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Marinus Link Stage 1 – Part A (Early Works) Revenue Proposal

Cost Independent Verification and Review
of Expenditure Forecasting Methodology

Marinus Link

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Acronyms

Acronym	Description
AER	Australian Energy Regulator
D&A	Design and Approvals
EES	Environmental Effects Statement
EIS	Environmental Impact Statement
FTE	Full Time Equivalent
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
ISP	Integrated System Plan
MLPL	Marinus Link Pty Ltd
PEC	Project Energy Connect
PSA	Planning Scheme Amendment
TCD	Transmission Cost Database
TNSP	Transmission Network Service Provider

Contents

1	Introduction	10
1.1	Background	10
1.2	Purpose of This Report.....	10
1.3	Marinus Link Project Status.....	10
1.4	Limitations	11
2	Independent Verification Process.....	12
3	MLPL Stage 1 Expenditure Costs and Methodology Summary	13
4	Land and Easement Acquisition	15
4.1	Detailed Cost by Activity	15
4.2	Cost Validation	16
4.2.1	Stage 1: Land Access Licence Negotiations and Payment.....	16
4.2.2	Stage 2: Land Easement Compensation Negotiation	16
4.2.3	Stage 3: Land Easement Option Agreement	17
4.2.4	Land Acquisition	17
4.2.5	Resourcing and Delivery	18
4.2.6	Benchmarking.....	19
4.3	Conclusion	19
5	Landowner and Community Engagement.....	21
5.1	Detailed Cost by Activity	21
5.2	Cost Validation	21
5.2.1	AER Principles.....	22
5.2.2	Scope and Delivery Approach	22
5.2.3	Resourcing Assessment.....	22
5.2.4	Landowner and Community Engagement Timelines	24
5.2.5	Benchmarking.....	25
5.3	Conclusion	25
6	Environmental Impact Assessments	26
6.1	Detailed Cost by Activity	26
6.2	Cost Validation	27
6.2.1	Scope and Delivery Approach	27
6.2.2	Resourcing Assessment.....	28
6.2.3	EIS Timelines	28
6.2.4	Benchmarking.....	29
6.3	Conclusion	29
7	Technical Designs and Specifications	31
7.1	Detailed Cost by Activity	31
7.2	Cost Validation	32
7.2.1	Scope and Delivery Approach	32
7.2.2	Review of MLPL Scope and Approach.....	32
7.2.3	Resourcing Assessment.....	35
7.2.4	Technical Design and Specifications Timelines	36
7.2.5	Benchmarking.....	37
7.3	Conclusion	37
8	Procurement Strategy and Execution	39

8.1	Detailed Cost by Activity	39
8.2	Cost Validation	40
8.2.1	Scope and Delivery Approach	40
8.2.2	Resourcing Assessment.....	40
8.2.3	Benchmarking.....	41
8.3	Conclusion	42
9	Program and Project Management	43
9.1	Detailed Cost by Activity	43
9.2	Cost Validation	44
9.2.1	Scope and Delivery Approach	44
9.2.2	Resourcing Assessment.....	44
9.2.3	Benchmarking.....	45
9.2.4	Change Management	45
9.3	Conclusion	45
10	Corporate and Support Costs	47
10.1	Detailed Cost by Activity	47
10.2	Cost Validation	48
10.2.1	Scope and Delivery Approach	48
10.2.2	Resourcing Assessment.....	49
10.2.3	Benchmarking.....	51
10.3	Conclusion	51
11	Total Early Works Expenditure Benchmarking	52
11.1	Conclusion	53

Figures

Figure 5-1 Landowner and Community Engagement Work Program³⁰

Figure 6-1 EIS Work Program Timeframe

Tables

Table 1-1 Summary of Aurecon Expenditure Assessment

Table 3-1 Marinus Link Early Works Stage Expenditure Costs and Verification

Table 4-1 Objectives and activities of Land and Easement Acquisition

Table 4-2 Summary of Land and Easement Costs – Nominal \$2023

Table 4-3 Comments on Land Acquisition Activities

Table 4-4 MLPL Land and Easement Resources

Table 5-1 Objectives and activities for Landowner and Community Engagement

Table 5-2 Detailed Costs of Landowner and Community Engagement – \$ Nominal

Table 6-1 Objectives and Activities of environmental impact assessment

Table 6-2 Detailed costs for EIS - \$Nominal

Table 6-3 MLPL FTEs for Environmental Assessments²⁸

Table 7-1 Objectives and activities of Technical Design and Specifications

Table 7-2 Technical Design and Specifications Expenditure - \$ Nominal

Table 7-3 Early Works Technical Design and Specifications Activities

Table 7-4 MLPL Internal Resourcing Technical Design and Specifications²⁸

Table 7-5 Status of studies for technical design and specifications

Table 8-1 Objectives and activities of procurement and execution
Table 8-2 Detailed Expenditure Procurement Strategy and Execution - \$ Nominal
Table 8-3 Actual and proposed internal labour requirement for procurement strategy and execution
Table 9-1 Objectives and activities of procurement and execution
Table 9-2 Detailed Expenditure Program and Project Management
Table 9-3 Marinus Link Resourcing for Program and Project Management
Table 10-1 Corporate and Support Costs Objectives and Activities
Table 10-2 Corporate and Support Costs Detailed Costs - \$ Nominal
Table 10-3 MLPL Corporate Staffing²⁸
Table 11-1 Benchmarking of D&A Costs for International Projects

Executive Summary

Marinus Link is a significant national infrastructure project that is poised to deliver considerable benefits to electricity consumers by reducing wholesale electricity costs. The project includes the construction of approximately 255 kilometres of undersea High Voltage Direct Current (HVDC) cable and roughly 90 kilometres of underground HVDC cable in Victoria. It also includes converter stations in both Tasmania and Victoria.

Marinus Link Pty Ltd (MLPL) has commenced its revenue determination process, which is being undertaken by the Australian Energy Regulator (AER) in accordance with Part D, clause 6A.9 of the National Electricity Rules (the Rules).

The purpose of this report is to provide an independent assessment of MLPL's proposed expenditure outlined in Stage 1 Part A (Early Works) of the project and comment on the likely prudence and efficiency of the forecasts put forward by Marinus Link.

Early works is defined by the AEMC as any pre-construction activity which is necessary to improve the accuracy of project cost estimates or could ensure that the project will be delivered within timeframes specified within the most recent Integrated System Plan (ISP). Based on advice received from MLPL and publicly available documentation, various options analysis and value exercises have been carried out in previous phases, including, project routing, technology, and timing assessments.^{1,2} Although influential, costs associated with these assessments do not form a part of the early works expenditure items detailed below.

In Table 1-1 Aurecon summarises the key expenditure Marinus Link is seeking to recover as part of its revenue proposal to the Australian Energy Regulator and Aurecon's assessment of its reasonableness.

Table 1-1 Summary of Aurecon Expenditure Assessment

Item	\$m Nominal July 21 to Dec 24	Aurecon Assessment of Scope, Resourcing and Delivery
Land and Easement Acquisitions	8.0	<ul style="list-style-type: none">■ To minimise potential risks and project delays, MLPL has formulated a clear strategy and principles for land and easement acquisition activities as required for Stage 1. These activities comprise three stages: initial negotiations with landowners, calculation of compensation payments, and negotiations with landowners for options agreements and initial down payments.■ In Aurecon's view the land and easement acquisition costs included in Stage 1 (early works) have been prepared on a reasonable basis and the activities are likely prudent to facilitate timely access to proposed sites needed to progress the project's development.■ MLPL has competitively procured external advisors for specialist expertise where required, such as legal expertise for negotiations, land valuations experts for easement valuation, and other advisors as necessary.
Landowner and Community Engagement	23.2	<ul style="list-style-type: none">■ The methodology for Phase 2 works includes a 'diverse range of opportunities' for community engagement and a strong focus on First People's inclusion within the project. This is in line with delivering best practice community engagement.■ The scope of work is consistent with activities identified as prudent to carry out during early works by MLPL's engagement area leaders and consultants■ In Aurecon's view, the internal and external resourcing allocated to the community engagement components of the project is appropriate and the expenditure reasonable. Service providers were competitively procured through TasNetworks Procurement Policy when required.

¹ Marinus Link Route Options Report, February 2021. Available from: <https://www.marinuslink.com.au/2021/03/marinus-link-route-options-report/>

² Marinus Link Project Assessment Conclusions Report (PACR). Available from: <https://www.marinuslink.com.au/wp-content/uploads/2021/06/Project-Marinus-RIT-T-PACR.pdf>

Item	\$m Nominal July 21 to Dec 24	Aurecon Assessment of Scope, Resourcing and Delivery
Environmental Impact Assessments	24.5	<ul style="list-style-type: none"> Based on Aurecon's review, MLPL's methodology, timeline and resourcing appear reasonable. On the understanding that MLPL has undertaken significant and timely engagement with all the key Commonwealth and State environmental and planning regulators, it is assumed the scope of technical assessments to support the EIS' and Development Approval submissions met the regulator's requirements. The suite of environmental assessments MLPL will undertake during its early works program appear reasonable. Based on the available schedule³ and the actual expenditure for the past 2 years, costs to date and the forecasted level of expenditure for the next 2 years appear reasonable. The use of competitive tendering is a mechanism by which MLPL can demonstrate they are obtaining value for money. Aurecon notes that EIS costs can vary significantly, this is compounded by the fact that Marinus Link operates across multiple jurisdictions and a large component of the project is marine based, requiring completion of a wide range of environmental studies.
Technical Designs and Specification	43.9	<ul style="list-style-type: none"> MLPL has undertaken a range of studies to ensure it has optimised its route and technical design for the project and has prepared the necessary documentation and tender work packages leading into post final investment decision stage. The subsea cable and associated system studies are the biggest risk drivers for the Marinus Link project. Aurecon found that MLPL had undertaken (or plans to undertake) the required technical studies and works across key areas such as cable studies, converter and substation studies, marine studies, and system agreement studies. MLPL has utilised its internal team and engaged advisors through competitive processes for the development of system studies and technical specifications. Aurecon is satisfied with the procurement process and cost forecasts conducted by MLPL, and that they are very likely to be prudent based on our bottom-up evaluations.
Procurement Strategy and Tender	18.9	<ul style="list-style-type: none"> Procurement expenditure for MLPL's early works includes activities for the development of tender strategy, execution of procurement strategy and ensuring the manufacturing capacity of suppliers. In Aurecon's view, these procurement strategies and execution activities are likely to be prudent to support project delivery timeframes. The MLPL team has also demonstrated that by proactive engagement with suppliers (through additional travel and senior executive involvement), the procurement activities remain on track despite global supply chain challenges. The procurement strategy development and execution has been based upon the external and internal specialist advice and its estimates are adequately supported by quotations to meet the scope of work and estimates. Aurecon believes the costs, resourcing and the scope of work undertaken or proposed to be completed prior to Final Investment Decision and Stage 2 are likely to be prudent and efficient.

³ EIA03 - Provided by MLPL

Item	\$m Nominal July 21 to Dec 24	Aurecon Assessment of Scope, Resourcing and Delivery
Program Management	27.8	<ul style="list-style-type: none"> ■ MLPL have undertaken a range of project management activities to ensure the overall effectiveness of the project, including the efficient management of risk and costs. ■ Aurecon believes the cost of MLPL's proposed expenditure is reasonable based on the activities it is required to undertake. The team structure and labour rates being applied are in line with industry practices. ■ The progressive implementation of dedicated project systems (replacing corporate systems) into its PMO function is timely and targeted for completion prior to the next phase of the project. ■ We also note that the implementation of a change management discipline will also provide an important reference for future pricing determinations.
Corporate costs support	50.2	<ul style="list-style-type: none"> ■ Aurecon understands there are transitional and once-off establishment costs required to transform, prepare and establish MLPL corporate functions to be stand-alone from TasNetworks. Aurecon understands MLPL has received quotes from the market for future software and system needs. ■ Aurecon has reviewed the ongoing business costs and resourcing requirements identified by MLPL for early works against typical corporate structures for standalone entities and believe this to be consistent with industry practice.
Total Expenditure	\$197m or 5.9% of projected expenditure ⁴	<ul style="list-style-type: none"> ■ In Aurecon's view, MLPL has adequately identified the activities to undertake during the early works phase to reduce project construction and implementation risks. MLPL has also demonstrated that its resourcing costs are in line with industry benchmarks and that specialist consultants have been procured on a competitive basis. ■ In Aurecon's view the basis for the preparation of the \$197m in early works expenditure MLPL is seeking to recover is likely to be prudent and efficient and consistent with the activities we believe need to be undertaken in delivering the Marinus Link. These activities will help ensure the project is sufficiently evaluated to mitigate project implementation and operational risks. ■ In terms of the proportion of total project expenditure this represents, we note that Marinus Link is within the range of benchmarks observed nationally and globally which range from 3% to 15% of total project costs.⁵ Aurecon notes that there are some unique factors with the Marinus Link project that contribute to the scale of early works expenditure relative to other HVAC projects in the region. For example, the undersea HVDC market in Australia is less mature compared to HVAC in the region and HVDC in other regions globally, different degree of stakeholder engagement and compliance obligations, and additional one-time establishment costs incurred by MLPL to operate as a separate entity from TasNetworks.

⁴ MLPL Early Works Relative to Total Capex. Available from: <https://www.marinuslink.com.au/>

⁵ Refer to Chapter 11

1 Introduction

This section specifies the project's background, purpose of the report, Marinus Link's project status, Aurecon's scope of work and independent review limitations

1.1 Background

Marinus Link is a significant national infrastructure project that is poised to deliver considerable benefits to electricity consumers by reducing wholesale electricity costs. The project includes the construction of approximately 255 kilometres of undersea High Voltage Direct Current (HVDC) cable and roughly 90 kilometres of underground HVDC cable in Victoria. It also includes converter stations in both Tasmania and Victoria. The total interconnection capacity will reach 1500 MW, facilitated by two 750 MW cables.

