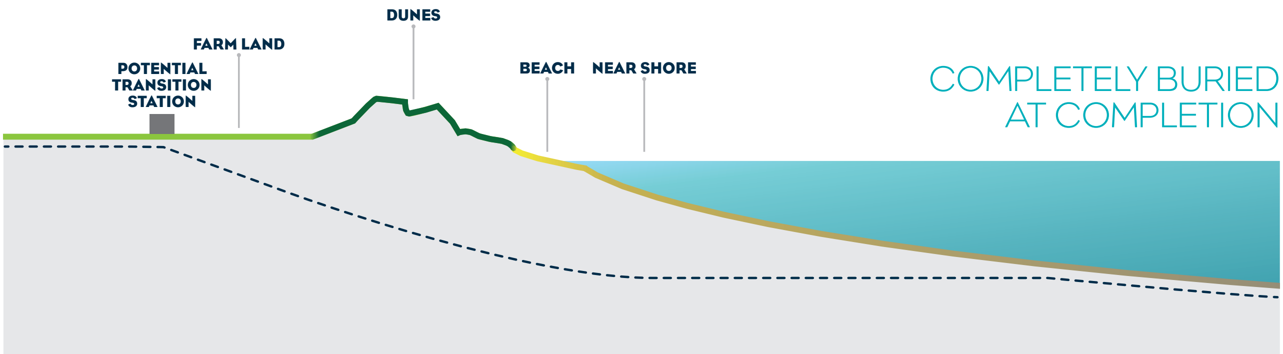
HORIZONTAL DIRECTIONAL DRILLING

The land cable sections are proposed to be installed by trenching. In some cases, Horizontal Directional Drilling (**HDD**) will be used to avoid sensitive areas, major watercourses and major roadways. The length of each HDD is limited by the technical ability to safely pull the cable through.

HDD is the proposed construction method to install the shore crossings at the Tasmanian and Victorian coasts. In Tasmania, this would see the cabling travel underneath the beach, the rail line and the highway, to the converter station site. In Victoria, this would see drill rigs threading cables from land, well below the surface, under the coastal dune system, under the near shore beach to an area approximately 1 km out to sea. This method will minimise impacts on the coastal reserves, beach and shallow marine areas, and high value coastal foreshore.

INDICATIVE CONSTRUCTION





Indicative Victorian shore crossing showing the proposed horizontal directional drilling construction method, and a potential transition station between HVDC subsea and HVDC land cable sections.

TRANSITION STATION

In Victoria a proposed 'land-sea joint' and supporting transition station connects the subsea HVDC section of Marinus Link with the underground HVDC section. The specific location and details of the transition station are still being investigated, but may result in structures akin to a large farm shed. The land-sea joint configuration will be confirmed in the detailed design.

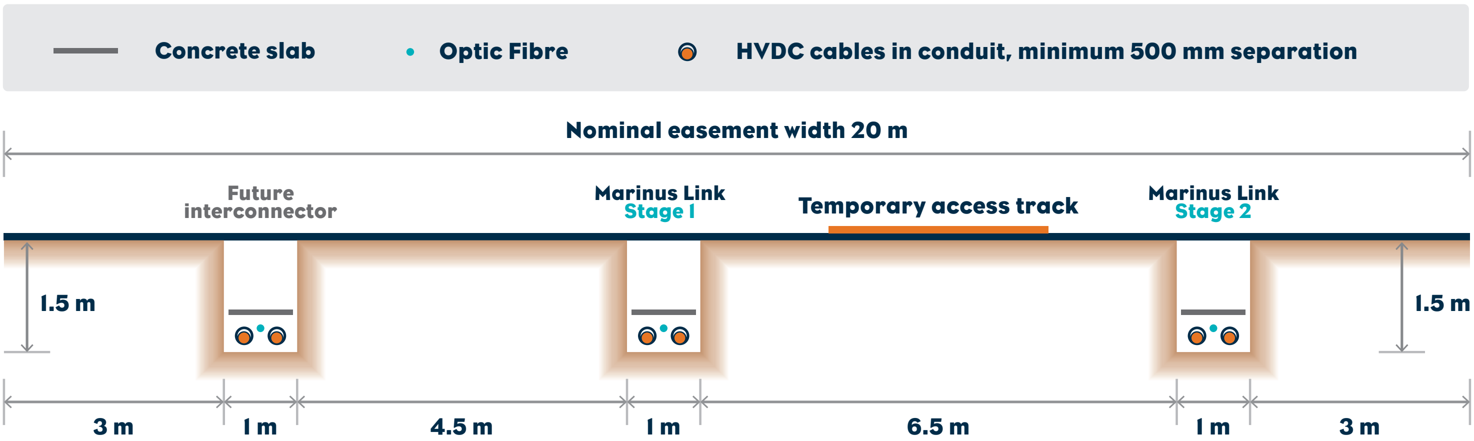
An HVDC cable land-sea joint and transition station is not proposed in Tasmania, given the Heybridge converter station site's proximity to the coast.

EASEMENTS

As with other public utilities such as water, gas and sewerage, easements are required for construction, operation and maintenance of electricity assets. The proposed width of easements for Marinus Link is 20 metres.

