



# Attachment 1: Explanation of Expenditure Forecasts - Part A (Early works)

Submission to the Australian Energy Regulator

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## Responsibilities

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# 1 Introduction and overview

## 1.1 Purpose

Marinus Link is an infrastructure project of national significance which is expected to deliver substantial benefits to electricity consumers by reducing wholesale electricity costs. It involves the construction of approximately 255 kilometres of undersea High Voltage Direct Current (**HVDC**) cable and approximately 90 kilometres of underground HVDC cable in Victoria. It also includes converter stations in Tasmania and Victoria. The total interconnection capacity will be 1500 MW, provided through two 750 MW cables.

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**). In accordance with those provisions, the AER published its Commencement and Process Paper on 1 June 2023 which sets out the AER's timetable and process for setting MLPL's regulated revenues.

This supporting document forms part of MLPL's Revenue Proposal – Part A (Early works), as it provides further information to explain why MLPL's 'early works' expenditure is prudent and efficient. Specifically, this document describes the activities that MLPL is undertaking to prepare the essential groundwork that will enable Marinus Link to be delivered on time and on budget.

This document also serves to meet the MLPL Consumer Advisory Panel (**CAP**) information request for detailed explanation of costs, including information on benchmarking.

As explained in this supporting document, our early works activities and expenditure have been informed by two independent reviews conducted in 2019 and 2020, i.e., prior to the commencement of 'early works' expenditure covered by MLPL's Revenue Proposal. To further support our Revenue Proposal, we have commissioned a further report from a third independent expert, Aurecon, to review our early works activities and expenditure. MLPL considers that these independent expert reports provide a high degree of assurance that the project has been subject to robust planning and governance processes, and that the resulting expenditure is prudent and efficient.

## 1.2 Expenditure categories, scope and timeframes

Chapter 3 of the Revenue Proposal document provides a detailed explanation of what is meant by 'early works' expenditure. The remainder of this section provides a summary of the main points, noting that Chapter 3 provides further detailed information and explanation.

Our early works activities are:

- Landowner and community engagement programs, including Traditional Owners, and stakeholder relations;
- Land and easement acquisition;
- Environmental impact assessments;
- Technical designs and specifications;
- Procurement strategy and execution;
- Program and project management; and
- Corporate costs and support.

Our early works activities are consistent with the definition proposed by the AEMC, which is reproduced below:<sup>1</sup>

“Any activity which commences prior to the construction of the preferred option can be considered early works if the activity can be justified as being necessary to:

- improve the accuracy of project cost estimates, and
- ensure that a project will be delivered within the time frames specified by the most recent ISP.

Early works are activities that help TNSPs prepare to construct the physical asset and not the actual construction of the asset.”

Our proposed expenditure for early works activities covers the period:

- From 1 July 2021, which is the first financial year immediately following completion of the RIT-T and AEMO’s classification of Marinus Link as an actionable ISP project;
- To 31 December 2024, which is shortly after MLPL’s final investment decision.

In addition to these early works activities, our early works expenditure includes land purchases at Heybridge and Mardan Farm that were incurred prior to 1 July 2021. The Hazelwood and Heybridge sites were acquired for the purpose of locating the converter stations, while Mardan Farm provides logistical value in relation to construction in Victoria. For each land acquisition, MLPL obtained independent expert advice regarding the market value. As such, MLPL is confident that the decision to procure the land and the costs of the acquisitions are prudent and efficient, having regard to their market value and their strategic importance to the project.

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<sup>1</sup> AEMC, Final Report, Transmission Planning and Investment Review, Stage 2, 27 October 2022, page 41.



## 1.3 Summary of early works expenditure

A summary of MLPL's proposed early works expenditure is set out in the table below, covering the period from 1 July 2021 to 31 December 2024. It shows that the total expenditure over this period is \$196.5 million, expressed in nominal terms, which reduces to \$128.9 million net of grant funding. As the period relates to 1 July 2021 to 31 December 2024, our early works expenditure is a mix of actual and forecast expenditure.