Marinus Link, a key component of Project Marinus, aims to address Australia's need for affordable and reliable electricity as coal-fired generation plants retire.⁶ By leveraging Tasmania's existing hydro capacity, wind resources, and energy storage capability, Marinus Link will provide the National Electricity Market (NEM) with low-cost, on-demand, and clean energy.

Marinus Link Pty Ltd (MLPL), a subsidiary of TasNetworks, is progressing the 'design and approvals' phase of Marinus Link, with design, environmental assessments, community engagement and procurement underway. In October 2022, the Australian, Tasmanian and Victorian Governments entered an historic agreement for joint ownership of Marinus Link, securing it as a critical transmission project for the nation.

1.2 Purpose of This Report

The purpose of this report is to:

- Provide an independent assessment of the nominal expenditure from 1 July 2021 to 31 December 2024 for Stage 1 Part A (Early Works) of the Marinus Link project.
- Evaluate the likely prudence and efficiency of the forecasts based on the Expenditure Forecasting Methodology used in Stage 1 Part A (Early Works).
- Determine whether the costs and forecasts outlined in Stage 1 Part A (Early Works) are likely to be prudent and efficient, and whether they are essential to meet project timelines, reduce final project costs, and/or minimise schedule and cost risks.

1.3 Marinus Link Project Status

MLPL has now chosen a regulatory pathway to establish itself as an independent provider of major transmission infrastructure. MLPL will reach this status via two processes or regulatory periods:⁷

- First regulatory period from 1 July 2025 to 30 June 2028 (Stage 1) – The first regulatory period covers the pre-commissioning phase of the project, when MLPL will not be providing prescribed transmission services and, therefore, will not be recovering revenues from customers.
- Second regulatory period from 1 July 2028 to 30 June 2033 (Stage 2) – The second regulatory period will cover the post-commissioning phase of the project, although it will commence approximately 6 months before the first cable is expected to be commissioned.

MLPL initiated the process of being recognised as a regulated transmission network service provider by submitting a letter of intent to the AER on the 31st March 2023.⁸ This commenced the Australian Energy Regulator's revenue determination process, in accordance with Part D, clause 6A.9 of the National Electricity

⁶ Project Marinus is made up of Marinus Link (being the HVDC converter stations and HVDC cables), and then also HVAC reinforcement transmission works within the Tasmanian transmission network

⁷ Marinus Link, Intending TNSP application for a revenue determination - Submission to the Australian Energy Regulator (31 March 2023). Available from: <https://www.aemc.gov.au/rule-changes/establishing-revenue-determinations-intending-tnsps>

⁸ Marinus Link - Intending transmission network application. Available from: <https://www.aer.gov.au/all-aer-projects/marinus-link-intending-transmission-network-application>

Rules (the Rules). In accordance with the Rules, the AER published its Commencement and Process Paper on 1 June 2023. This sets out the AER's timetable and process for setting MLPL's regulated revenues.⁹

This Report provides an independent assessment of the early works that MLPL is seeking to recover as part of its Stage 1 works, specifically Part A of Stage 1. Early works are defined by the AEMC as any pre-construction activity which is necessary to improve the accuracy of project cost estimates or could ensure that the project will be delivered within timeframes specified within the most recent ISP.

1.4 Limitations

- This report, prepared by Aurecon for MLPL, is intended solely for the use and reliance of MLPL for the agreed-upon purpose stated in section 1.2 of this report.
- Aurecon explicitly disclaims any responsibility to any other party arising from this report. Implied warranties and conditions are also excluded to the extent permitted by law.
- Aurecon's services in preparing this report were limited to the scope limitations stated within the report.
- The opinions, conclusions, and recommendations in this report are based on the conditions and information reviewed at the time of its preparation. Aurecon is not obligated to update the report to account for subsequent events or changes.
- The opinions, conclusions, and recommendations in this report are based on assumptions made by Aurecon as outlined in the report. Aurecon disclaims any liability that may arise from the incorrect assumptions.
- The scope of Aurecon's work relates to Marinus Link which encompasses the scope of converter sites, the required infrastructure between the sites in Hazelwood in Victoria and Heybridge in Tasmania, and not "Project Marinus" which includes broader transmission infrastructure within Tasmania.
- Although Aurecon has made assertions on the scope of the activities Marinus Link has sought to undertake, Aurecon has not in all instances cited or verified every output produced by MLPL or provided judgement on the quality or completeness of all documents referenced.

⁹ AER - Marinus Link - Notice of decision and commencement and process paper - June 2023. Available from: <https://www.aer.gov.au/all-aer-projects/marinus-link-intending-transmission-network-application>

2 Independent Verification Process

Aurecon has provided an independent verification of the early-stage works put forward by Marinus Link by utilising a range of verification approaches such as:

- Benchmarking – Aurecon has benchmarked expenditure cost elements based on publicly available project benchmarks, our project experience, and databases such as AEMO's Transmission Cost Database.¹⁰
- Reliance on tender documentation – Aurecon has reviewed documents provided by MLPL which provide the basis for pricing via a competitive process.
- Assessing whether costs proposed are prudent and would be incurred by other TNSPs in similar circumstances.
- Evaluating whether internal or service providers costs are complete and represent an efficient team structure and position rate.
- Reviewing timeframes developed by MLPL to deliver on its work programs.
- Verification of unit rates and underlying assumptions where costs have been provided by third parties.
- Engaging with MLPL to understand how the scope of work has been developed, the resourcing strategy and timeframes for implementation.

¹⁰ Transmission costs for the 2022 Integrated System Plan. Available from: <https://aemo.com.au/en/consultations/current-and-closed-consultations/transmission-costs-for-the-2022-integrated-system-plan>

3 MLPL Stage 1 Expenditure Costs and Methodology Summary

In this section we summarise the total expenditure MLPL is seeking to recover as part of this revenue proposal and the methodology Aurecon understands has been applied to derive actual and forecast projections. Aurecon's summary is outlined below in Table 3-1.

Based on advice received from MLPL and publicly available documentation, various options analysis and value exercises have been carried out in previous phases. Various assessments encompassing (but not limited to) project route options, technology options such as prequalification process for cables, and project timing. Although influential, MLPL have advised that costs to complete these options analysis items do not form a part of the early works expenditure items detailed below.

Table 3-1 Marinus Link Early Works Stage Expenditure Costs and Verification

Expenditure Item	Nominal Expenditure \$m (July 21 to Dec 24)	MLPL Methodology
Land and Easement Acquisitions	8.0	<ul style="list-style-type: none"> ■ MLPL's internal staff have worked with legal and land valuation advisors to determine a required scope of work for the early works period. ■ MLPL has then developed delivery plans and budgets for the various stages of land and easement acquisitions required. ■ The delivery plans cover land access licence negotiations, compensation calculations and options agreements for the early works period ■ MLPL has utilised external advisors with specialist expertise where required, such as legal expertise for negotiations, land valuations experts for easement valuation, and other advisors as necessary.
Landowner and Community Engagement	23.2	<ul style="list-style-type: none"> ■ Marinus Link has identified 15 engagement areas and assembled project teams to carry out engagement in line with the scope for the Landowner and Community Engagement program ■ Each engagement area determined a budget for the specified activities developed by MLPL's internal subject matter experts. With regards to landowner and community engagement, MLPL procured consultants through a competitive tender process to implement the designated activities
Environmental Impact Assessments	24.5	<ul style="list-style-type: none"> ■ The expenditure MLPL is seeking to recover encompasses the activities undertaken in preparing its Environmental Impact Statements (EIS) to meet State and Commonwealth Government requirements. ■ MLPL has competitively procured a lead environmental consultant, Tetra Tech Coffey, to jointly develop a scope of work and manage the required work packages to meet its environmental compliance and obligations across State and Commonwealth jurisdictions. ■ MLPL has actively engaged with each Commonwealth and State environmental regulator to develop its scope and ensure timelines can be met.

Expenditure Item	Nominal Expenditure \$m (July 21 to Dec 24)	MLPL Methodology
Technical Design and Specifications	43.9	<ul style="list-style-type: none"> ■ MLPL has undertaken a range of studies to ensure it has optimised its route and technical design for the project and has prepared the necessary documentation and tender work packages leading into the post final investment decision stage. ■ The studies undertaken span across key areas such as cable studies, converter and substation studies, marine studies, and system agreement studies. ■ MLPL has utilised its internal team to develop system studies and has managed the development of technical studies and specifications for other workstreams utilising its suite of advisors, which include Jacobs, Tetra Tech Coffey and MMA Subsea Services.
Procurement Strategy and Tender	18.9	<ul style="list-style-type: none"> ■ MLPL has extensively engaged with its external advisors to effectively develop and execute the procurement strategy in accordance with the project objectives. ■ In accordance with the project objectives, MLPL has undertaken a rigorous and thorough assessment of relevant considerations in developing a procurement strategy. This includes market testing and analysis with potential suppliers, insurance due diligence, site due diligence and risk assessment. ■ MLPL has extensively engaged with external advisers, such as Jacobs for engineering and specialised HVDC procurement advice, HSF for legal and procurement advice and Tetra Tech Coffey for environment advice, to optimize the tender process. ■ In response to unprecedented supply chain challenges, MLPL have re-organised their procurement strategy and proactively engaged with suppliers (through additional travel and senior executive involvement) in this phase of the project
Program Management	27.8	<ul style="list-style-type: none"> ■ MLPL have a dedicated Project Management Office function (PMO) responsible for establishing governance, managing the project plan, implementing project control and management systems, scheduling, risk, quality and information management. ■ MLPL's team has also implemented a change management discipline within the project team which is being utilised to capture significant changes in scope and circumstance. This will provide a reference in the case of deviations in actual costs from the forecast cost for early works.
Corporate Costs	50.2	<ul style="list-style-type: none"> ■ MLPL is in the process of establishing itself as a standalone entity from TasNetworks and is required to establish standalone business practices and corporate functions across human resources, IT systems, finance, compliance, and other business processes ■ MLPL has utilised the services for EY to conduct a current state business review and transition overview for what functions MLPL would need in its transition to becoming a standalone entity from TasNetworks. MLPL's activities with respect to the composition of its staff, business establishment costs, and software and processes have been guided by this specialist advice
Total	196.5	

*Totals may not sum due to rounding

In the sections below Aurecon provides further detail on the components which have formed the basis of MLPL's projections and our view on the reasonableness and prudence of these costs.

4 Land and Easement Acquisition

In this Section Aurecon outlines the activities Marinus Link Pty Ltd has undertaken as part of its early works stage with respect to Land and Easement acquisitions.

Objectives and Activities

Table 4-1 below summarises the objectives of Marinus Link's early stage activities and the activities it has undertaken in line with those objectives. Overall, these activities seek to improve the accuracy of future expenditure and feasibility assessments by Marinus Link.

Table 4-1 Objectives and activities of Land and Easement Acquisition

Objectives	Activities
<ul style="list-style-type: none"> ■ To improve the accuracy of the costs of land and easement acquisition and ensure that these costs are efficient and minimise the risk of project delays. ■ To facilitate the environmental assessment processes and optimal route design. In the absence of this activity, MLPL would be exposed to the risk of project delays. 	<ul style="list-style-type: none"> ■ Develop accurate assessments of land and easement acquisition requirements. ■ Obtain reasonable land valuations and commence genuine negotiations to minimise compulsory acquisition. ■ Negotiation of interim access agreements for survey purposes to inform the environmental assessment processes and route design.

4.1 Detailed Cost by Activity

MLPL's expenditure as part of the early works period for land and easement acquisition is outlined below in Table 4-2. Aurecon has noted that MLPL has acquired land for a portion of sites prior to July 2021. MLPL has advised that this expenditure will be accounted for as part of the Opening Regulatory Asset Base (RAB). Aurecon's review of land acquisition expenditure is from June 2021 to December 2024, as per our scope.

Table 4-2 Summary of Land and Easement Costs – Nominal \$2023

Cost Element (\$ Nominal)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024	Total
Internal labour (FTE)	1.0	1.5	4.0	2.0	N/A
Internal labour (\$m)	0.1	0.2	0.7	0.3	1.3
Service provider (\$m)	1.4	1.2	1.3	0.5	4.4
Materials costs and other payments (\$m)	1.0	0.3	0.5	0.2	2.0
Administrative (\$m)	0.0	0.1	0.1	0.0	0.2
Total cost (\$m)	2.6	1.8	2.5	1.1	8.0

*Totals may not sum due to rounding

4.2 Cost Validation

Aurecon has reviewed the expenditure MLPL is seeking to recover in this category. MLPL have presented these costs across the three stages that they will be incurred:

- Stage 1 – Land access licence negotiations
- Stage 2 – Compensation calculation
- Stage 3 – Options agreements

Each of the above stage are outlined below, together with a discussion of the costs incurred for each.

4.2.1 Stage 1: Land Access Licence Negotiations and Payment

The MLPL forecast of land access fees is based on the number of landholders (approximately 102 landowners¹¹) multiplied by a nominal fixed amount of \$5,000 per property with an additional \$1,000 in legal fees as advised by Herbert Smith Freehills (HSF) and Land Access and Management Services (LAMS), MLPL's former land access agent.¹² However, MLPL could depart from these values due to specific negotiations with landowners contemplated within the MLPL's Land Access and Easement Compensation Framework.¹³ Land access licences do not survive the sale of properties and must be negotiated with new owners.

MLPL has taken a view on the landholders who are not willing or likely to progress a dialogue for the future options agreements and approximately 22% have been excluded from the above estimate.¹⁴ To Aurecon's understanding MLPL does not need to acquire all land identified within the route prior to the Final Investment Decision (FID) and the costs for this land if required may be allocated in later stages of the project (whether via private negotiations or via compulsory acquisition under the LAC Act).