The easement will run from the Tasmanian landfall to its converter station site and from the Victorian landfall to its converter station site. The land cables will be buried in trenches, approximately one metre wide and 1.5 metres deep, inside the 20 metres wide easement.

The easement will accommodate trenches for both Marinus Link stages, with space for a third trench. The space for a third trench could be used to replace one 750 MW link in the future, or to accommodate a future interconnector.



Proposed easement for Marinus Link underground cables.

WHEN IS THE PROPOSED TIMING FOR MARINUS LINK?

Marinus Link is currently in the Design and Approvals stage, with a range of activities underway. The proposed 1500 MW capacity of Marinus Link is planned to be built in two 750 MW stages. Commissioning of each stage is proposed to be separated by two to three years. There are a number of activities required before manufacturing and construction commences.

	1	2	3	4
Project Phases	**Feasibilty and Business Case Assessment**	**Design and Approvals**	**Manufacturing and Construction**	**Operations**
Project Duration	**2 years**	**~ 3 - 4 years**	**~ 4 - 7 years**	**~ 40+ years**

We are here

Stage 1

Stage 2

Marinus Link will only progress to equipment manufacturing and construction once necessary approvals, funding and pricing arrangements are in place, following a rigorous economic assessment, and rigorous land use planning and environment approvals process at local, state and national levels.

We aim to reach a Final Investment Decision in 2023-2024, with manufacturing and construction to commence shortly after that decision is made.

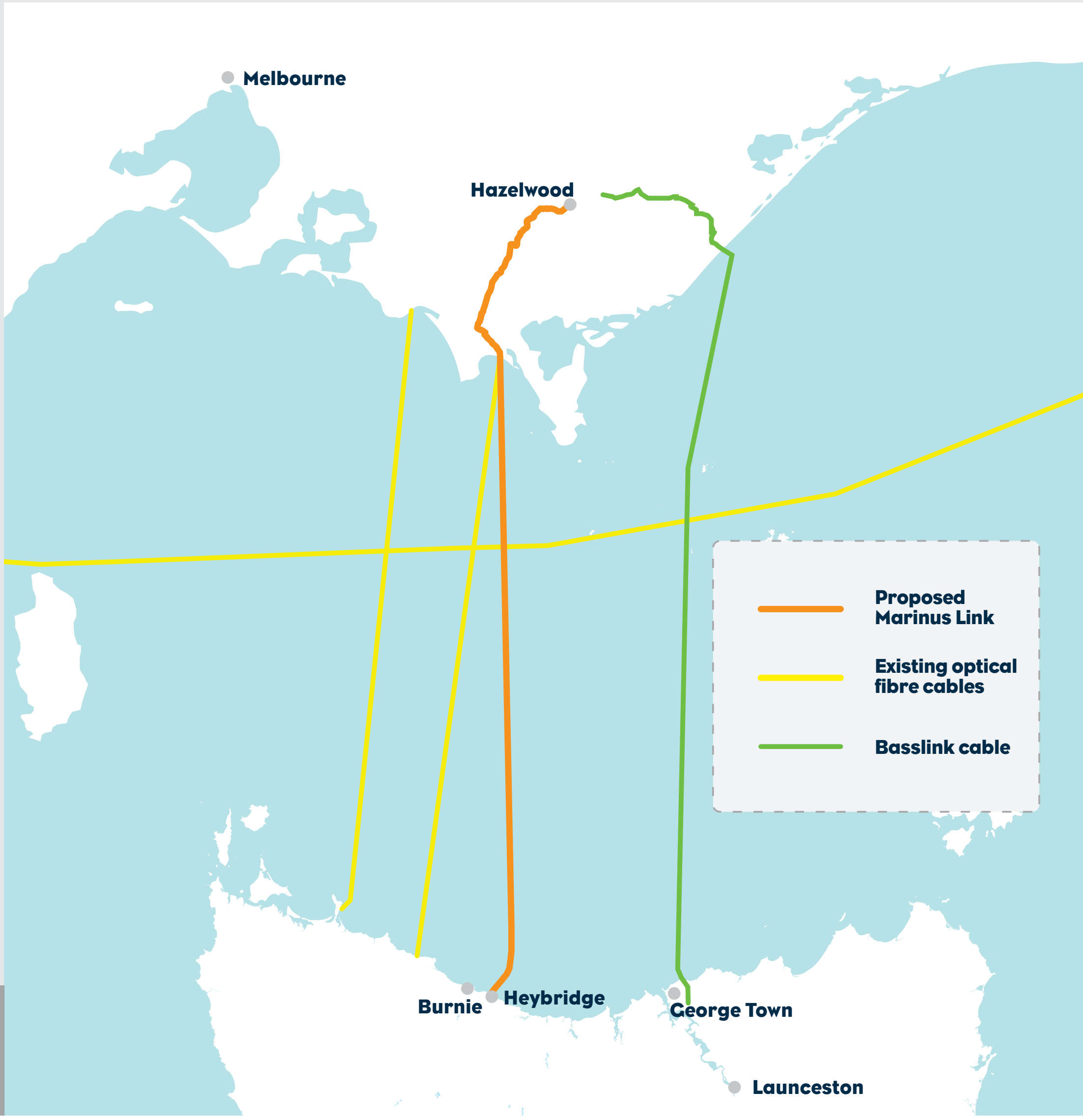
ROUTE OVERVIEW

WHERE DOES THE PROPOSED ROUTE GO?