**Table 1: Proposed early works expenditure (\$m nominal)<sup>2</sup>**

| Category   | 2021-22     | 2022-23     | 2023-24     | 6 months to 31 Dec 2024 | Total        |
|--|-------------|-------------|-------------|-------------------------|--------------|
| Landowner and community engagement programs, including Traditional Owners, and stakeholder relations | 4.0         | 6.0         | 9.0         | 4.1                     | 23.2         |
| Land and easement acquisition  | 2.6         | 1.8         | 2.5         | 1.1                     | 8.0          |
| Environmental impact assessments   | 2.7         | 7.4         | 9.9         | 4.6                     | 24.5         |
| Technical designs and specifications   | 17.4        | 12.2        | 11.7        | 2.6                     | 43.9         |
| Procurement strategy and execution <sup>3</sup>  | 2.4         | 4.6         | 8.8         | 3.1                     | 18.9         |
| Program and project management   | 4.5         | 8.2         | 10.4        | 4.7                     | 27.8         |
| Corporate costs and support  | 6.6         | 13.9        | 21.0        | 8.7                     | 50.2         |
| <b>Sub-total</b>   | <b>40.1</b> | <b>54.2</b> | <b>73.3</b> | <b>28.9</b>             | <b>196.5</b> |
| Less Grant funding   | -9.4        | -27.2       | -19.4       | -11.6                   | -67.6        |
| <b>Net expenditure</b>   | <b>30.7</b> | <b>27.1</b> | <b>53.9</b> | <b>17.2</b>             | <b>128.9</b> |

Note: Numbers may not sum exactly due to rounding.

The cost of the land purchase at Hazelwood is included in the costs presented in Table 1. However, the costs of land purchases at Heybridge and Mardan Farm, which were incurred prior to 1 July 2021, are included in MLPL's regulatory asset base as at 1 July 2021 and, therefore, excluded from costs presented in the above table.

<sup>2</sup> Excludes land purchases for Heybridge and Mardan Farm, which are included in MLPL's regulatory asset base as at 1 July 2021.

<sup>3</sup> Excludes pre-payments that may be required to secure manufacturing capacity.

As already noted, the purpose of this document is to explain each line item and the expenditure for early works activities, with a particular focus on demonstrating that it is prudent and efficient. In developing this information, we have had regard to the feedback from our Consumer Advisory Panel which emphasised the issues of affordability and the importance of benchmarking our expenditure against our peers.

With this feedback in mind, we have provided additional information to explain how we have scoped the early works activities to achieve the stated objectives for each expenditure category, while also maintaining a focus on managing our total expenditure within an acceptable budget. While grant funding has defrayed the costs that will be borne by consumers, the presence of grant funding has not diminished our focus on cost efficiency.

## 1.4 Structure of this document

The remainder of this document is structured as follows:

- Chapter 2 summarises the independent reviews and benchmarking that were undertaken by Boston Consulting Group (BCG) and GHD prior to 1 July 2021, i.e., prior to the commencement of 'early works' as defined by our Revenue Proposal.
- Chapter 3 provides an overview of our forecasting methodology for our early works expenditure.
- Chapter 4 sets out our actual and forecast stakeholder engagement early works.
- Chapter 5 sets out our actual and forecast land and easement acquisition early works.
- Chapter 6 details our actual and forecast environmental impact assessment early works.
- Chapter 7 sets out our actual and forecast technical designs and specifications early works.
- Chapter 8 provides our actual and forecast procurement strategy and execution early works<sup>4</sup>.
- Chapter 9 details our actual and forecast program and project management early works.
- Chapter 10 details our actual and forecast corporate and support early works.

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<sup>4</sup> Excludes pre-payments that may be required to secure manufacturing capacity. Any physical preparatory works associated with pre-construction will be treated as construction costs and included in our Revenue Proposal - Part B (Construction costs).



- Chapter 11 provides a summary explanation as to why our early works expenditure is prudent and efficient in accordance with the Rules requirements. In presenting this information, we have had regard to the Rules requirements, including the operating and capital expenditure objectives.<sup>5</sup>

Unless otherwise stated, the financial data presented in this document is expressed in nominal terms. It should also be noted that the total values presented in tables may not sum exactly due to rounding.