In addition to the land access licence fees, MLPL has also taken on the cost of its two land access agents and internal labour who carry out the engagement with landholders as a part of this process. MLPL has allowed for a future Land Access and Acquisitions Manager to facilitate the later stages of negotiations and options agreements.

Aurecon considers the activities within Stage 1 of land and easement acquisitions to be prudent for the timely development of the Marinus Link. Access to land to undertake studies and secure route pathways are necessary to minimise risk by ensuring that technical and environmental impact studies are undertaken when needed in a timely manner, and that sufficient land is acquired prior to the FID. The tasks and costs incurred to date and those forecasts are appropriate based on the advice MLPL has received from its advisors and from our experience in infrastructure delivery.

4.2.2 Stage 2: Land Easement Compensation Negotiation

Aurecon reviewed the approach taken by Marinus Link for land and easement compensation negotiations which has been developed by MLPL's legal advisor, HSF, with inputs from Acumentis Pty Ltd (Acumentis), MLPL's land valuation expert. The Compensation Framework developed by MLPL has been developed based on a review of the Compensation Frameworks within Tasmania and Victoria.^{15,16}

Three activities are prudent and necessary according to Tasmanian and Victorian legislation which include:

- Establishing market value of the easements
- Professional expenses incurred by landowners in negotiations
- Other economic and financial losses the landowner may incur

¹¹ Advised by Marinus and per discussions with MLPL 21st June

¹² Victorian Land Access And Easement Acquisition Process. Available from: <https://www.marinuslink.com.au/wp-content/uploads/2021/12/Victorian-land-access-and-easement-acquisition-Marinus-Link-web.pdf>

¹³ Project Marinus Land Access and Easement Compensation Framework

¹⁴ Ibid

¹⁵ Victorian Land Acquisition and Compensation Act 1986

¹⁶ Tasmania Land Acquisition Act 1993

Establishing market value of easements

MLPL's land valuation consultant Acumentis was selected as part of a competitive tender process for identifying the market value of easements and land for which landowners would be compensated. Acumentis has followed the compensation framework developed by HSF and conducted a market valuation of the land expected to be acquired.¹¹

Aurecon has reviewed the valuation reports conducted by Acumentis and other advisors which will inform the total compensation expected to be incurred at the later stages of the project.

The cost of procuring Acumentis and their ongoing work in carrying out field investigations will also be recovered by MLPL as a part of the early works process.

Professional expenses

Landowners may also incur expenses for the negotiation process with MLPL. This is typically associated with professional expenses for legal and valuation services. MLPL will seek to make a fixed payment to each landowner (\$1,000),¹² but in some instances MLPL may be required to reimburse all professional expenses incurred by landowners where a fixed amount is not agreeable.¹⁷

Aurecon believes this to be suitable based on the advice it has received from HSF, MLPL's legal advisor.

Other economic and financial losses

Landowners could seek additional compensation for any disruption to their activities through construction on the easement when negotiating the agreed consideration. An allowance may be included for other economic losses of landowners as a part of the overall compensation estimate. Examples of this include disturbances to any production or yields following construction activities. A "blight on title" is also considered in the event there is an impact on market values of property due to the existence of an easement.

These expenses are often referred to as Solatium within Victoria where a payment is allowed which cannot exceed 10% of market value.¹⁴

4.2.3 Stage 3: Land Easement Option Agreement

It is industry practice to provide a portion of compensation payments upfront to landholders to encourage negotiation to commence for the acquisition of land and easements upon the signing of options agreements. MLPL's legal advisor has advised that the greater of \$2,500 per landowner or 10% of the total compensation payable to landholders (as derived within the Stage 2 Works) should be released and distributed to landholders over the early works period to facilitate the process.¹²

We note that for HumeLink, Transgrid provided a similar upfront option fee equivalent to forecast expenditure of about 10% of the property valuation for freehold land. Transgrid noted this is typical for major projects in NSW. Additionally, approximately 10% of the total compensation expected for landowners who exercise options and have land acquired is expected to be required in Option Agreement process. This allocation is in line with standard industry practice and serves as an incentive for landowners to actively engage in and advance negotiations for the acquisition of land based on advice received by MLPL's former advisor LAMs¹² and Aurecon's experience.

Aurecon did not have visibility to the total cost of compensation.

4.2.4 Land Acquisition

The land acquisition activities carried out by MLPL are essential to facilitate timely access to sites and provide security for acquiring easements through option agreements. Aurecon has evaluated land valuation reports and settlement deeds for the acquisition of a site at Hazelwood in Victoria. In this assessment, Aurecon mainly focused on the process of MLPL's land acquisition for to determine whether the acquisition process demonstrates prudence to support MLPL's activities and proposed expenditure. We have evaluated

¹⁷ LEA02 Framework – Provided by MLPL

these activities and the associated costs based on Aurecon's experience on other TNSP projects and internal SME advice. In addition, Aurecon evaluated if the cost per hectare of the sites acquired is comparable to what has been observed within the market and in line with advice MLPL has received from its advisors.

Table 4-3 Comments on Land Acquisition Activities

Site	Land Acquisition Activities	Aurecon Comments ¹⁸
Hazelwood	<ul style="list-style-type: none"> ■ MLPL carried out land valuation activities and engaged an external property valuer to establish an independent view of the market value of the Hazelwood site. The valuation report for the site was received in January 2022.¹⁹ ■ MLPL subsequently purchased the land in August 2022.²⁰ 	At present, Aurecon does not have direct access to a registered valuer to independently validate the estimate. Nonetheless, Aurecon reviewed the land valuation report presented by MLPL and is satisfied with its inclusion of market benchmarking and justifications. Drawing on our experience on TNSP projects and consulting with our internal subject matter experts, Aurecon believes that the acquisition process and sale is appropriate for Stage 1 - Part A (Early works).
Mardan Farm	<ul style="list-style-type: none"> ■ MLPL carried out land valuation activities and engaged an external property valuer to establish an independent view of the market value of the Mardan Farm site. The valuation report for the site was received in May 2019.²¹ ■ MLPL subsequently purchased the land in August 2019.²² 	Since the land acquisition cost for Mardan Farm occurred prior to July 2021, the acquisition process of this site sits outside Aurecon's review scope.
Heybridge	<ul style="list-style-type: none"> ■ MLPL received independently market valuation for the Heybridge site in May 2019.²³ ■ MLPL purchased the land in April 2020. ■ A portion of the site was sold to TasNetworks in June 2022.²⁴ 	<p>MLPL conducted the land acquisition for the Heybridge site in Tasmania in 2020, occurred prior to July 2021, and therefore sits outside Aurecon's review scope.</p> <p>Part of the Heybridge site was sold to TasNetworks, however, this activity sits outside of Aurecon's scope of review.</p>

In Aurecon's view, the acquisition process and sale are suitable and appropriate for Stage 1 - Part A (Early works).

4.2.5 Resourcing and Delivery

MLPL provided Aurecon an overview of its internal resourcing for land and easement acquisitions. MLPL has advised Aurecon that its internal SMEs manage workstreams, with specialist consultants being typically utilised for implementation of these workstreams to manage any resourcing or capacity gaps as needed. Table 4-4 outlines MLPL's internal resourcing structure up to December 2024. In Aurecon's view, the resourcing is adequate and labour costs provided for Aurecon's review are in line with industry.²⁵

¹⁸ Benchmarks based on Aurecon research

¹⁹ LEA03 Hazelwood Valuation report - Provided by MLPL

²⁰ LEA04 Hazelwood Settlement - Provided by MLPL

²¹ LEA05 Mardan Farm Valuation report - Provided by MLPL

²² LEA06 Mardan Farm Contract of Sale - Provided by MLPL

²³ LEA07 Heybridge Valuation report - Provided by MLPL

²⁴ LEA08 Heybridge Sale ML TN - Provided by MLPL

²⁵ Aurecon's assessment is per the structure provided as of 19th July 2023

Table 4-4 MLPL Land and Easement Resources

Team role (FTE)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024
Land Access & Acquisitions Specialist	1.0	1.0	1.0	0.5
Land Access Project Manager	-	-	1.0	0.5
Land Agents	-	0.5	2.0	1.0
Total	1.0	1.5	4.0	2.0

MLPL has advised it utilises service providers to deliver specialised work as required. This includes advice from:

- Herbert Smith Freehills (HSF) – Legal Advice
- Lee Property – Valuation (in the past)
- Land Access and Management Services – Valuation (in the past)
- Acumentis - Valuation
- Other advisors as required.

MLPL staff develop a scope of works as required for each advisor which is then implemented as needed. Aurecon has reviewed tender and procurement information provided by MLPL and is satisfied that advisors have been procured on a competitive basis and pricing is indicative of market rates.²⁶

4.2.6 Benchmarking

In terms of the proportion of capex, the estimates for land and easement expenditure for HumeLink accounted for 7% of total early works expenditure.²⁷ The land and easement expenditure for Marinus Link as a proportion of early works costs is approximately 4%. Although HumeLink's early works activities and costs are a useful point of reference for benchmarking in terms of project background and timing, in Aurecon's view, the proportion of capex comparisons with HumeLink is still a limited value as a benchmark, because:

- Aurecon believes that the cost of land and easement acquisition is driven principally by the route design and the associated number and value of the affected properties. Therefore, it is not particularly meaningful to benchmark the land and easement acquisition costs in absolute value of money across projects, such as HumeLink.
- Furthermore, unlike MLPL, HumeLink's total expenditure estimate for Stage 1 includes down payments for long lead-equipment (LLE) items (substation, transformers, reactors) as well as bidder payments (which skews the total early works cost value).

Although the nature of these costs is more project-specific, Aurecon has evaluated MLPL's estimates concerning land easement and acquisition and considers them likely to be prudent and efficient.

4.3 Conclusion

MLPL has formulated a clear strategy and principles for land and easement acquisition as required for early works to minimise potential risks and project delays. Land and easement acquisition activities comprise four stages: initial negotiations with landowners, calculation of compensation payments, and negotiations with landowners for options agreements and initial down payments. Aurecon has reviewed the process of land

²⁶ Per discussions with MLPL 21 June

²⁷ HumeLink Stage 1 Contingent Project Application – Independent Verification of Costs and Review of Capex Forecasting Methodology.

acquisition and in Aurecon's view, the acquisition process and sale is suitable and appropriate for Stage 1 - Part A (Early works).

MLPL has competitively procured external advisors for specialist expertise where required, such as legal expertise for negotiations, land valuations experts for easement valuation, and other advisors as necessary.

In Aurecon's view the land and easement acquisition costs included in Stage 1 activities are likely to be prudent to facilitate timely access to proposed sites needed to progress the project's development. These activities help ensure technical studies are conducted in a timely manner to de-risk construction activities and that land is appropriately acquired in line with development schedules.

5 Landowner and Community Engagement

This section details the activities Marinus Link has undertaken as a part of its early works phase with respect to Landowner and Community Engagement.

Table 5-1 Objectives and activities for Landowner and Community Engagement

Objectives	Activities
<ul style="list-style-type: none"> ■ To build community support for the project. This work is essential to optimise project design and avoid project delays. ■ To ensure the project achieves planning and approvals from relevant regulators. ■ To ensure that the project meets the needs of consumers and other stakeholders. In the absence of effective engagement, the project may be sub-optimal. 	<ul style="list-style-type: none"> ■ Engage with landowners and affected communities, including Traditional Owners, to understand and address their concerns. ■ Work with Governments and other agencies to ensure that regulatory requirements and community expectations are understood and addressed. ■ Actively engage with the competitively approved provider (CAP), electricity consumers and other stakeholders to ensure that their views are reflected in our project plans to the greatest extent possible. ■ Work with industry stakeholders to maximise local content opportunities and inform tender documents.

5.1 Detailed Cost by Activity

Table 5-2 below provides a summary of the costs incurred by MLPL historically and forecasts to 31 December 2024.

Table 5-2 Detailed Costs of Landowner and Community Engagement – \$ Nominal

Expenditure Costs (\$ Nominal)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024	Total
Internal labour (FTE)	9.9	17.5	23.2	11.5	N/A
Internal labour (\$m)	1.3	2.5	3.4	1.8	8.9
Service provider (\$m)	2.4	2.8	3.7	1.6	10.6
Materials costs and other payments (\$m)	0.1	0.2	1.3	0.5	2.2
Administrative (\$m)	0.2	0.5	0.5	0.2	1.5
Total cost (\$m)	4.0	6.0	9.0	4.1	23.2

5.2 Cost Validation

The approach Aurecon has taken to validation of MLPL's Landowner and Community Engagement covers three areas:

- A review of the scope of the work MLPL has proposed to undertake
- A review of MLPL's resourcing and delivery; and
- An assessment of the timeframes for the overall work program

5.2.1 AER Principles

The AER has principles for stakeholder engagement which should be followed in a revenue determination from a TNSP include ²⁸:

- Clear, accurate and timely
- Accessible and inclusive
- Transparent
- Measurable

The revenue determination is required to present a methodology outlining how to satisfy the AER stakeholder engagement principles. To evaluate the authenticity of the stakeholder engagement, the AER will assess various factors, including the thoroughness and extent of the involvement.

5.2.2 Scope and Delivery Approach

Marinus Link has identified 15 engagement areas and assembled project teams to carry out engagement in line with the required scope for the Landowner and Community Engagement program. The project teams are structured as below: ²⁹

- 1) Whole Project team
- 2) External Affairs
- 3) Project Delivery
- 4) Executive External Affairs
- 5) Customer & Revenue
- 6) Finance and Commercial
- 7) Legal and Governance
- 8) People Team

The methodology outlined by MLPL as part of its Phase 2 works includes a 'diverse range of opportunities' for community engagement and a strong focus on First People's inclusion within the project. This is in line with delivering best practice community engagement.