The proposed route for Marinus Link runs between the Hazelwood area in Victoria's Latrobe Valley and Heybridge, just east of Burnie in North West Tasmania.

This route commences at the Hazelwood Terminal Substation, with nearby converter stations connecting to the existing Victorian 500 kV transmission network. There is a potential option for the converter stations to connect with the existing 500 kV lines slightly further west of Hazelwood, at a new substation. Marinus Link will engage with landowners and the community to further consider this option.

The route traverses southward for approximately 90 km to Waratah Bay on Victoria's south coast, crosses Bass Strait in a relatively straight line, and meets the Tasmanian coastal converter station site at Heybridge. The Tasmanian converter station site will connect to the North West Tasmania transmission network, augmented to support the increased power flows across the link.



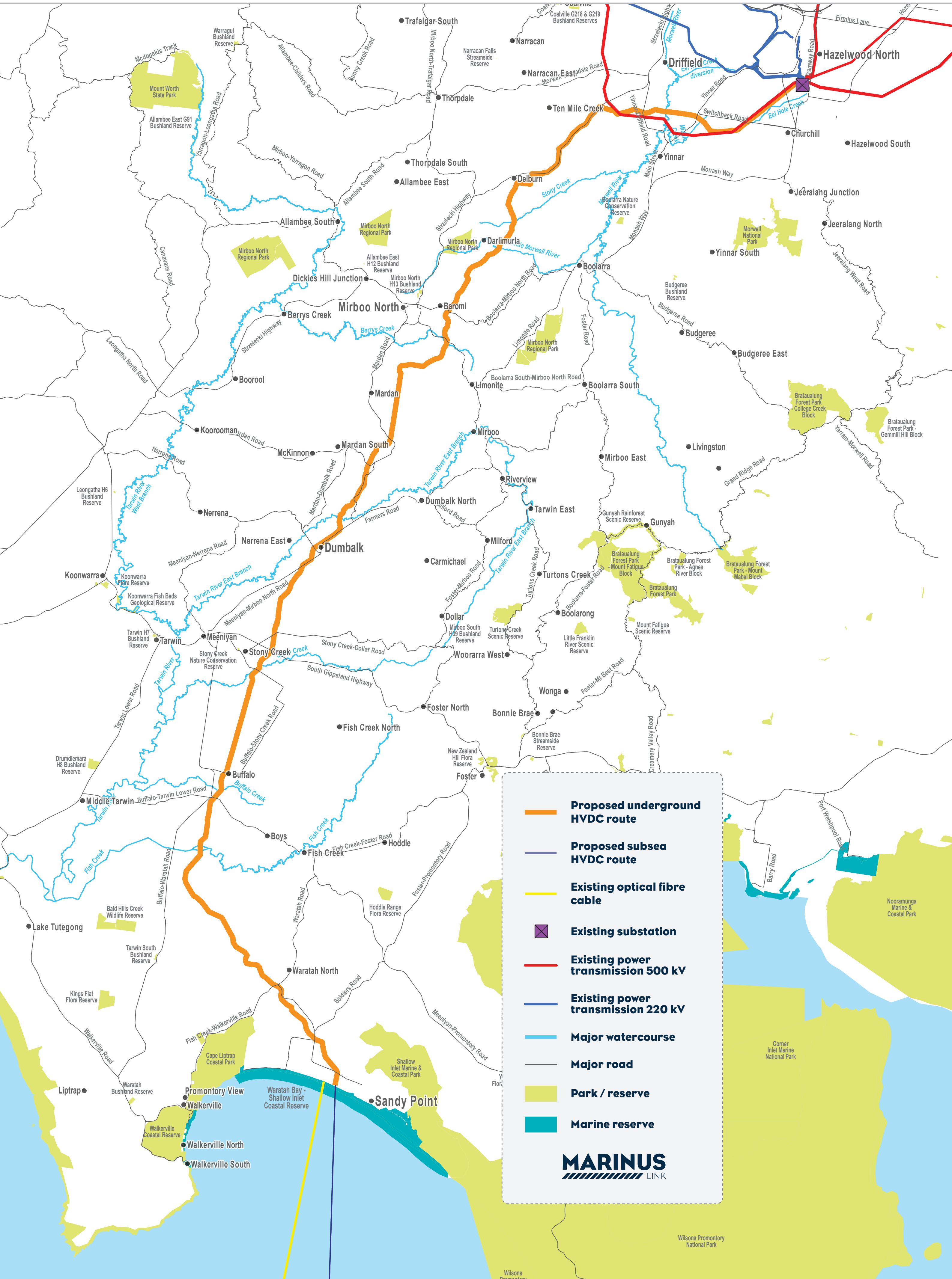
Proposed route for Marinus Link.