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<sup>5</sup> MLPL notes that the capital and operating expenditure objectives do not directly relate to early works expenditure. Nevertheless, MLPL has interpreted the Rules as requiring MLPL to demonstrate that its actual and forecast expenditure is prudent and efficient, having regard to MLPL's particular circumstances and the project requirements, including the timing specified in the 2022 ISP.

## 2 Expert reviews and benchmarking

### 2.1 Introduction

The purpose of this chapter is to provide an overview of the independent expert reports that were commissioned prior to the commencement of the 'early works' period covered by our Revenue Proposal. The reports were prepared by strategy consultants, Boston Consulting Group (**BCG**), and engineering consultants, GHD.

Each of these reports refer to the Design and Approval (**D&A**) phase of the project, which is essentially synonymous with 'early works', but has an earlier start date. In discussing the two reports, we refer to the D&A phase as this terminology is used in those reports. In terms of interpreting the reports, however, it is appropriate to read 'early works' for 'D&A phase'.

It is also worth noting that the reports were commissioned prior to MLPL's current organisational structure, in which MLPL is operating as a standalone entity with its own CEO and Board. The independent expert reports therefore focused on the D&A phase for the whole project, i.e., Project Marinus rather than Marinus Link<sup>6</sup>, and did not make any allowance for MLPL's establishment costs.

Notwithstanding these differences, both reviews provide useful insights regarding the efforts that were made to ensure that the D&A phase is well managed, appropriately resourced and scoped. As both reviews were completed prior to 1 July 2021, it means that the early works activities and costs that are the subject of our Revenue Proposal have benefited from external scrutiny and advice, including benchmarking. As a consequence, these reviews provide a high degree of assurance, albeit at a high-level, that our proposed early works expenditure is prudent and efficient.

### 2.2 Boston Consulting Group Review – Nov 2019

In July 2019, BCG was commissioned to assist in developing the strategy for delivering Project Marinus, which included a review of the budget for the D&A phase. BCG's advice and recommendations covered the full breadth of the project, presented in three steps:

1. Successfully establishing the project;
2. Setting up for successful delivery; and

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<sup>6</sup> It should be noted, however, that the independent experts often referred to 'Marinus Link' when referring to Project Marinus.

3. Options for delivery.

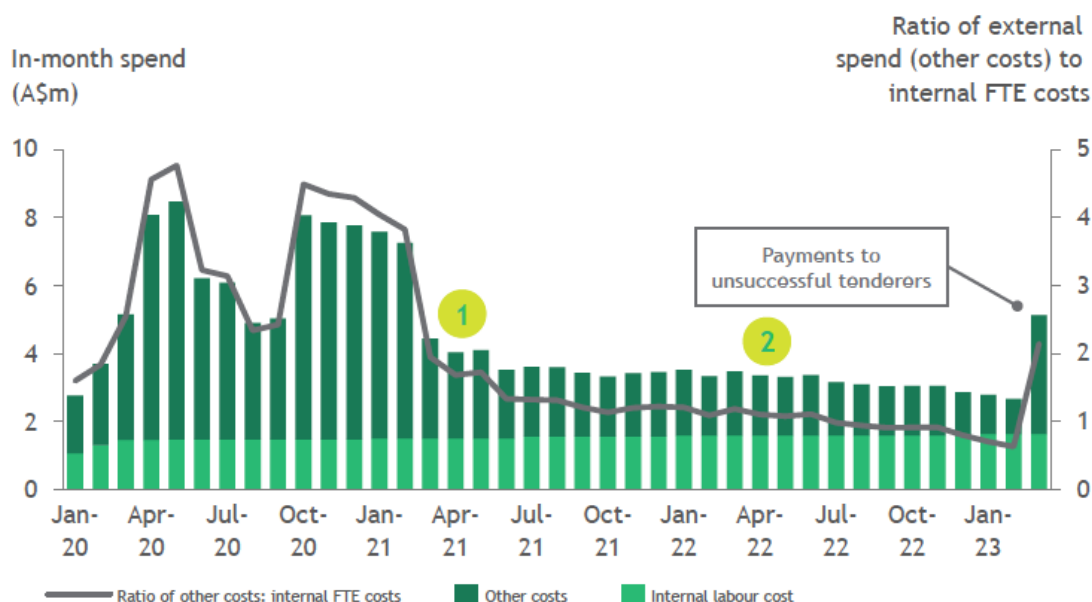
The second step included the following considerations:

- Project charter, value drivers and principles;
- Adequacy of setup for the D&A phase, including budget and stage gating;
- Framing and initial deep dives for project execution strategy;
- Design of project organisation structure and interfaces with TasNetworks; and
- Recommendations to adapt decision making for Project Marinus.

In relation to the budget estimates for the D&A phase, BCG highlighted the following points, as indicated in the figure below, which is reproduced from BCG's report:

1. Falling ratio of external to internal spend may lead to additional procurement; and
2. Consistency of lower spend profile in later years may indicate unaccounted for expenditure from the budget at that time, i.e., November 2019.

**Figure 1: Boston Consulting Group's analysis of external to internal expenditure<sup>7</sup>**



<sup>7</sup> Boston Consulting Group, Project Marinus Strategic Advisory, 1 November 2019, page 29.

In addition to the observations made by BCG, it is also important to emphasise that the D&A phase has now been extended to December 2024 to reflect the later timing of FID. Evidently, in addition to the observations made by BCG, the extended timeframe will also contribute to increased costs for this phase of the project.

As part of its review, BCG undertook benchmarking analysis to assess the reasonableness of the D&A budget for Marinus Link. In its review, BCG considered the costs of the following projects:

- Nemo Link1 – HVDC submarine cable between the UK and Belgium
- New Zealand HVDC Inter-Island Link Upgrade2 – upgrade of HVDC link between North and South Island
- WesternLink – HVDC submarine link between Scotland and North Wales
- VikingLink – Planned HVDC link between the UK and Denmark
- North Sea Link (UK share of project) – HVDC submarine link between the UK and Norway; and
- Typical LNG projects.

BCG's benchmarking analysis concluded that:

- Comparable HVDC and other major capital projects typically spend 4-8% of total project costs prior to FID; and
- The period from project conception to FID is typically in the range of 2 to 9 years.

BCG concluded that the projected budget for the D&A phase was at the upper end of the observed range, at 6% of the total project costs, including contingencies. BCG also identified reasons why an upper end estimate may be appropriate:

- Supporting transmission work and underground land cable crossing over 300 properties, will add easement acquisition and community engagement costs; and
- Legal and environmental requirements across state and federal jurisdictions increase time and legal costs to navigate multiple approval bodies and processes across the regulatory landscape.

## 2.3 GHD's Independent Technical Review – Dec 2020

In 2020, the Department of Industry, Science, Energy and Resources (DISER) commissioned an independent technical review of the D&A phase for Marinus Link. The review was conducted by GHD, which is an internationally respected engineering consultancy, as part of the Australian Government's due diligence in

relation to providing grant funding for the project. GHD's final report, which was completed in December 2020, explained the purpose of its report is to:<sup>8</sup>

"...provide the Department of Industry, Science, Energy and Resources with independent technical advice for the purposes of reviewing the delivery methodology and cost estimated for the Marinus Link. The assessment focuses on the reasonableness of the proposed program to achieve optimum value for money."

As already noted in section 2.1, the scope and timing of GHD's review is especially important in relation to this Part A - Revenue Proposal (Early works) because it was undertaken prior to July 2021, which is our proposed start date for seeking cost recovery for early works expenditure. As a consequence, we were able to action GHD's recommendations prior to the commencement of the early works period, ensuring that our approach reflected best practice.