MLPL's forecasted expenditure is formulated from a budget set by each executive of the functions listed above including the required internal FTEs to deliver the required scope of work within the early works period. External consultant services are also included in this budget and are used where expert advice is needed or when a gap exists in internal capability.³⁰

In addition to the forecast expenditure, each team have developed an operational framework which guides the implementation of the activities required and set within the budget (e.g Environmental Effects Statement, Cultural Heritage Management, First Nations Plan, Stakeholder Engagement Strategy, and Corporate Guide and Events Plan).¹⁴

5.2.3 Resourcing Assessment

An overall plan of Full Time Equivalents (FTEs) internal to MLPL is maintained and updated over time to ensure resources are adequate and appropriate to carryout work overtime. Changes to workload and specific work areas has led to reallocation of resources throughout the project duration. Aurecon has cited this plan and believes it is adequate.³¹ A summary of MLPL's staffing is also provided below for landowner and community engagement.

²⁸ AER – Regulation of Actionable ISP Projects 2021

²⁹ Per MLPL Explanation of Expenditure Forecasts – Part A (Early Works)

³⁰ Per discussions with MLPL 20th May

³¹ Aurecon's assessment is per the structure provided as of 19th July 2023

Table 5-3 Actual and forecast internal labour resources for landowner and community engagement programs, including Traditional Owners, and stakeholder relations (FTE)³²

Team role (FTE)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024
Executive Assistant	1.0	1.0	1.0	0.5
Communications and Engagement Specialist	1.0	-	-	-
Community, Communications & Government Lead	1.0	-	-	-
Corporate Relations Manager	1.0	1.0	1.0	0.5
Engagement Specialist (Vic)	0.1	1.0	1.0	0.5
Executive Manager	1.0	-	-	-
Graphics & Photography Specialist	0.8	0.8	1.0	0.5
Head of Communications & Community	0.5	1.0	1.0	0.5
Head of Government Relations	-	1.0	1.0	0.5
Project Coordinator - Comms & Community	0.4	0.7	2.0	1.0
Project Coordinator - Customer & Revenue	0.1	1.0	1.0	0.5
Sustainability Manager	1.0	1.0	1.0	0.5
Aboriginal Engagement Advisor	-	2.3	3.0	1.5
Communications & Media Specialist	-	1.0	1.0	0.5
Communications Manager	-	0.7	1.0	0.5
Economic Development Principal (Vic)	-	0.2	2.0	1.0
Engagement & Communications Specialist	-	1.0	1.0	0.5
Engagement Manager (Vic)	-	0.7	1.0	0.5
Engagement Principal	-	-	1.0	0.5
Events, Media & Brand Manager	-	1.0	0.2	-
Head of Customer Projects	-	1.0	1.0	0.5
Indigenous Trainee	-	-	1.0	0.5
Executive Manager, External Affairs	-	1.0	1.0	0.5
Landowner support	1.0	-	-	-
Community engagement support	1.0	1.0	1.0	0.5
Total	9.9	17.5	23.2	11.5

*Totals may not sum due to rounding

The resourcing allocated to the landowner and community engagement components of the project in Aurecon's view is appropriate.³³ The resourcing structure of the landowner and community engagement team contains a high proportion of Manager, Head and Specialist roles due to the project's unique complexities. Aurecon understands that service providers are supporting MLPL in time intensive activities such as popup events, workshops, stakeholder recording keeping and communication collateral.

Service providers are competitively procured following TasNetwork's Procurement Policy and Procurement guidelines as cited by Aurecon. The policy has four different thresholds ranging from minimal to major, with increasing requirements and procurement methods for each threshold. Once the medium threshold is met (>\$25k) a minimum of three quotations are required and a short form procurement plan is needed. The major

³² LSE07 Resourcing – Provided by MLPL

³³ Based on our assessment as of 19th July 2023

threshold (>\$300k) requires an open market approach with an open or two stage tender and a long form procurement plan.³⁴

For example, RPS has been a consultant since 2020 and is contracted until FID, their scope involves 2.5 days per week for planning and approvals engagement as well as resourcing backfill when required. 89 Degrees was engaged from April 2021 – June 2023 for public relations and Cor Comms engaged from June 2023 until FID. They have been engaged for media and public relations management as well as management of the relations with the Tasmanian Government, currently 1 day per week or as required.³²

In terms of future costs for internal labour and service providers, these are estimated from budgets from each team lead. Consultant rates are pre-agreed on existing panel agreements to ensure pricing is competitive and in-line with earlier tender outcomes across each work area.³⁵

Aurecon believes the basis for the selection via a competitive tender process and the level of effort each consultant applied from tender documents reviewed is reasonable and in line with our industry experience. The activities performed by the consultants are required to appropriately manage the project specific engagement complexities and satisfy legal obligations.

5.2.4 Landowner and Community Engagement Timelines

Aurecon was provided the work program for MLPL's Landowner and Community Engagement for delivery of the activities that were planned as part of the early works phase. In Aurecon's view, the timelines outlined by MLPL below within Figure 5-1 are commensurate with the level of work planned. Moreover, landowner and community engagement is likely to require continuous engagement as access to land and parcels are acquired. This function is key for the delivery of several other expenditure areas or work programs, such as environmental impact assessments and technical design and specifications.

Marinus Link Stakeholder and community engagement

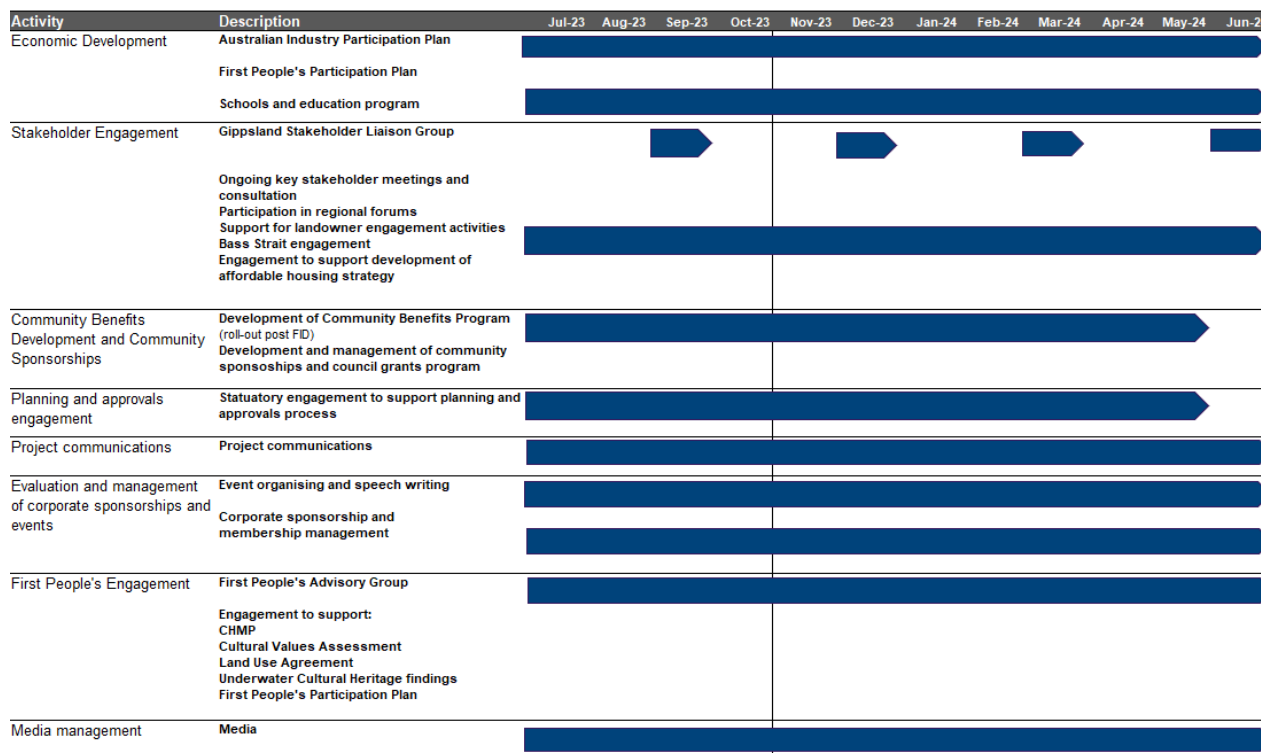


Figure 5-1 Landowner and Community Engagement Work Program³²

³⁴ MLPL Procurement Policy v6.0

³⁵ Discussion with MLPL 20th June 23

5.2.5 Benchmarking

Aurecon has earlier noted that in our view the resourcing for landowner and community engagement is consistent with our industry experience. Aurecon is not aware of the specific team structures for peer projects (such as HumeLink).

MLPL has previously had expert advice on ensuring its resourcing requirements are commensurate with the requirements of the program it is delivering. GHD in their earlier independent verification has previously noted that the level of resourcing can be compared with large road and rail infrastructure and larger than other large electricity network interconnector projects. Identified was a team consisting of:

- Full time Program Integration Manager
- Full time Community & Customer Engagement Operations Lead
- Six full time field secondments
- External resources across the 3-year early works phase of approximately \$10.4 million

Compared to other ISP projects, the engagement requirements for the Marinus Link are considered more complex due to marine elements and the project crossing multiple legal jurisdictions of Tasmania, Victoria and Commonwealth Government. As far as benchmarking is concerned, it can be anticipated that engagement expenses will be higher than those of a typical transmission project, such as HumeLink. This is because the Marinus Link project presents additional complexities that are not commonly encountered in standard projects, including a higher on-land component when compared with typical HVDC projects, marine component and the project crossing multiple legal jurisdictions (Tasmania, Victoria and the Commonwealth Government).

The current Stakeholder and Community Engagement cost and forecast is approximately 12% of the overall early work expenditure on a comparative basis, which is higher than the HumeLink project of approximately 9%.²⁷ Aurecon believes that this justification is valid when compared to a typical transmission project due to the enhanced engagement resulting from the project spanning three legal jurisdictions and involving numerous Traditional Owner groups. The increased engagement required for the marine component of this project is an additional factor for the increased budget on a comparative basis.

5.3 Conclusion

The methodology for Phase 2 works includes a 'diverse range of opportunities' for community engagement and a strong focus on First People's inclusion within the project. This is in line with delivering best practice community engagement. The scope of work and methodology are consistent with AER guidelines and requirements at the Commonwealth and State levels.

The timeline developed for the Marinus Link in the context of its complexities has been driven by extensive engagement with State and Commonwealth regulatory bodies.

The resourcing allocated to the landowner and community engagement components of the project is appropriate. The resourcing structure of the landowner and community engagement team contains a high proportion of Manager, Head and Specialist roles due to the project's unique complexities.

In addition to the FTE resourcing, service providers have been engaged to complete planning and approvals engagement, media, public relations management and back-filling as required. These consultants were competitively procured through TasNetworks Procurement Policy and Procurement guidelines cited by Aurecon. In summary, Aurecon believes the basis for the selection and level of effort each consultant is applying is in line with our industry experience.

6 Environmental Impact Assessments

In this section we outline the activities MLPL has undertaken as part of its early works stage with respect to meet its environmental compliance requirements. Specifically, the development of its environmental impact assessments (EIA), environmental effects statements (EES), and cultural heritage management plans across the State and Commonwealth levels.

Objectives and Activities

Table 6-1 summarises the objectives of Marinus Link's early stage activities and the activities it has undertaken in line with those objectives. Overall, these activities seek to improve the accuracy of future expenditure and feasibility assessments by Marinus Link.

Table 6-1 Objectives and Activities of environmental impact assessment

Objectives	Activities
<ul style="list-style-type: none"> ■ Ensure that the planning and environmental requirements are properly understood and addressed. ■ Ensure cultural heritage surveys and project plans meet the requirements of the relevant government agencies and indigenous stakeholders. 	<ul style="list-style-type: none"> ■ Conduct an effective environmental impact assessment and develop a comprehensive suite of environmental approval documentation. ■ Engage effectively with stakeholders, including the environmental and planning authorities, to ensure that their requirements and the expectations of the wider community are met.

6.1 Detailed Cost by Activity

In Table 6-2 below we summarise the costs incurred by MLPL for the environmental impact assessments expenditure area.

Table 6-2 Detailed costs for EIS - \$Nominal

Expenditure Costs (\$ Nominal)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024	Total
Internal labour (FTE)	2.8	1.8	5.0	2.5	N/A
Internal labour (\$m)	0.4	0.4	0.9	0.5	2.2
Service provider (\$m)	2.2	6.6	7.3	1.4	17.4
Materials costs and other payments (\$m)	0.0	0.2	1.6	2.7	4.4
Administrative (\$m)	0.0	0.3	0.2	0.1	0.5
EIS total cost (\$m)	2.7	7.4	9.9	4.6	24.5

*Totals may not sum due to rounding

6.2 Cost Validation

The approach Aurecon has taken to validation of MLPL's environmental impact assessments covers three areas:

- A review of the scope of work MLPL has proposed to undertake
- A review of MLPL's resourcing and delivery; and
- An assessment of the timeframes for the overall work program

6.2.1 Scope and Delivery Approach

The expenditure MLPL is seeking to recover encompasses the activities undertaken in preparing its:

- Environmental Impact Statement (EIS) and Environmental Effects Statements (EES) to address Commonwealth and Victorian matters
- EIS and Development Application for the Converter Station in Tasmania
- EIS for the shore crossing and cables in Tasmania
- Planning Scheme Amendment (PSA) in Victoria; and
- Cultural Heritage Management Plans (2) in Victoria

These reports are being developed for MLPL to meet its Commonwealth, Victorian, and Tasmanian legislative requirements. Specifically, the:

- Commonwealth Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)
- Tasmanian Environmental Management and Pollution Control Act 1994 (EMPC Act) and Land Use Planning and Approvals Act 1993 (LUPA Act)
- Victorian Environmental Effects Act 1978 (EE Act)

There have been 23 technical studies undertaken by MLPL to inform its key submissions to regulators (EIS, EES, PSA, and Cultural Heritage Management Plans) across the following areas:

- Marine
- Terrestrial
- Environmental Effects
- Economics
- Climate and Sustainability

The marine element is unique to MLPL in comparison to other transmission line projects. Marine studies create an additional requirement for a niche technical skillset and lead to a greater degree of engagement with the Commonwealth.