VICTORIAN SECTION OF MARINUS LINK PROPOSED ROUTE

The proposed Victorian land section of Marinus Link will have an approximately 90 km underground HVDC cable route. The route commences at or near the Hazelwood Terminal Substation, with nearby converter stations connecting to the existing 500 kV transmission network. As outlined, subject to further consideration, there is a potential option to connect with the existing 500 kV lines slightly further west of Hazelwood, at a new substation. From the connection point, the route proceeds southwest through the Latrobe Valley and then west towards Driffield, before continuing south west across the Strzelecki Ranges between Dumbalk and Mirboo North.

The route proceeds in a south-to-south-westerly direction through the Tarwin River valley, before turning southeast to a proposed land-sea joint on the approach to Waratah Bay.

Proposed Marinus Link underground route between Waratah Bay and Hazelwood

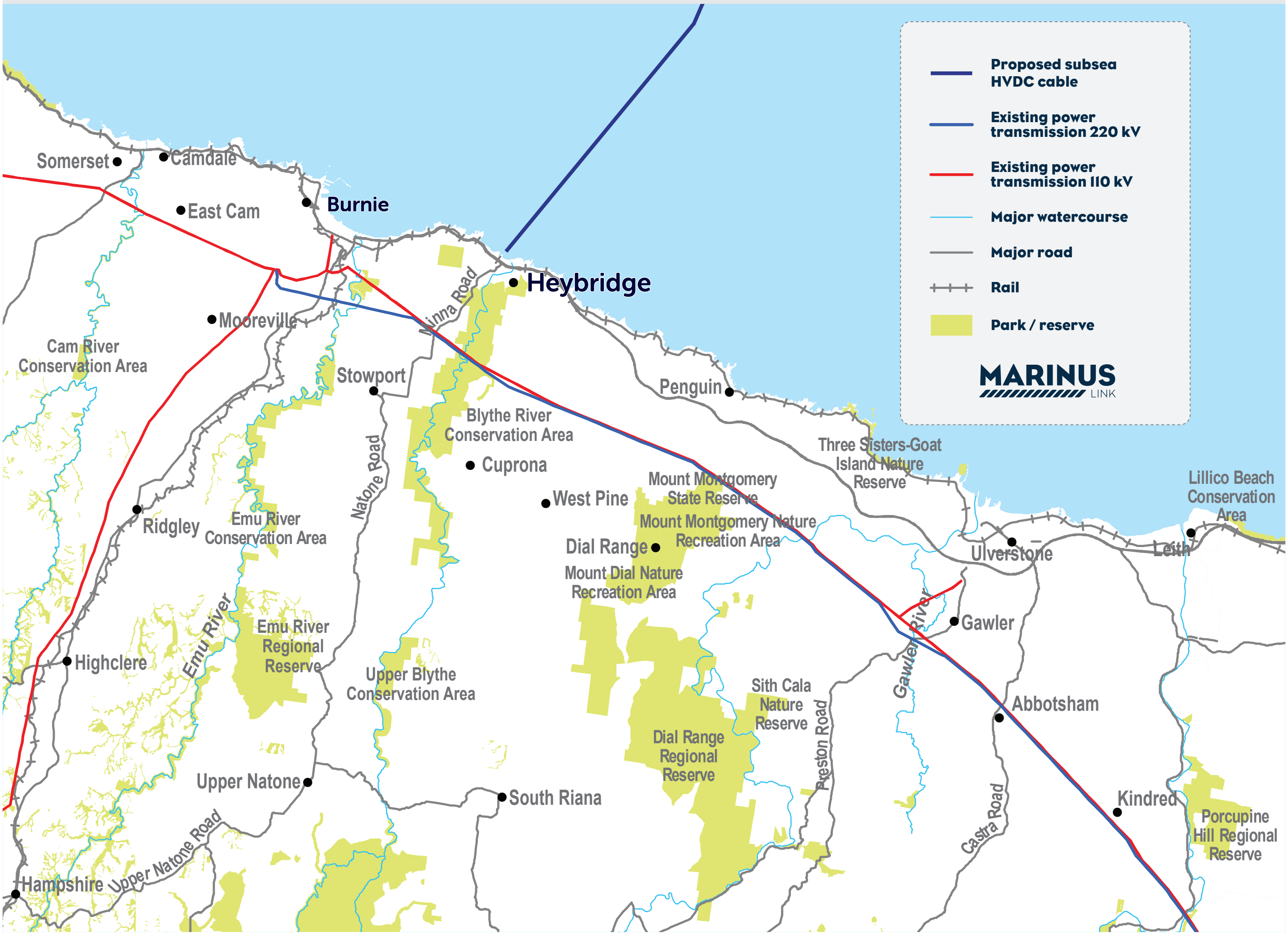


TASMANIAN SECTION OF MARINUS LINK PROPOSED ROUTE

Marinus Link converter stations at Heybridge, just to the east of Burnie, are proposed to be connected to the Tasmanian HVAC transmission network. Designs for the proposed connections to the augmented Tasmanian 220 kV transmission network are being finalised as part of the North West Transmission Developments. These designs will be covered in a separate, dedicated route options report for that area, proposed to be released for consultation in early 2021.

From the Heybridge site, the proposed HVDC route will proceed north-east, underground across the narrow strip of coastal land containing the Bass Highway and Western Line railway, to the deep water off the Tasmanian coast. HDD is proposed for the shore crossing. Due to the short distance from the converter station to the shore crossing, no land-sea joint is proposed.