While GHD's report identified some areas for improvement, its overall assessment was positive as highlighted by the commentary below relating to project governance and planning:<sup>9</sup>

- *In general, the D&A phase projects governance structure and controls are consistent with similar projects.*
- *The program schedule is appropriately front-end loaded incorporating steps to clear key decision rules such as the projects attractiveness and other key commercial issues such as the price impact upon customers.*
- *The objectives and deliverables of the D&A phase are well documented and project planning incorporates all key tasks required to reach FID.*
- *Interdependencies have been incorporated into schedules and key project stream planning, or delivery, aligns with the activities to reach FID.*
- *The D&A phase planning incorporate appropriate decision gates.*

In relation to project management, GHD made the following positive observations:<sup>10</sup>

- *The structure of project management controls and resources, at this early stage of the project, is consistent with similar large infrastructure projects.*

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<sup>8</sup> GHD Advisory, Marinus Link Design and Approval Phase: Cost and Constructability Technical Advice, 16 December 2020, page 8.

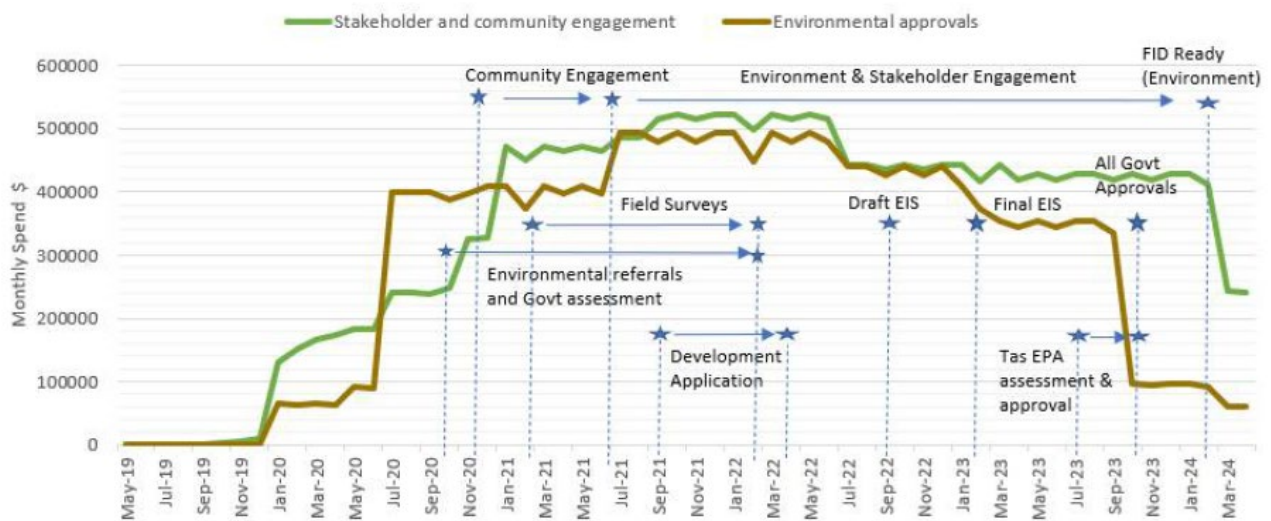
<sup>9</sup> Full details of GHD's concluding observations and recommendations are provided in GHD's Report, pages 9-11.

<sup>10</sup> Further details are provided in section 5.7 of GHD's Report, page 22.

- Planning includes appropriate consideration of front-end loading.
- GHD Advisory has not identified any concerns with the resources and activities reviewed in the project governance, management and assurance works program.
- The upfront investment in the strategic framework has resulted in consistent planning and a coordinated approach as evidence in GHD Advisory's review of each work program.

GHD also undertook a detailed review of the scheduling for each of the activities that comprise the D&A phase. For example, GHD examined the linkages between the stakeholder/community engagement and the environmental approvals activities, which is reproduced in the figure below.

**Figure 2: GHD's review of MLPL's resource scheduling, activities and deliverables<sup>11</sup>**



GHD reached the following conclusion regarding this component of the project, noting the potential need for additional work:<sup>12</sup>

“Overall, the schedule appears to be in appropriate order to address environmental permitting requirements.