MLPL has identified its required scope by engaging external contractors Tetra Tech Coffey, who have been appointed as MLPL's lead consultant across environment, land use planning and heritage advisory services.

MLPL has also advised that it has undertaken significant engagement with various Commonwealth and State regulators to ensure the scope of its EIS submissions are fit for purpose.

Aurecon has reviewed the tender documentation issued by MLPL to procure an advisor to lead its environmental impact assessments and overall environmental compliance programs. MLPL procured service providers through a competitive tender process to implement the designated EIA activities, and to ensure cost efficiency in delivering the project within the planned timeframes.³⁶ The tender documentation provided meets the expectations of our internal subject matter experts. Given the level of detail of relating to EIAs provided to Aurecon, we consider that the proposed tasks, deliverables and degree of engagement envisaged by MLPL are appropriate at the time of our review.

³⁶ EIA03 – Provided by MLPL

6.2.2 Resourcing Assessment

As mentioned above, MLPL has primarily delivered the EIS scope of its early works through a combination of internal resources and service providers (predominantly Tetra Tech Coffey). MLPL's internal resourcing required for the delivery of the EIS scope is outlined below in Table 6-3.

Table 6-3 MLPL FTEs for Environmental Assessments²⁹

Team role (FTE)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024
Environment and sustainability specialist	1.0	-	-	-
Environmental & Planning Operations Lead	0.8	-	-	-
Head of Environment & Planning	1.0	1.0	1.0	0.5
Environment and Planning Manager	-	0.4	1.0	0.5
Environmental Management System Advisor	-	-	1.0	0.5
Project Interface Manager	-	0.4	1.0	0.5
Environmental Specialist	-	-	1.0	0.5
Total	2.8	1.8	5.0	2.5

In Aurecon's view, the degree of internal resourcing is adequate for the management of the outputs being completed by MLPL's lead advisor Tetra Tech Coffey. Aurecon has also reviewed a sample of labour rates and believes them to be in line with market rates.³⁷

Tetra Tech Coffey and its consortium of advisor's are the key party responsible for the development of technical reports which have been used to inform and develop the required EIS/EES, PSA and heritage management plans. Tetra Tech Coffey was selected to be MLPL's preferred advisor via a two-stage competitive procurement process.³⁸

Aurecon has reviewed MLPL documentation which outlines that the board has revaluated the use of its preferred advisor (Tetra Tech Coffey) for the D&A phase of works, and Aurecon has cited several values for money assessments which detail that performance has been satisfactory, and that contracted rates are comparable to peers.³⁹

MLPL has also provided Aurecon value for money assessments which are undertaken periodically for MLPL to assess whether outputs received from technical advisors (such as Tetra Tech Coffey) are in line with the commercial costs and outcomes desired. This represents good practice.

6.2.3 EIS Timelines

Aurecon has reviewed the timelines proposed by MLPL for lodging its EIS/EES documentation to the relevant Commonwealth and State regulators, review periods, public exhibition, approvals, and appeals. MLPL has advised that as of July 2023 its progress is in line with the plan outlined below in Figure 6-1 for completion of its EIS work for the early works phase.

MLPL has advised that it is on track to submit its initial draft EIS/EES for adequacy reviews prior to the exhibition period. The timeframes developed by MLPL are informed by Tetra Tech Coffey using a bottom up approach and agreed upon through engagement with State and Commonwealth regulators (i.e the adequacy reviews exhibition period, ministerial assessment, and approvals timelines). Based on MLPL advice, the timeline has been actively managed, re-baselined and updated as negotiations with regulators and shareholder

³⁷ Aurecon's assessment is per the structure provided as of 19th July 2023

³⁸ EIA10 Two-Stage Shortlist of Consultants – Provided by MLPL

³⁹ EIA04 pg 3, Annex A EIA05, EIA07 – Provided by MLPL

needs has become known.⁴⁰ On this basis, Aurecon believes that the timelines outlined by MLPL for future work under the EIS expenditure area are likely to be prudent and efficient. Aurecon has not reviewed post-approval work and timeline as it is outside of the review period. On this basis, Aurecon believes that the timelines outlined by MLPL for future work under the EIS expenditure area are adequate and efficient.

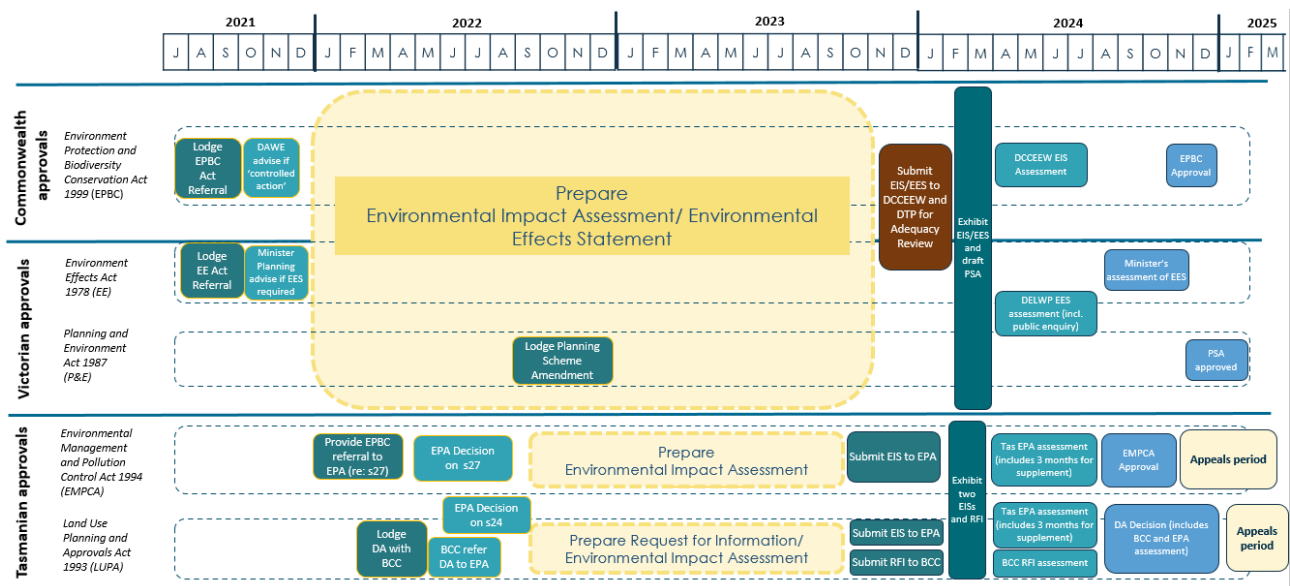


Figure 6-1 EIS Work Program Timeframe

6.2.4 Benchmarking

Marinus Link has forecast \$24.5 million (nominal) works activities on Marinus Link, which corresponds to approximately 13% of total early works expenditure. Based on GHD's report, HumeLink's EIS development expenditure (\$18.79m real 2017-18) representing approximately 5.8% of total Stage 1 costs on the project. However, similar to the preceding section, Aurecon notes that attempting to benchmark MLPL's environmental impact assessment costs against those of HumeLink would not be a like-for-like comparison due to:

- Substantial differences in the scope of work - notably, HumeLink does not require any Technical Reports related to marine impacts of which MLPL has incurred over \$1.3 million in costs (nominal).⁴¹ MLPL also has and will continue to require engagement with several multi-jurisdictional groups such as the Technical Reference Group (TRG) convened by the Victorian Department of Environment, Land, Water and Planning (DELWP) to facilitate advice from approximately 25 government agencies with a statutory, policy or technical interest in the project to DELWP and Marinus Link during the preparation of the EIS/EES. While the TRG is Victorian-led, members of Commonwealth and Tasmanian regulators are invited to attend.
- HumeLink's total Stage 1 expenditure appears broader and includes items not considered in MLPL's early works (Stage 1 Phase A) total expenditure, such as long lead equipment purchases (which skews the total early works expenditure cost).

6.3 Conclusion

The expenditure MLPL is seeking to recover encompasses the activities undertaken in preparing its Environmental Impact Statements (EIS) to meet State and Commonwealth requirements. The activities undertaken by MLPL are likely to be prudent and efficient to understand the potential risks generated by the project with respect to key environmental areas which span marine habitats, terrestrial ecology, agriculture, aboriginal lands, greenhouse gas emissions and sustainability, and other areas. By undertaking these

⁴⁰ Advised by MLPL SME, email dated 27 June 2023

⁴¹ MLPL Correspondence 30th June 2023

studies, MLPL is better able to manage these adverse impacts throughout the project's design and development and reduce impacts to the broader community and environment.

Aurecon has reviewed value for money assessments for the use of consultants and verified delivery timelines. MLPL has competitively procured a lead environmental consultant, Tetra Tech Coffey, to jointly develop a scope of work and manage the required work packages to meet its environmental compliance and obligations across State and Commonwealth Governments. In terms of the timeframe for project delivery, Aurecon considers that MLPL have had appropriate and timely consultation with all the environmental regulators. MLPL's methodology, timeline and resourcing support EIS activities completion prior to FID and to avoid the risk to schedule delays and support Stage 1 – Part B timelines and forecasts.

Based on Aurecon's review, MLPL's methodology, timeline and resourcing appear reasonable. On the understanding that MLPL has undertaken significant and timely engagement with all the key Commonwealth and State environmental and planning regulators, it is assumed the scope of technical assessments to support the EIS' and Development Approval submissions met the regulator's requirements.

The suite of environmental assessments MLPL will undertake during its early works program appear reasonable. Based on the available schedule⁴² and the actual expenditure for the past 2 years, costs to date and the forecasted level of expenditure for the next 2 years appear reasonable. The use of competitive tendering is a mechanism by which MLPL can demonstrate they are obtaining value for money.

Aurecon notes that EIS costs can vary significantly, this is compounded by the fact that MLPL operates across multiple jurisdictions and a large component of the project is marine based, requiring completion of a wide range of environmental studies.

⁴² EIA03 – Provided by MLPL

7 Technical Designs and Specifications

In this section we outline the activities that MLPL has undertaken as part of its early works stage with respect to technical designs and specifications.

Objectives and Activities

Table 7-1 summarises the objectives of the technical designs and specifications early works category and describes the activities that are required to achieve these objectives.

Table 7-1 Objectives and activities of Technical Design and Specifications

Objectives	Activities
<ul style="list-style-type: none">■ To optimise the project design, including route selection, to deliver the best outcome for consumers.■ To prepare accurate cost forecasts and minimise risk of increases in project costs by providing accurate information to potential service providers.	<ul style="list-style-type: none">■ Undertake the planning and design activities needed to accurately define the project, including route design.■ Complete pre-contracting activities for engineering, procurement and construction contracts.

The technical design and specification studies being undertaken by MLPL are targeted at optimising the project's design and route during the early works period. The benefit of undertaking these activities is that MLPL can better predict costs for delivery of the project, carry out a better procurement process to deliver value for money, and reduce the risk of any cost overruns.

The studies will help MLPL to better understand how the technical solution and proposed route could impact other workstreams such as:

- Land and Easement Acquisitions (Section 4), which are linked to the preferred route and technical solution
- Environmental Impact Assessments (Section 6), which are linked to the preferred route and technical solution
- Procurement Strategy (Section 8), which includes developing tender specifications, preparation, support and evaluation, and the negotiation of contracts for the work packages

By completing these studies in the early works phase, MLPL can update the technical design and preferred route of the project as required if it is identified that adverse outcomes created exceed the benefits of a potential design or route choice.

7.1 Detailed Cost by Activity

Table 7-2 below summarises the historical and projected expenditure for activities related to developing the technical designs and specifications for the early works phase of the Marinus Link project.

Table 7-2 Technical Design and Specifications Expenditure - \$ Nominal

Expenditure Costs (\$ Nominal)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024	Total
Internal labour (FTE)	7.7	8.4	9.4	5.0	NA
Internal labour (\$m)	1.4	1.2	1.5	0.8	5.0
Service provider (\$m)	16.0	10.7	9.0	1.6	37.4
Materials costs and other payments (\$m)	0.0	0.3	1.0	0.1	1.3

Expenditure Costs (\$ Nominal)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024	Total
Administrative (\$m)	0.0	0.0	0.2	0.1	0.2
Total cost (\$m)	17.4	12.2	11.7	2.6	43.9

*Totals may not sum due to rounding

7.2 Cost Validation

The approach Aurecon has taken to validation of MLPL's technical design and specifications covers three areas:

- A review of the scope of work MLPL has proposed to undertake
- A review of MLPL's resourcing and delivery; and
- An assessment of the timeframes for the overall work program

7.2.1 Scope and Delivery Approach

With the preferred route selected prior to the early works phase, MLPL is now progressing across several workstreams to optimise the route and technical design of the HVDC option. Specifically, MLPL has commenced studies across:

- Cable studies
- Converter studies
- Marine studies
- System studies
- Others – GIS mapping, surveys, land and ground condition, climate studies

MLPL has utilised its internal resources to procure and manage the specialist resources to deliver the required studies across the above scope areas. The advisors MLPL has predominately relied on include Jacobs, MMA Subsea Services, and Tetra Tech Coffey Services.

To ensure the adequacy of the MLPL's expenditure on technical design and specifications, Aurecon has undertaken a thorough review on both the scope and resourcing approach of this work package.