Tasmanian section of Marinus Link proposed route



WHY NOT FOLLOW THE BASSLINK ROUTE?

Locating Marinus Link alongside the existing Basslink cable was considered and evaluated, however it was not pursued further for reasons including:

◊ the risk to energy supply between Tasmania and Victoria from a single event, which could render both interconnectors inoperable, such as a bush fire impacting on northern Tasmania's transmission network, or an anchor strike from shipping activity in Bass Strait. There is less chance of this happening with geographic separation of interconnectors and diversity of connection points to the existing network

◊ potential constraints to the existing grid capacity between Loy Yang (the Victorian connection site for Basslink) and Hazelwood, and significant upgrades required to the Tasmanian Basslink grid connection point at George Town

◊ the need for proximity to the North West Tasmania Renewable Energy Zone, for more efficient access to Tasmania's existing hydro plant, areas with high potential for wind generator development, and Hydro Tasmania's Battery of the Nation pumped hydro energy storage projects.

HOW ARE POTENTIAL ROUTES IDENTIFIED AND EVALUATED?

Identifying suitable sites and connecting routes is guided by technical, environmental and social criteria, including the existing values and constraints of each area. This helps to identify the optimal and least constrained route/s.

'Prudent and feasible' routes

Environmental, planning and cultural heritage legislation and guidelines require that 'prudent and feasible' route alternatives are identified and evaluated.

'Prudent and feasible' routes must consider and balance factors, including:

◊ constructability (including geology, topology)

◊ project construction and operation costs

◊ current and future land use

◊ environmental impacts

◊ cultural heritage considerations

◊ societal expectations.

What do we mean by 'prudent and feasible'?

Simply put, this means routes that are geographically practical, technically sound, and economically viable when all reasonable and existing values and constraints are considered.

Existing values

Understanding the physical, biological and socioeconomic environment of an area potentially affected by the proposed works is a key stage in the route selection process. Environmental and social criteria include the existing values that are documented and considered important to people, ecosystems, communities and regulators. Landscape and scenic values are also considered.

These values give context and help to identify constraints and opportunities for prudent and feasible routes. The existing values can limit route options, although there may be opportunities to locate alongside existing linear infrastructure, such as existing transmission lines and road corridors.

Existing values information helps to map and identify prudent and feasible corridors and routes. Mapping and identifying constraints, opportunities and prudent and feasible corridors and routes includes:

◊ collating all relevant publicly available information including spatial data, reports and previous investigations

◊ building a project geographic information system (**GIS**) to store and facilitate analysis of publicly available spatial data

◊ using the project GIS to understand constraints to the route selection and to support the identification and evaluation of prudent and feasible routes

◊ using the collective experience and knowledge of our team and its consultants to identify and analyse all prudent and feasible routes and sites

◊ ground-truthing of shortlisted prudent and feasible alternatives including by technical specialists to identify any fatal flaws and key issues that will require management.

Constraints

Identifying and evaluating the 'areas of least constraint' is crucial to route selection. Constraints to route selection are considered in both strategic and tactical contexts, and are largely identified through statutory requirements, technical considerations and community values and expectations. For example:

◊ Legislation and planning controls list the land uses that are acceptable in reserves and planning zones.

◊ Australian, Tasmanian and Victorian Government legislation lists and protects threatened species and ecological communities, and cultural heritage sites.

Levels of constraint

Constraints are grouped and defined as:

◊ **Very high** areas are those areas or land uses where transmission infrastructure may have significant impacts that may be difficult to effectively mitigate. Avoiding these areas is an objective, although may not always be practical to achieve.

◊ **High** constraint areas are those areas or land uses where avoidance is prudent, but transmission infrastructure could be sited and impacts mitigated with careful route selection and design and/or specific management measures.

◊ **Moderate** constraint areas are those areas or land uses where transmission infrastructure could be sited, and impacts can be managed with standard mitigation and site specific measures that address the type and nature of constraint.

◊ **Low** constraint areas are those areas or land uses where transmission infrastructure is compatible with existing land uses and/or the impacts can be effectively mitigated.

