



CIVIL CONTRACTORS FEDERATION
EARTH AWARDS

BRUNY ISLAND - SUBMARINE Cable Replacement

Date: Nov 2020 – Oct 2022

Principal: TasNetworks

Project Value: \$6.1M

TASK

The purpose of this design and construct project was to replace the failed electrical cable from Tinderbox to Dennes Point. The new submarine cable is sized to allow for reasonable future load growth in numbers of residents and visitors to Bruny Island and it will also reduce reliance on diesel generators. The new submarine cable was approximately 2.2km long with connection works at either end including a significant cable structure to support the cable over a near vertical cliff approximately 30m tall.

CHALLENGES

Whilst Shaw was selected as the preferred Tenderer for the project, TasNetworks continued to refine its Principal Project Requirements including the interface with the cliff face at Tinderbox. Shaw went through a significant process of defining, designing and assessing various options including pole mounting, cable structures and horizontal directional drilling. Numerous procurement models were received and risk assessed. Given the tight environmental and community constraints, Shaw was able to deliver a cable retaining structure sensitive to a number of stakeholders.

To meet other project requirements, TasNetworks embarked on the project by procuring the reel of electrical cable in advance of project award. As a design and construct project, Shaw needed to work with its design team to match the design requirements with this cable selection. This was further complicated by delivery timeframes noting the supply side issues the Covid-19 pandemic produced.

The D'Entrecasteaux Channel is a feature with significant environmental and community importance. A primary concern of the project was minimizing the effect of the works on the local environment. This was especially important given the highly visible nature of the works including its proximity to significant tourism infrastructure. For example, Shaw worked closely with TasNetworks and architects to minimize the visual impact of the cable structure which was attached to the cliff.



CHALLENGES cont'd ...

The project had a number of significant potential safety issues which could have disrupted project progress. Tensioned cable install over water, complex crane lifting of the cable support structure and the use of divers to complete marine cable install were all examples of works Shaw completed following exhaustive safety and environmental reviews, procedures and implementation.

Immediately prior to the placement of the cable across the D'Entrecasteaux Channel, the original supplier of the vessel to lay out the cable determined that it could not provide this service. Within an extremely tight timeframe, Shaw was able to source another vessel and complete all the necessary due diligence on the replacement vessel in 6 weeks – Shaw had completed the same due diligence over 6 months for the original vessel. Delays to the project were not acceptable noting TasNetworks requirement not to discontinue relying on old infrastructure.

OUTCOMES

Ultimately, Shaw was able to deliver on time and budget a complex marine cable installation to secure critical public infrastructure. This was completed despite the uncertainties of the marine setting while meeting complex safety and environmental demands.