7.2.2 Review of MLPL Scope and Approach

To validate the scope of the work undertaken by MLPL, Aurecon conducted a bottom up assessment of the activities that would be required to deliver its early works. We consider that the following are necessary in developing the Marinus Link technical design and specification prior to any final decision to invest. This is outlined below:

Table 7-3 Early Works Technical Design and Specifications Activities

Required Works	Studies	Identification of Study
HVDC Cable	<ul style="list-style-type: none"> ■ Cable Technical Specification ■ Cable Package Contract ■ Cable route alignment ■ Onshore Route Surveys (LiDAR, Geotech) ■ Constructability Review & Constraint identification 	<ul style="list-style-type: none"> ■ All studies have been identified or have been flagged as being developed within tender proposals

Required Works	Studies	Identification of Study
	<ul style="list-style-type: none"> Preliminary Haul and Lay Plans, Risk Identification Repairability Assessment Operation and Maintenance Assessment Joining Assessment 	
Cable Design (Ocean)	<ul style="list-style-type: none"> Thermal resistivity Study (Part of Subsea Geotech) Cable Fault History Report (Considering existing HVDC and Telecom Cables) 	<ul style="list-style-type: none"> All studies have been completed and fault history is within tender documentation
HVDC Converters	<ul style="list-style-type: none"> Converter Specification Converter Package Contract Heybridge & Hazelwood Site Selection Heybridge & Hazelwood Reference/Tender Design Heybridge & Hazelwood Environmental Survey Heybridge & Hazelwood Geotechnical Survey 	<ul style="list-style-type: none"> All studies have been identified
Marine	<ul style="list-style-type: none"> Navigation & Shipping Study UXO Desktop Study MetOcean Study Sub bottom profiling Ocean Thermal Studies Tidal Study Existing and Future subsea infrastructure (Route specific), Military exercise areas report Dredging and Dumping Grounds assessment Sites of Sensitivity habitats Wreck Study Environmental Impact of cable laying operations Environmental Impact assessment of the operation of the cable 	<ul style="list-style-type: none"> All studies have been identified; no military exercise areas are applicable
System Design	<ul style="list-style-type: none"> NEM connection system studies Internetwork System Assessments (Vic-Tas). E.g Import and Export impacts and consequence of failure. Modification/Development/Design of Tasmanian Special Protection Schemes 	<ul style="list-style-type: none"> All studies have been completed MLPL notes further studies may be required once commissioning regime is determined with AEMO

Required Works	Studies	Identification of Study
	<ul style="list-style-type: none"> System Energisation Studies 	
Other Studies		
Ocean Route Engineering	<ul style="list-style-type: none"> Landfall Feasibility study (Desktop) HDD Feasibility Study Seabed mobility Marine Bathymetry and Geotechnical studies 	<ul style="list-style-type: none"> All studies have been completed
Ocean Project Management	<ul style="list-style-type: none"> FEED Study Initial Desktop Study GIS platform/Strategy implementation Cable installation method statement (Initial) Cable protection strategy 	<ul style="list-style-type: none"> All studies have been completed
AC Interface - Heybridge	<ul style="list-style-type: none"> Connection Agreement (Inc Performance Standards) Substation Specification Reference/Tender Design 	<ul style="list-style-type: none"> All studies have been completed
AC Interface - Hazelwood	<ul style="list-style-type: none"> Connection Agreement (Inc Performance Standards) Substation Specification Reference/Tender Design 	<ul style="list-style-type: none"> All studies have been completed

In Aurecon's view, the subsea cable, cable installation, laying and associated system studies are the biggest risk drivers for the Marinus Link project. Early identification of difficulties and limitations imposed by the cable, its installation and laying are key to a successful project. As a result, Aurecon reviewed MLPL's activity alignment with the following requirements:

- Early environmental and route assessments
- Early concept design for the cable system and converters
- System studies

Through documentation provided by MLPL the appropriate early environmental and technical studies have been conducted to date. Environmental and marine assessments addressing at minimum the following:

- Bathymetry
- Seafloor structure
- Seafloor morphology
- Geophysical data
- Sediment movements
- Water temperature
- Wave patterns
- Tides and currents
- Wind patterns over the year
- Birds fisheries and nurseries

- Sensible natural resources
- Tourist resorts

In addition to the above environmental studies, front end engineering of both the cable system and the associated converters has also been performed. Front end engineering has predominantly been performed by Jacobs' early engineering works.

System studies have been conducted in line with the number and type of studies expected to be done by Aurecon. It is Aurecon's understanding that a few system studies, such as system energisation studies, remain outstanding.

7.2.3 Resourcing Assessment

Internal Labour

MLPL requires internal staff to actively manage the external engagements, monitor progress and manage issues which may arise from the development of technical studies. MLPL has provided Aurecon its resource plan which is outlined below in Table 7-4

Table 7-4 MLPL Internal Resourcing Technical Design and Specifications²⁹

Team role (FTE)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024
Cables Engineer (Vic)	1.0	1.0	1.0	0.5
Converter Engineer	1.0	1.0	1.0	0.5
Engineering Lead	1.0	-	-	-
Network Performance Engineer	1.0	1.0	1.0	0.5
Project Director	1.0	-	-	-
Project Manager	0.6	1.4	2.0	1.0
Project Manager (Vic)	0.4	-	-	-
Senior Network Performance Engineer	0.7	2.0	2.0	1.0
Systems Integration Manager	1.0	1.0	1.0	0.5
Converter BOP Engineer	-	-	0.8	0.5
Graduate Engineer	-	1.0	0.6	0.5
Total	7.7	8.4	9.4	5.0

Aurecon has considered the team size above in comparison to the size of capital development teams typically seen in TNSP businesses across the NEM.⁴³ Our general knowledge across these businesses, is that these businesses have much larger development teams, which is to be expected since they are developing multiple large-scale projects, whereas MLPL is developing one large project. However, we consider that the Marinus Link project should be considered as more equivalent to a number of large development elements coming together to form one linear asset. A well-resourced team is warranted given the highly complex nature of HVDC projects (relative to HVAC), the physical distance, the fact that a significant distance of the HVDC cable will be through a marine environment, and the capital investment size. Aurecon considers the team size to be appropriately resourced for the size and nature of the project being developed.

⁴³ Aurecon's assessment is per the structure provided as of 19th July 2023

As part of the review, Aurecon considered but was not able to identify any opportunities where functions this team performed, could reasonably be outsourced over the short-term to manage long-term headcount. We conclude that it would not be appropriate to outsource the functions of this core team, as it would outsource risks that should be managed by MLPL itself as the party most suited to carrying those risks. On balance therefore, we consider it appropriate to have the team size as established by MLPL.

Labour rates are in line with what Aurecon has observed within the market and based on our industry experience.

Service Providers

MLPL has utilised consultants to deliver on work streams where specialist expertise is required. These advisors include:

- Jacobs – Cables and converters and other technical studies
- Tetra Tech Coffey – Environment and Land
- Marine – MMA Subsea Services

For system studies, MLPL has relied on internal resources.

Each technical advisor has contributed to the technical documentation produced, those underway, and those planned to be delivered by MLPL as part of the early works phase. Work orders are submitted to MLPL and need to be approved for each technical study or output that is to be produced as part of the technical designs and specifications work package.

Aurecon notes that across the three key technical areas identified above, MLPL has procured a preferred technical partner via a two-stage procurement process to deliver on each scope of work, with MLPL staff managing overall program or scope area.

Aurecon has reviewed the tender documentation of MLPL. In our view, the documentation is consistent with the required scope and tasks outlined above in the section above.⁴⁴

Aurecon also reviewed MLPL's tender evaluation report which documented the evaluation process and findings in relation to the RFP conducted for Technical, Engineering and Project Management (TEPM) services of service providers tendering to support Project Marinus.⁴⁵ The reviews identify that MLPL has evaluated whether outputs produced are consistent with the scope of work required and are delivering value for money. Aurecon is satisfied that MLPL has competitively procured specialist consultants to deliver the required scope of work and monitored performance against outcomes throughout the early works period. In our view the approach to resourcing taken by MLPL is prudent.

7.2.4 Technical Design and Specifications Timelines

MLPL has provided an overview of the studies it is seeking to undertake across the early works period, outlining those underway and those yet to commence.

In terms of cable studies, we understand MLPL has completed its assessments in this study area.

For converter site studies and system studies, the bulk of MLPL's assessments are underway or to be complete. MLPL is just over halfway through its early work timeframe and the completed and underway studies (27 studies) account for about 50% of the total 58 studies regarding Technical Designs and Specifications in their early work. We understand that given the use of external advisor's the delivery of these reports is expected to be completed within the early works period.

⁴⁴ TDS 02 – Technical Scope.xlsx - Provided by MLPL

⁴⁵ TDS 01 RFP TEPM Evaluation Report– Provided by MLPL

Table 7-5 Status of studies for technical design and specifications

Study Categories	Completed	Underway	Yet to Commence
Cable Studies	9	N/A	N/A
Converter Studies	5	5	7
Marine Studies	1	-	-
Network Agreement and System Studies	5	2	8

7.2.5 Benchmarking

MLPL has outlined a total expenditure of \$43.9 million in nominal terms for technical design and specifications which represents 22% of early works expenditure. HumeLink's project development costs (which covers development engineering, legal and economic support) make up 10% of its Stage 1 Expenditure.

Like previous sections and despite being a useful reference, Aurecon views the comparison between MLPL and HumeLink as limited in value (and potentially unhelpful) for the following reasons:

- The nature of the technical designs and specifications work are project-specific and the MLPL project has several features which make it unique relative to other benchmarks. These include:
 - Subsea cabling vs overhead
 - Marine elements
 - A HVDC solution vs HVAC (relative to HumeLink)⁴⁶
 - Varying degrees of environmental compliance obligations across multiple states and the Commonwealth
- HumeLink's total Stage 1 expenditure appears broader and includes items not considered in MLPL's early works (Stage 1 Phase A) total expenditure, such as long lead equipment purchases.

The above points therefore make the HumeLink project a relatively ill-suited benchmark for the Marinus Link for this category, and we have therefore given limited weight to it.

7.3 Conclusion

MLPL has undertaken a range of studies to ensure it has optimised its route and technical design for the project and has prepared the necessary documentation and tender work packages leading into post FID stage.

The subsea cable and associated system studies are the biggest risk drivers for the Marinus Link project. Aurecon found that MLPL had undertaken (or plans to undertake) the required technical studies and works across key areas such as cable studies, converter and substation studies, marine studies, and system agreement studies.

MLPL has utilised its internal team to develop system studies and has managed the development of technical studies and specifications for other workstreams utilising its suite of advisors, which include

⁴⁶ HVDC converter stations being complex devices with multiple components. The specification of the power electronics performance must be done to achieve the specific requirements of the project, considering the transient conditions that the system itself may create and experience. As such, the design assessment would typically be expected to be much longer than the design activities for an AC system procurement, both because of the higher complexity of HVDC equipment, and because each HVDC system design is highly bespoke.

Jacobs, Tetra Tech Coffey and MMA Subsea Services. Aurecon is satisfied that each advisor has been procured on a competitive basis and that work orders are scoped and reviewed by MLPL appropriately. Aurecon has also cited value for money assessments conducted by MLPL against its advisors. Labour rates are also in line with what Aurecon has observed within the market and based on our industry experience.

Aurecon believes MLPL's proposed expenditure is likely to be prudent based on the activities it is required to undertake. Aurecon has conducted a bottom up exercise of the activities MLPL is required to undertake and believes the current scope is likely to be prudent to mitigate risk during the construction and operations phases of the project.

We note that aspects such as marine elements and the deployment of a HVDC solution may make benchmarking against Australian projects difficult as this will not be like for like.

8 Procurement Strategy and Execution

In this section Aurecon outlines the activities Marinus Link has undertaken as part of its early works stage with respect to Procurement Strategy and Execution.

Objectives and Activities

Table 8-1 below summarises the objectives of Marinus Link's early stage activities and the activities it has undertaken in line with those objectives. Overall, these activities seek to improve the accuracy of future expenditure and feasibility assessments by Marinus Link.

Table 8-1 Objectives and activities of procurement and execution

Objectives	Activities
<ul style="list-style-type: none"> ■ To establish a tender process that enables MLPL to discover the efficient costs of providing the project in accordance with the planned timeframes. ■ To establish contractual arrangements that share project cost risks efficiently between contractors and MLPL, for the benefit of electricity consumers. ■ Where pre-payments are required to avoid project delays, our objective is to achieve the best outcome for electricity consumers. 	<ul style="list-style-type: none"> ■ Develop a tender strategy to deliver efficient outcomes in accordance with the project objectives. ■ Execute the procurement strategy to maximise effective participation in the tender process. Develop supporting tender materials and contracts, as required. ■ To secure manufacturing capacity, pre-payments may be required. These pre-payment amounts will be determined through the tender process.

8.1 Detailed Cost by Activity

In Table 8-2 below we summarise the total expenditure sought by MLPL for procurement strategy and execution as part of its early works submission.

Table 8-2 Detailed Expenditure Procurement Strategy and Execution - \$ Nominal

Expenditure Costs (\$ Nominal)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024	Total
Internal labour (FTE)	4.0	6.7	11.6	6.0	N/A
Internal labour (\$m)	0.6	1.0	1.7	0.9	4.3
Service provider (\$m)	1.7	3.5	7.0	2.1	14.3
Materials costs and other payments (\$m)	0.0	0.0	0.0	0.0	0.0
Administrative (\$m)	0.0	0.1	0.1	0.1	0.3
Total cost (\$m)	2.4	4.6	8.8	3.1	18.9

*Totals may not sum due to rounding

8.2 Cost Validation

The approach Aurecon has taken to validation of MLPL's procurement strategy covers three areas:

- A review of the scope of work MLPL has proposed to undertake
- A review of MLPL's resourcing and delivery; and
- An assessment of the timeframes for the overall work program

8.2.1 Scope and Delivery Approach

In accordance with the project objectives. MLPL has undertaken a rigorous and thorough assessment of relevant considerations in developing a procurement strategy. This includes market testing and analysis with potential suppliers, insurance due diligence, site due diligence and risk assessment. MLPL has extensively engaged with external advisers, such as Jacob in engineering and specialised HVDC procurement advice, HSF in legal and procurement advice and Tetra Tech Coffey in environment advice, to optimize the tender process.