Technical criteria

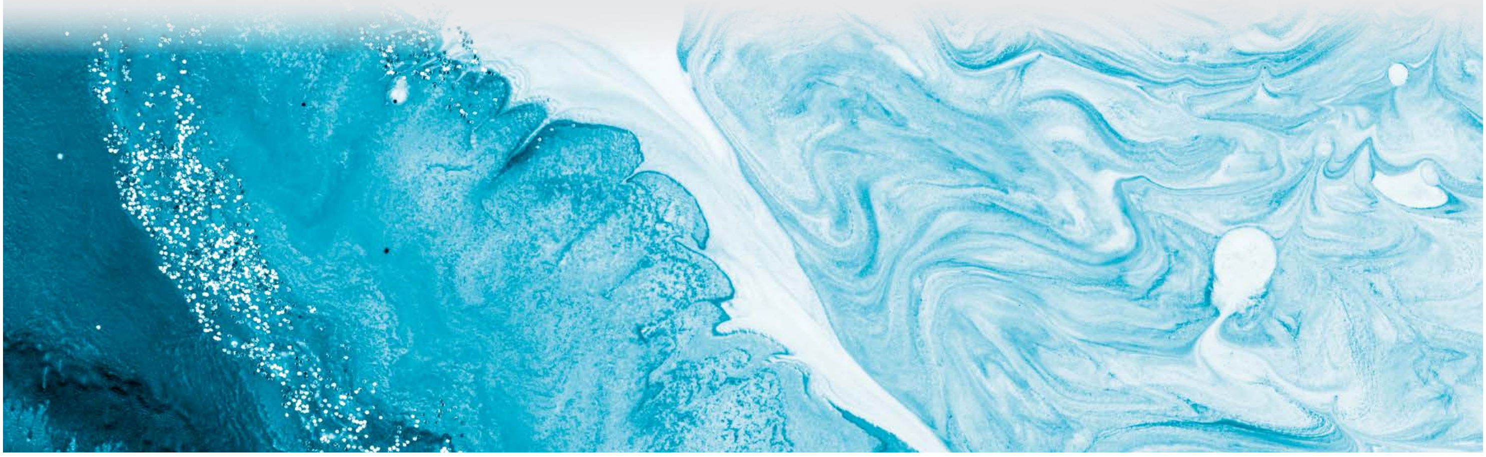
Technical criteria include the project objectives and engineering considerations for constructing and operating an HVDC interconnector.

A number of suitable landfalls and converter station sites that can service Marinus Link's technical and connection requirements were identified. Areas for potential routes, known as corridors, were then identified between the connection points in Tasmania and Victoria. In some cases, there were several potential routes.

The routes considered to have the least constraints were progressed to detailed review and refinement, to address recommendations from the initial investigations and an engineering review, to identify the 'proposed route'.

Economic regulatory conditions

The Regulatory Investment Test for Transmission (**RIT-T**), which must be satisfied by all transmission network developments, requires that all "commercially and technically feasible" options are considered. The RIT-T requires that the option which results in the greatest net economic benefit to the electricity market be selected. It is therefore important that the cost of route alternatives is taken into account in route selection, to manage impacts on customer electricity charges.