In addition, MLPL has set out a dedicated internal expert team for their procurement strategy and execution of early works to ensure that the tender process can be managed efficiently in accordance with the project timeframes.

In Aurecon's assessment MLPL has addressed significant emerging challenges during early works including:

- Correctly identifying the risks associated with the current ramp in in energy project resulting in global shortages of materials and personnel.
- Significant shortages in cable supplies (and undersea cable installation contractors) applying additional effort into cable procurement – some of this has been through senior management and executive involvement in procurement negotiations, with corporate work back-filled by short term consultants
- Reorganising procurement packages to meet the market in terms of willingness to supply
- Additional overseas travel to engage directly with suppliers.

Apart from the use of additional consultants for back-fill of corporate work, these activities have been managed from the existing procurement resource pool across the project and corporate team.

8.2.2 Resourcing Assessment

Internal Labour

MLPL has structured dedicated internal labour resources for its procurement strategy and execution of early works. The labour resources increased in 2022-23 in accordance with the work program and timelines for this activity, as shown in Table 8-3.

Table 8-3 Actual and proposed internal labour requirement for procurement strategy and execution

Team role (FTE)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024
Corporate Finance Lead	1.0	-	-	-
Procurement Lead	1.0	-	-	-
Procurement Specialist	1.0	1.0	2.0	1.0
Senior Procurement Specialist	1.0	1.0	1.0	0.5
Admin Support	-	1.0	1.0	0.5

Team role (FTE)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024
Contracts Administrator	-	1.0	1.0	0.5
Contracts Manager	-	0.2	1.0	0.5
Executive Manager, CCO	-	0.2	1.0	0.5
Head of Procurement	-	1.0	1.0	0.5
Project Coordinator - Procurement	-	1.0	1.0	0.5
Senior Procurement / Contract Manager	-	0.2	0.6	0.5
Other Procurement Support	-	-	2.0	1.0
Total	4.0	6.7	11.6	6.0

*Totals may not add due to rounding

Aurecon has assessed the team structure and labour rates and believes it to be consistent with industry practice.⁴⁷

Service Providers

With extensive support from external advisors (such as HSF, Jacobs, Tetra Tech Coffey and Lockton), MLPL has undertaken a comprehensive assessment in relation to the development of the procurement strategy and execution. This approach ensures that all relevant considerations, such as the market testing and analysis with potential suppliers, insurance due diligence, site due diligence and risk assessment, are thoroughly examined, reinforcing the integrity and effectiveness of the procurement process.

As noted in Section 8.2.1, some additional resources have been utilised on a short-term basis to back-fill corporate work whilst MLPL executives have been assisting with procurement and commercial negotiations. This represents 3-4 months of external support, and therefore is within a small margin of the total procurement effort.

8.2.3 Benchmarking

An independent cost verification report developed by GHD for Stage 1 of Transgrid's HumeLink in April 2022 reported procurement team costs totalling \$7.2m (real 2017-18 dollars) which translates to 2% of total Stage 1 expenditure.²⁷ However, it should be noted that this value seems to account only for internal labour, based on the information provided in their contingent project application. MLPL procurement cost estimates make up approximately 10% of early works expenditure which includes internal labour, service provider and materials costs and other payments. As previously suggested, In Aurecon's view, the proportion of expenditure comparisons with HumeLink is of limited value as a benchmark for the following reasons:

- Total Stage 1 expenditure for HumeLink appears broader and includes items not considered in MLPL's early works (Stage 1 Phase A) total expenditure, such as long lead equipment purchases.
- It is challenging to make a direct cost comparison due to the unique complexities and challenges associated with procurement in the context of Marinus Link, which goes beyond the scope of a typical actionable ISP project.
- Global and unprecedented supply chain challenges have resulted in MLPL applying additional effort into cable procurement, re-organising procurement packages and increased supplier engagement.

⁴⁷ Aurecon's assessment is per the structure provided as of 19th July 2023

8.3 Conclusion

Procurement expenditure for Marinus Link's Stage 1 A proposal includes activities in relation to the development of tender strategy, execution of procurement strategy and ensuring the manufacturing capacity of suppliers. In Aurecon's view, these procurement strategies and execution activities are needed and prudent to support the project delivery timeframes.

The MLPL team has also demonstrated that by proactive engagement with suppliers (through additional travel and senior executive involvement), the procurement activities remain on track despite global supply chain challenges. Aurecon believe the resourcing and costs associated with responding to these challenges reduces timing and construction risk in future stages of the project.

The procurement strategy development and execution has been based upon the external and internal specialist advice and its estimates are adequately supported by quotations with rates and schedules against required work scopes. Aurecon believes the costs and scope of work undertaken or proposed to be completed prior to FID and Stage 2 are addresses significant emerging challenges, avoiding risks to schedule delays and support Stage 2 forecasts.

9 Program and Project Management

In this section Aurecon outlines the activities Marinus Link has undertaken as part of its early works stage with respect to program and project management.

Objectives and Activities

The table below summarises the objectives of program and project management early works and describes the activities that are required to achieve these objectives.

Table 9-1 Objectives and activities of procurement and execution

Objectives	Activities
<ul style="list-style-type: none">■ To ensure the overall effectiveness of the project, including the efficient management of risk and costs for the benefit of electricity consumers.■ To ensure that the tender process maximises effective participation in the tender process for the benefit of consumers.■ To provide systems and processes that enable the efficient and timely delivery of the project.	<ul style="list-style-type: none">■ The overall project management is the responsibility of the Project Director, supported by direct reports responsible for respective work programs.■ Development of the project execution strategy, which is a key input to the procurement strategy.■ Implement systems and processes to provide key support functions including Health Safety and Environment (HSE), stakeholder engagement, project design, risk management, project controls/scheduling, cost estimating, interface management, quality control, document control and administration support.

9.1 Detailed Cost by Activity

The table below provides a breakdown of the program and project management expenditure for the period 1 July 2021 to 31 December 2024.

Table 9-2 Detailed Expenditure Program and Project Management

Expenditure Costs	2021-22	2022-23	2023-24	6 months to 31 Dec 2024	Total
Internal labour (FTE)	4.7	9.5	14.5	7.5	N/A
Internal labour (\$m)	0.6	1.5	2.4	1.2	5.8
Service provider (\$m)	3.5	5.1	6.5	2.8	17.9
Materials costs and other payments (\$m)	0.0	0.4	0.5	0.3	1.3
Administrative costs (\$m)	0.4	1.1	0.9	0.4	2.8
Total cost (\$m)	4.5	8.2	10.4	4.7	27.8

*Totals may not sum due to rounding

9.2 Cost Validation

The approach Aurecon has taken to validation of MLPL's program and project management covers the following:

- A review of the scope of work MLPL has proposed to undertake
- A review of MLPL's resourcing and delivery

9.2.1 Scope and Delivery Approach

Aurecon have reviewed information provided by MLPL, outlining key scope and activities principally focused on for early works program and project management.

MLPL has a Project Management Office (PMO) function carrying out key activities as follows:

- Establishment of governance structure and appropriate forums
- Development and management of the project plan
- Design and implementation of core project control, commercial processes and management systems
- Introduction and management of HSE management system to prevent or mitigate accidents, incidents and meet MLPL's legal obligations
- Development and management of project schedule and cost baseline
- Ongoing management of risk and quality aspects as the project evolves

9.2.2 Resourcing Assessment

MLPL has structured dedicated labour resources for its program and project management of early works. The actual and proposed resourcing indicates that the internal resourcing requirements for program and project management are expected to be unchanged during the remainder of the early works period.

Table 9-3 Marinus Link Resourcing for Program and Project Management

Team Role (FTE)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024
Head of Governance	1.0	1.0	1.0	0.5
Head of Safety	0.1	1.0	1.0	0.5
Information Specialist	2.0	1.0	1.0	0.5
Project Coordinator PMO/Project Mgt & Engineer	0.3	1.0	1.0	0.5
Safety Partner	0.1	1.0	1.0	0.5
Cost Controller	-	-	1.0	0.5
Estimating & Cost Manager	-	0.5	1.0	0.5
GIS Specialist	-	-	1.0	0.5
Head of Program Planning	-	1.0	1.0	0.5
Information & Data Specialist	-	1.0	1.0	0.5
Project Scheduler	1.2	0.8	1.5	1.0
Project Director	-	1.0	1.0	0.5

Team Role (FTE)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024
Governance Specialist	-	0.2	2.0	1.0
Total	4.7	9.5	14.5	7.5

Based on Aurecon's review of positions, we believe the staffing to be adequate⁴⁸ noting that some aspects such as risk, quality and finance reporting have been resourced from MLPL corporate support.⁴⁹ Aurecon has also reviewed a sample of market rates for each of the positions and believe these to be comparable.

The continuation of project management resources at consistent levels through the remainder of the early works period appears appropriate. It is noted also that the project team is progressively on-boarding more sophisticated systems for project controls such as Innate and an MLPL specific GIS system, transitioning away from a combination of TasNetworks hosted solutions and consultant hosted solutions and further enhancing its PMO functions. From discussions with project leadership has recognised that capability needed to be increased in GIS, planning, scheduling and governance and the project resourcing increases in these areas accordingly. The timeline of these transitions is also appropriate, with a target for completion before the end of the early works (ready for utilisation during project delivery).

Aurecon has assessed the team structure and labour rates and believes it to be consistent with industry practice.

9.2.3 Benchmarking

The current program and project management expenditure estimates, totalling \$27.8m, represents approximately 14% of total early works expenditure. In GHD's independent verification of Stage 1 costs report for Transgrid's HumeLink, program and project management costs are estimated to makeup approximately 12.3% of capex. GHD's report states that HumeLink's project management team is responsible for overall project management, governance, network planning, development of transmission line routes and concept design, substation concept designs and cost estimates. This is broadly aligned with the scope activities identified in MLPL's scope, but it is difficult to compare variances in scope based on this level of detail.

As mentioned earlier, despite being of useful reference, Aurecon considers the proportion of capex comparisons with HumeLink to be of limited value since total Stage 1 expenditure for HumeLink appears broader and includes items not considered in MLPL's early works (Stage 1 Phase A) total expenditure, such as long lead equipment purchases.

9.2.4 Change Management

The MLPL team has also implemented a change management discipline within the project team which is being utilised to capture significant changes in scope and circumstance. This will provide a reference in the case of deviations in actual costs from the forecast cost for early works.

9.3 Conclusion

MLPL have undertaken a range of project management activities to ensure the effectiveness of the project, including the efficient management of risk and costs.

- Aurecon believes the MLPL's proposed expenditure is appropriate based on the activities it is required to undertake and team structure and labour rates being consistent with industry practice.

⁴⁸ Aurecon's assessment is per the structure provided as of 19th July 2023

⁴⁹ Prior to independent incorporation, the Marinus Link project had been utilising corporate systems and resources for risk management, quality management and financial reporting – these aspects will continue to be supported from corporate until the project moves into delivery mode (after completion of early works).

- The progressive implementation of dedicated project systems (replacing corporate systems) into its PMO function is timely and targeted for completion prior to the next phase of the project.
- We also note that the implementation of a change management discipline will also provide an important reference for future pricing determinations.

10 Corporate and Support Costs

This section provides an overview of the corporate and support costs MLPL is seeking to recover as part of its early works as part of its Stage 1 A Revenue Proposal.

Objectives and Activities

MNPL is in the process of establishing itself as a standalone entity from TasNetworks and is required to establish standalone business practices and corporate functions across:

- Human resources
- IT systems
- Finance
- Compliance; and
- Other business processes

MLPL therefore will incur the costs of this transition to establish these functions whereas other TNSPs may already have these processes and systems in place.

Table 10-1 Corporate and Support Costs Objectives and Activities

Objectives	Activities
<ul style="list-style-type: none"> ■ To ensure that the project is supported by effective corporate functions, governance processes and IT systems to promote the timely and efficient delivery of the project. 	<ul style="list-style-type: none"> ■ MLPL's corporate activities include IT systems costs, finance, human resources, legal, regulatory support and office costs.

10.1 Detailed Cost by Activity

Table 10-2 Corporate and Support Costs Detailed Costs - \$ Nominal

Expenditure Costs (\$ Nominal)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024	Total
Internal Labour (FTE)	15.7	18.2	33.8	17.5	N/A
Internal labour (\$m)	2.6	3.4	6.6	3.5	16.1
Service provider (\$m)	2.8	4.1	3.0	0.8	10.6
Materials costs and other payments (\$m)	0.0	0.2	0.5	0.6	1.2
Administrative costs (\$m)	0.5	3.7	8.7	2.9	15.9
Establishment Expenditure (\$m)	0.6	2.6	2.2	0.9	6.3
Total cost (\$m)	6.6	13.9	21.0	8.7	50.2

*Totals may not sum due to rounding

10.2 Cost Validation

The approach Aurecon has taken to validation of MLPL's corporate and support costs covers the following:

- A review of the scope of work MLPL has proposed to undertake
- A review of MLPL's resourcing and delivery

10.2.1 Scope and Delivery Approach

Aurecon has reviewed data provided by MLPL outlining the scope of its current corporate functions, the software and equipment currently utilised to deliver these functions, and the intended transition plan as MLPL becomes a standalone entity from TasNetworks with its own software systems for business operations.