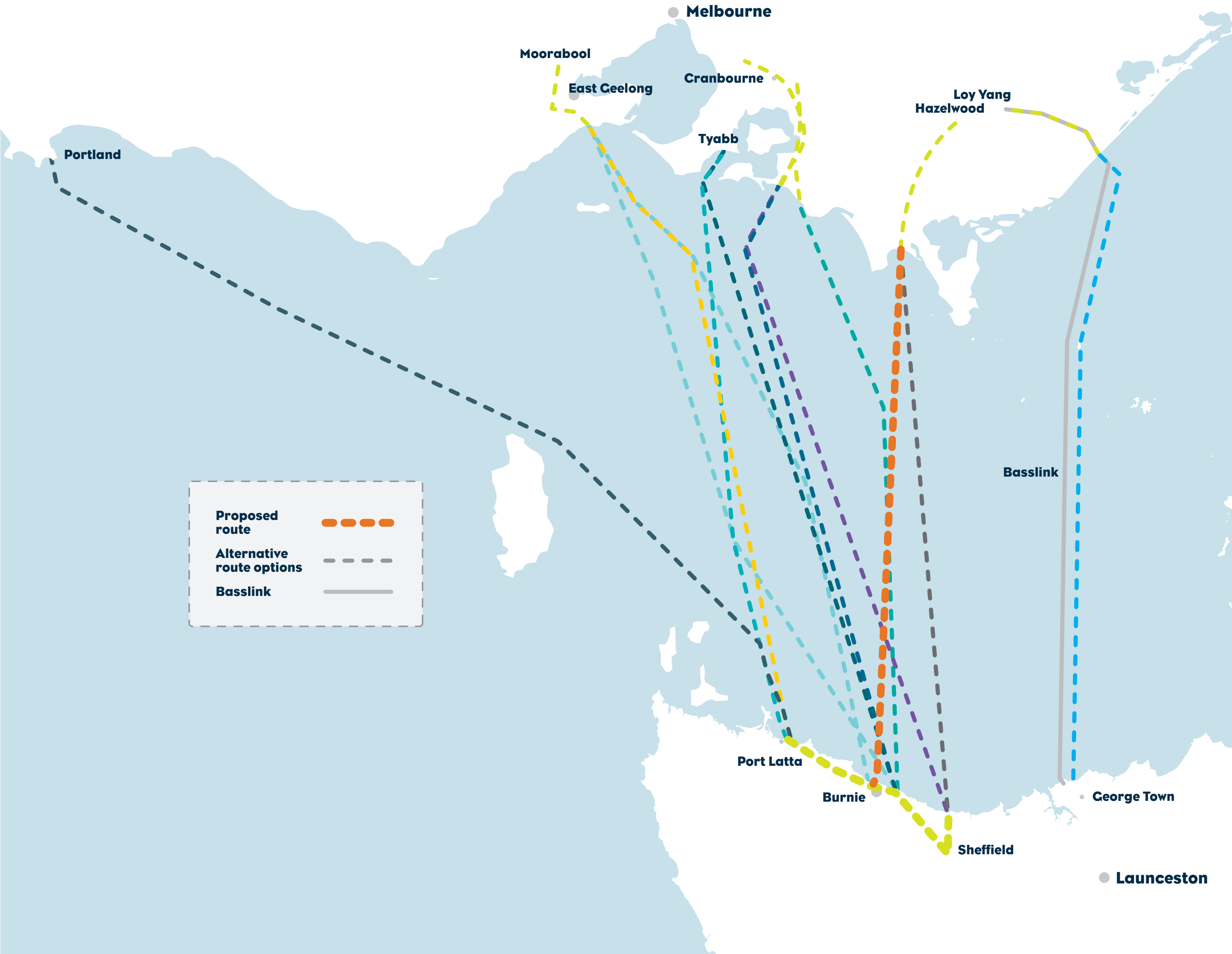


SUMMARY OF ROUTE OPTION EVALUATIONS

Summary findings of the alternative route options evaluations include:

- **Port Latta to Portland** (far north west coastal Tasmania to far south west coastal Victoria)
  - is closer to the North West Tasmanian Renewable Energy Zone, but further from the Central Tasmanian Renewable Energy Zone
  - would potentially enable better inter-regional trading with South Australia
  - is the longest route and therefore the most costly option
  - would pass close to and potentially impact important fisheries
  - would cross the Otway Basin gas fields and production infrastructure
- **Port Latta to East Geelong** (far north west coastal Tasmania to coastal south west of Melbourne); **Burnie to East Geelong** (coastal north west Tasmania to coastal south west of Melbourne); and **Burnie to Moorabool** (coastal north west Tasmania to north of Geelong, inland south west of Melbourne)
  - These were all attractive sites for connection to the Victorian transmission network, as they are close to the Greater Geelong and western Melbourne centres of demand
  - East Geelong area would require significant upgrades to existing transmission lines, at a substantial cost
  - both East Geelong and Moorabool options deemed highly constrained by urban development, requiring routes to follow and impact existing roads and reserves, with associated construction and cost issues
  - the approach to landfall on the Victorian south west coast would be through or near Defence Force training areas and ship graveyards, adding complexity to offshore routes and construction
- **Burnie or Sheffield to Cranbourne** (coastal north west Tasmania or inland north west Tasmania, to inland south east of Melbourne)
  - Cranbourne was considered unconstrained electrically and close to areas of demand in south eastern Melbourne and the Mornington Peninsula, however this narrow area was considered highly constrained by urban development in the Casey-Cardinia corridor, with significantly higher land values and lack of availability
  - the route from Kilcunda (near Wonthaggi, south east of Melbourne) was also considered highly constrained due to existing infrastructure, small landholdings, the Koo Wee Rup swamp drains and associated ecological values, and asparagus growing areas around Koo Wee Rup
- **Burnie or Sheffield to Tyabb** (coastal north west Tasmania or inland north west Tasmania, to coastal south east of Melbourne)
  - Tyabb presented a strong option from the perspective of a close and major connection point, which could be achieved by connection through to Cranbourne Terminal Station; however, the Tyabb to Cranbourne 220 kV transmission section is highly constrained by urban development, and would require upgrading or duplicating the existing lines
  - the Victorian landfall location on this route has significant environmental and technical constraints, including required crossing of the Western Port Bay Ramsar Wetland and traversing a busy shipping channel
  - land costs between Tyabb and Cranbourne were high, relative to some other options
- **Burnie or Sheffield to Hazelwood** (coastal north west Tasmania or inland north west Tasmania, to inland east of Melbourne in Latrobe Valley, Gippsland, Victoria)
  - limited subsea infrastructure crossings would be required
  - both routes have a relatively shorter marine section
  - long onshore cable sections in Victoria, resulting in a higher number of affected landholdings than other routes and potential constructability challenges
  - good proximity to the North West and Central Tasmania Renewable Energy Zones
  - proximity to existing hydroelectricity resources, the North West Renewable Energy Zone, and proposed renewable generation projects including pumped hydro long duration energy storage
  - strong connection at Hazelwood to existing 500 kV Victorian transmission network, with sufficient capacity for interconnection
  - good geographic diversity to support power system stability and supply redundancy
  - both routes regarded as having limited exposure to incompatible land and/or seabed uses.

Prudent and feasible route options



HOW WAS THE PROPOSED ROUTE IDENTIFIED?

Evaluating the identified prudent and feasible routes enables a process of elimination to distinguish the routes considered to be least constrained. Two routes, one from Burnie (Heybridge) to the Hazelwood area and another from Sheffield to Hazelwood, were progressed to initial field investigations and detailed desktop studies. These studies confirmed there were no major constraints with either route option and that the existing environmental values identified were manageable.

Next, the least constrained routes were further evaluated, in order to identify the proposed route. Ecologists, geomorphologists and cultural heritage consultants conducted 'ground-truthing' during drive-by inspections from the public road network for the potential land-based sections of the Burnie to Hazelwood and Sheffield to Hazelwood routes.

Aboriginal elders and other indigenous community whose country is crossed by the potential route in Victoria, accompanied Marinus Link representatives on an inspection of the Victorian land-based route, and provided advice on whether the proposed route had any potential fatal flaws in relation to cultural heritage values. No fatal flaws were reported, and the representatives noted that Aboriginal cultural heritage would exist on and near the routes, as artefact scatters and story lines, particularly at the coast but also along and near inland watercourses. In Tasmania, engagement was undertaken with the Aboriginal community on areas impacted by the proposed Marinus Link route, with an Aboriginal Heritage Officer and an archaeologist finding no significant values associated with the proposed route.

Marine ecologists inspected the landfalls using still and video cameras mounted on submarine vehicles to verify substrate and benthic habitat types. Marinus Link commissioned a marine geophysical reconnaissance survey to confirm seabed topography (bathymetry) and composition along the routes. This analysis suggested that the Heybridge shore crossing in the Burnie area was likely to be more straightforward than options to connect through to the Sheffield area.

In addition to survey data, economic analysis suggested that greater energy market value was achieved by augmenting the North West Tasmanian HVAC transmission network, to support flows from renewable energy zones to and from the link, and locating the HVDC converter stations in the Burnie area.

Existing values of the proposed route

All publically available geospatial data was gathered into a GIS. Critical information captured includes the physical features and structure of the landscape, existing land uses, vegetation types and coverage, waterways, and existing roads and other linear infrastructure. This information was evaluated alongside the established literature relevant to identifying constraints to the proposed route.

FURTHER REVISIONS

Once the Burnie to Hazelwood route was identified as the least constrained out of the alternative routes, a further review was conducted and the route was revised to address recommendations from investigations to date. It was then subject to an engineering review.

From a planning perspective, this route is considered the least constrained as it:

◊ connects to a strong point on the Victorian transmission grid, where the Marinus Link interconnector will be complementary to existing and future load, generation and storage proposals in the Latrobe Valley region

◊ creates a strong grid connection point in the Burnie area, with efficient augmentation of the North West Tasmanian transmission network to support flows to and from Marinus Link, unlocking the North West and Central Tasmanian Renewable Energy Zones and increasing interconnector resilience by distributing energy flows across the network

◊ is considered most likely to achieve environmental, planning and cultural heritage approvals

◊ is one of the more cost efficient routes, and

◊ balances key objectives of cost, efficiency and constructability whilst seeking to minimise adverse impacts on landowners, communities, businesses and conservation areas.

In summary, the Burnie to Hazelwood route, including suitable landfalls located at Waratah Bay on the Victorian side and Heybridge on the Tasmanian side, achieves the best balance of the project's objectives and the technical, environmental and social criteria. It is therefore identified as the least constrained and proposed route.

NEXT STEPS

COMMUNITY INPUT

We recognise the need to provide many avenues to engage with the Marinus Link team on the project and the proposed route. In early 2021, Marinus Link will host a public webinar to provide more information on the proposed route and answer questions from the community. We will host in person sessions throughout the Gippsland region and North West Tasmania. We also welcome engagement via our project website and social media.

Landowners, the community and stakeholders can find the latest information and opportunities for input on the proposed route at https://engage.marinuslink.com.au.

The proposed route may vary as a result of the environmental, cultural heritage, socio-economic and technical studies, and as engagements with landowners and the community are further progressed.

Formal opportunities to make submissions within regulatory processes will also be available through the environmental, land use planning and cultural heritage impact assessment and approvals frameworks.

Marinus Link will continue to keep the community updated as these opportunities arise.

MARINUS LINK ROUTE SELECTION AND ENGAGEMENT PROCESS

2018-2020

- Ecological, cultural heritage and geotechnical desktop surveys undertaken
- Prudent and feasible corridors and routes identifed and evaluated
- Project Initial Feasibility Report published (February 2019)
- Business Case Assessment and Project Assessment Draft Report published (December 2019)
- Marine ecology and marine geophysical reconnaissance surveys undertaken

Late 2020

- Landowner, community and key stakeholder engagement commences
- Proposed route released

Early-mid 2021

- Ecological, cultural heritage and geotechnical field surveys commence, with some additional seasonal surveys in 2021-22
- Landowner engagement continues
- Wider community engagement opportunities

Mid 2021

- Preferred route released, refined by landowner and community feedback

Mid-late 2021

- Commonwealth and State environment, planning and heritage approval applications

Marinus Link will continue to keep the community updated as engagement opportunities arise. We invite you to contact us with any questions about the proposed developments via our website, email or phone line.

visit **engage.marinuslink.com.au**

email **team@marinuslink.com.au**

call **1300 765 275**

For engagement opportunities and information, visit https://engage.marinuslink.com.au

For the landscape and visual impact assessment process and updates, visit http://www.marinuslink.com.au

The full Route Options Report will be made available from early 2021 at http://www.marinuslink.com.au

Marinus Link remains committed to working closely with communities, businesses and landowners as planning continues for the project.

Marinus Link enables the National Electricity Market to

save at least

70 million tonnes of CO_2*

*The emission saving is calculated based on the current carbon emission intensity of the NEM. Commissioning of Marinus Link unlocks the achievement of the 200 per cent Tasmanian Renewable Energy Target (10,500 megawatt hours of additional renewable generation by 2040).

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