These functions and their required software systems include, but are not limited to:

- Delivery procurement
- Package delivery
- Environmental planning and approvals
- Land access and acquisitions
- Asset management and engineering
- Commercial
- Customer and revenue
- Project controls
- Governance, risk and compliance
- Safety
- Financial administration and management
- Legal
- IT and systems
- Corporate procurement
- Human resources

Aurecon notes that MLPL has utilised the services for Ernst & Young (EY) to undertake a high-level design of MLPL's corporate functions and provide a roadmap for the implementation of the corporate functions' high-level design to support MLPL becoming a standalone entity from TasNetworks. MLPL's activities with respect to composition of its staff, business establishment costs, and software and processes have been guided by this specialist advice. EY's evaluation from June 2023 notes MLPL's extensive reliance on the systems and services provided by TasNetworks and that the continued reliance on TasNetworks is not fit for purpose to support MLPL's strategic intent going forward. EY concludes that it is critical to transform and prepare MLPL corporate functions to be stand-alone.⁵⁰

In EY's review and proposed roadmap, as of June 2023 TasNetworks provides services to MLPL through an established master services agreement (MSA). EY identified a total 269 corporate processes of which 139 (52%) are fully or partially (hybrid) reliant on TasNetworks, with 127 being fully MLPL and the remainder being third party driven. EY proposes that by 1 October 2023 (interim state) there would be a Transition Services Agreement (TSA) in place, formalising a commercial arrangement between two independent legal entities, and securing ongoing support from TasNetworks. At which point, the reliance (full / partial) on

⁵⁰ CCS03 - EY, Corporate function high level design – DRAFT Executive Summary, Marinus Link, June 2023

TasNetworks will reduce to 117 (43%) of the 296 processes. The desired end state is that all services, infrastructure, and data transitioned from TasNetworks to MLPL corporate functions.

In Aurecon's view, it is typical in separation processes for businesses to have a transition process where staff from a parent company and their software from a parent entity is utilised during the transition period, with knowledge and systems slowly being integrated or updated within the new standalone or functionally separated business. Once the business is stand-alone it is both practical and more efficient for the entity to re-assess if the equipment and software of its parent company are fit for purpose for the new standalone entity. From an autonomy, security and licensing perspective, it may also be necessary for MLPL to incur these costs for having standalone software systems which is not integrated with TasNetworks.⁵¹

From Aurecon's review, in 42 instances Marinus Link is relying on TasNetworks licensed software to carry out its business as usual operations. As of June 2024, MLPL is seeking to reduce this reliance to just 15 instances. The majority of this transition is occurring across areas such as:⁵²

- Human resources
- Environmental Planning
- Asset management
- Corporate Procurement
- Financial Management
- Legal
- Information Management
- Commercial
- Customer and Revenue

In Aurecon's view, and from transactions Aurecon has observed in the market where there is a separation of a business area, it is prudent or often necessary to have standalone functions and software systems.

10.2.2 Resourcing Assessment

In Table 10-3 below we provide an overview of the resourcing proposed by MLPL for Corporate Staffing. Based on Aurecon's review, the composition of staffing (provided separately by MLPL) across various business areas is consistent with typical corporate functions required by TNSPs.⁵³

Table 10-3 MLPL Corporate Staffing²⁹

Team role (FTE)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024
CEO	1.0	1.0	1.0	0.5
CFO	1.0	1.0	1.0	0.5
Executive Assistant	3.0	1.0	1.0	0.5
Commercial Manager	1.6	-	-	-
Corporate Counsel	1.0	1.0	1.0	0.5
Executive Manager	2.0	-	-	-
Finance Business partner	1.0	1.0	1.0	0.5
Finance Lead	1.0	-	-	-

⁵¹ Aurecon experience – Project Sinatra / Lion / Kennedy

⁵² CCS 01 Applications pg 2 & 3

⁵³ Aurecon's assessment is per the structure provided as of 19th July 2023

Team role (FTE)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024
Paralegal	0.4	1.0	1.0	0.5
People & Sourcing Specialist	1.0	-	-	-
People Business Partner	0.8	-	-	-
People Partner	2.0	-	-	-
Chief Advocacy Officer/Deputy CEO	-	0.4	1.0	0.5
Chief People, Safety & Culture Officer	-	-	1.0	0.5
Commercial Manager / FP&A Manager	-	-	0.8	0.8
Corporate Accountant	-	0.4	1.0	0.5
Executive Assistant - CEO	-	1.0	1.0	0.5
Executive Assistant - Governance	-	1.0	1.0	0.5
Executive Manager, Governance & Legal	-	1.0	1.0	0.5
Finance Analyst / Finance officer	-	1.0	1.0	0.5
Finance Systems Manager	-	-	0.4	0.2
Head of Commercial	-	-	1.0	0.5
Head of Finance	-	1.0	1.0	0.5
Head of People	-	1.0	1.0	0.5
Head of Systems & Technology	-	-	1.0	0.5
IT Project Manager - Business Systems	-	1.0	3.0	1.5
Organisational Development Advisor	-	-	1.0	0.5
People Advisor	-	-	1.0	0.5
People Business Partner (TAS)	-	1.0	1.0	0.5
People Systems & Data Specialist	-	-	0.8	0.5
Project Coordinator - People	-	1.0	1.0	0.5
Software Engineer Lead	-	1.0	1.0	0.5
Talent Business Partner	-	0.4	1.0	0.5
Transformation Lead	-	1.0	0.4	-
Application Support	-	-	1.7	1.0
Business Analyst	-	-	2.0	1.0
Corporate Finance Manager	-	-	0.8	0.5
Head of Finance (filling vacant position) - Previously Project manager	-	-	0.8	0.5
Board of Directors	N/A	N/A	N/A	N/A

Team role (FTE)	2021-22	2022-23	2023-24	6 months to 31 Dec 2024
Total	15.7	18.2	33.8	17.5

*Totals may not sum due to rounding

The increase in staffing from the 2021-2022 to the 2022-2023 period reflects a ramp up in the requirements for project delivery and MLPL onboarding staff to carry out functions previously provided by TasNetworks. Aurecon has not evaluated the need for each FTE in detail but agrees with the logic of this.

Aurecon has conducted a review of a sample of labour rates and believes these to be in line with market rates, however we note that depending on the size of an organisation the rates for corporate staff can range greatly. Aurecon's assessment has been based rates for a larger organisation.

EY has also provided professional services to MLPL on transitioning from TasNetworks and establishing itself as a stand-alone entity. EY was procured on a competitive basis to deliver this scope of work via a previous panel agreement with work orders being approved by MLPL. Aurecon is satisfied with this approach.

10.2.3 Benchmarking

In Aurecon's view, there are limited benchmarks that are suitable for an assessment of whether MLPL's upfront Corporate and Support Costs are comparable to a peer. This is based on the view that:

- Existing TNSPs delivering transmission projects are continuing to operate under their parent entity (e.g HumeLink is under Transgrid)
- Corporate costs benchmarks are more readily available for business that are operating and are typically assessed as proportional to operational expenditure. Aurecon is unable to make this assessment as the distinction between corporate costs which have been capitalised and those that would be considered operational expenditure was not available.
- Moreover, in our view any comparisons between an early-stage business with upfront establishment costs against a mature peer (such as PowerLink or Transgrid) may not be a like for like comparison.

10.3 Conclusion

Aurecon has reviewed MLPL's corporate and support costs which relate to ongoing business costs, once off establishment costs it has incurred in separation from TasNetworks, and transitional costs which have guided its planned separation.

- Ongoing business costs: Aurecon has reviewed the business functions and resourcing requirements identified by MLPL against typical corporate structures for standalone entities and believe this to be consistent with Industry. Aurecon has also evaluated a sample of labour rates which is aligned to industry.
- Transitional costs: EY has provided MLPL professional services on transitioning and establishing itself as a stand-alone entity. This is required to transform and prepare MLPL corporate functions to be stand-alone from TasNetworks. These activities are prudent, and the process has been guided by specialist advice received.
- Once-off establishment costs: As a standalone entity, MLPL will be required to utilise its own systems to deliver its business as usual operations. This can often lead to large once off costs. For example, MLPL noted the need for establishing its own finance systems. Aurecon agrees with the need for this and understands MLPL has received quotes from market for future software and system needs. These activities for establishment are prudent and the process has been guided by specialist advice received.

11 Total Early Works Expenditure Benchmarking

In this section, Aurecon summarises the total expenditure MLPL is proposing as part of its early works relative to peer projects.

On aggregate, the total D&A phase (early works) capital expenditure expected to be incurred by MLPL is within the range of what can be observed for HVDC internationally and HVAC projects within Australia.

However, Aurecon notes that as identified in this report, there are several factors which will drive project specific outcomes which benchmarking does not capture and could justify deviations within this range. For example:

- MLPL having once off corporate costs for establishing itself as a standalone entity.
- Whether benchmarks include bidder payments for long-lead items.
- We note procurement requirements, environmental compliance pathways, and labour costs across markets could also drive differences in benchmarks.
- The European HVDC market in Aurecon's view is also more mature than in Australia which can lead to lower procurement costs.

Table 11-1 Benchmarking of D&A Costs for International Projects

Project	Technical Scope	Early Works (D&A) as % of Total Capex	Comments
North Sea Link	±525 kV 1400 MW Bipole submarine power cable between England and Norway. (no metallic return (two cables))	2% ⁵⁴	Assessment based on Ofgem Final Project Assessment allowance
Viking Link	±525 kV 1400 MW Bipole HVDC submarine power cable between Great Britain and Denmark (no metallic return (two cables))	3% ⁵⁵	Assessment based on Ofgem Final Project Assessment allowance
IFA 2	±320 kV 1000 MW HVDC submarine power cable between Great Britain and France. Symmetrical Monopole	3% ⁵⁶	Assessment based on Ofgem Final Project Assessment allowance
NeuConnect	±525 kV 1400 MW Bipole connector between UK and Germany	3% ⁵⁷	Assessment based on Ofgem Final Project Assessment allowance
Nemo Link	±400 kV 1000MW HVDC submarine power cable between UK and Belgium	4% ⁵⁸	Assessment based on Ofgem ⁵⁹ final determinations on the Post Construction Review.

⁵⁴ Final Project Assessment of the NSL interconnector to Norway:

https://www.ofgem.gov.uk/system/files/docs/2016/10/nsi_fpa_consultation_-_final.pdf

⁵⁵ Decision on the Final Project Assessment of the Viking Link interconnector to Denmark:

https://www.ofgem.gov.uk/system/files/docs/2020/09/decision_on_the_final_project_assessment_of_the_viking_link_interconnector_to_denmark_0.pdf

⁵⁶ Final Project Assessment of the IFA2 interconnector to France:

https://www.ofgem.gov.uk/system/files/docs/2018/07/final_project_assessment_of_the_ifa2_interconnector_to_france.pdf

⁵⁷ Decision on the Final Project Assessment of the NeuConnect interconnector to Germany:

<https://www.ofgem.gov.uk/sites/default/files/2022-06/Neuconnect%20Final%20Project%20Assessment%20decision1656590974415.pdf>

⁵⁸ Ofgem post-construction review of Nemo Link (September 2019); General 03

⁵⁹ Ofgem: the Office of Gas and Electricity Markets is the government regulator for the electricity and downstream natural gas markets in Great Britain.

Project	Technical Scope	Early Works (D&A) as % of Total Capex	Comments
GreenLink	±320 kV 500MW HVDC submarine power cable between Great Britain and Ireland link ⁶⁰	5% ⁶¹	Assessment based on Ofgem FPA allowance
Marinus Link (This project)	Two Symmetrical Monopoles ±320 kV each 750 MW (four cables)	5.9% ⁶² (Estimated)	
NZ HVDC Inter-Island Link Upgrade 3	HVDC Link between North and South Island	8% ⁶³	Reasonably similar project in the region
HumeLink	500 kV HVAC Overhead transmission line	10% ⁶⁴	Variables may drive differences in costs to Marinus Link such as being a HVAC solution, overhead, and the inclusion of long-lead procurement costs. Linear electrical infrastructure in the region
Walney Ext UK Wind Farm	Two 220 kV AC circuits 330MW	12% ⁶⁵	Assessment based on Ofgem Final Project Assessment allowance
TR4 & TR5 UK Wind Farms	Multiple 132/220 kV circuits up to 1200MW	12 to 15% ⁶⁶	

11.1 Conclusion

On aggregate, the total D&A phase (early works) capital expenditure expected to be incurred by MLPL is within the range of what can be observed for HVDC internationally and HVAC projects within Australia.

However, Aurecon notes that as identified in this report, there are several factors which will drive project specific outcomes which benchmarking does not capture and could justify deviations within this range. For example, MLPL having once off corporate costs for establishing itself as a standalone business, whether early payments are made for long-lead items, or market structures in Europe for HVDC projects being more mature.

Aurecon has reviewed MLPL's proposed early works expenditure (e.g by GHD and BCG) throughout the project's inception and into the early works process. In Aurecon's view, MLPL has adequately identified the activities to undertake during the early works phase to reduce project construction and implementation risks. MLPL has also demonstrated that its resourcing costs are in line with industry and specialist consultants were utilised have been procured on a competitive basis.

⁶⁰ Non-Technical Summary. Available from: <https://www.greenlink.ie/summary>

⁶¹ Aurecon calculation and Ofgem. Available from: <https://www.ofgem.gov.uk/sites/default/files/2021-09/Greenlink%20FPA%20decision1633004200399.pdf>

⁶² MLPL Early Works Relative to Total Capex (\$197m relative to \$3.0bn costs for MLPL in 2021 dollars escalated by 12% for CPI. Available at: <https://www.marinuslink.com.au/>

⁶³ Transpower HVDC Inter-Island Link upgrade investment proposal (2005). Refers to expected pre-FID costs under original upgrade investment proposal (did not proceed with original scope), assumes linear project management and development spend profile across project duration- General 03

⁶⁴ HumeLink – Stage 1 (Early Works) Contingent Project Application

⁶⁵ Offshore Transmission: Cost Assessment for the Walney Extension Transmission Assets. Available from: https://www.ofgem.gov.uk/system/files/docs/2020/06/we_final_car_newtemplate_003.pdf & General 03 - Provided by MLPL

⁶⁶ General 02 - Marinus Link Design and Approval Phase: Cost and Constructability Technical Advice – Provided by MLPL

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