<sup>11</sup> GHD Advisory, Marinus Link Design and Approval Phase: Cost and Constructability Technical Advice, 16 December 2020, page 34.

<sup>12</sup> Ibid, page 35.

As there are numerous environmental issues to be assessed across the project it will be important to ensure there is enough time to consider any risks identified. This could in turn result in changes to the route and this may require additional assessments.”

GHD also undertook benchmarking of the D&A phase, having regard to:<sup>13</sup>

- Comparative estimates of D&A costs using costs for other similar HVDC projects in the UK (at a total development cost level);
- Findings by BCG for some comparative HVDC projects;
- Comparative estimates of D&A costs based on other large interconnector and transmission projects in Australia, at both the total cost level and several of the program elements within the Marinus Link D&A budget; and
- Comparative estimates of D&A costs based on other types of large infrastructure projects in Australia and using this data to assess the comparative costs at a total level and at a program element level.

GHD concluded that:<sup>14</sup>

“GHD Advisory D&A phase benchmarking indicates that the costs are within the range of accuracy considered acceptable and have been robustly developed.”

To assist in the review, GHD subcontracted Donald Cant Watts Corke (**DCWC**) to conduct a detailed review of the D&A budget. DCWC made the following conclusions:<sup>15</sup>

“...the cost estimate for Design and Approval phase was robust. TasNetworks has gone through the rigorous process to deploy first principles estimating techniques to provide sufficient level of confidence to the budget cost. Based on DCWC’s review, activity of works was aligned with detailed scheduling and programming”.

In relation to benchmarking the D&A costs, DCWC made the following comments:<sup>16</sup>

“Benchmark to similar projects nationally, whilst the Pre-Construction activities may appear high, for budgetary purposes \$212 Mill can be considered within industry benchmark data.

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<sup>13</sup> Ibid, page 63.

<sup>14</sup> Ibid, page 11.

<sup>15</sup> Ibid, page 65.

<sup>16</sup> Ibid, Appendix B, page 9.



Typical large-scale projects attract anywhere between 6% - 9% Pre-Construction Activities percentages, particularly in utility projects. Based on the Marinus Link Project - \$212 Million out of \$3.4 Billion elicits a 7.3% benchmark which falls within the acceptable ranges for high value high risk projects in Australia.”

In discussing its benchmarking analysis, DCWC explained that the D&A costs for Marinus Link are likely to be higher than comparable projects. In particular, DCWC recognised that the environmental costs are likely to be higher given the need to engage with all levels of Governments regarding the impact on land and sea in Tasmania and Victoria. DCWC also noted that labour costs tend to be higher in Australia, which tends to increase the D&A costs as a percentage of the total project costs.

## 2.4 Interpreting the benchmarking results

As noted in section 2.1, while the scope of the D&A phase discussed in the independent expert reports differ from early works, as the former relates to a longer timeframe and Project Marinus rather than MLPL’s ‘early works’ expenditure as defined in our Revenue Proposal, the benchmarking analysis is useful in the following respects:

- The benchmarking analysis highlights that there are a range of cost outcomes for large projects, which varies depending on the characteristics of each particular project;
- There are good reasons to expect the ‘early works’ expenditure for MLPL to be towards the upper end of the benchmark range;
- MLPL has actively managed its total early works expenditure, having regard to the benchmarking outcomes in the independent expert reports; and
- It is important to recognise the inherent limitations of benchmarking early works expenditure, not least because the duration of this phase of the project may be subject to change. For MLPL, we note that ‘early works’ has been extended from an original timeframe of early 2023 to late 2024.

In addition to the benchmarking undertaken prior to 1 July 2021, MLPL has also had regard to recent contingent projects, such as HumeLink, that also provide useful information both at an expenditure category and aggregate level. Where relevant, this further information is discussed in later sections of this report.

## 3 Forecasting methodology

### 3.1 Forecasting period and actual costs

The AER's commencement and process paper requires MLPL to submit its Revenue Proposal – Part A (Early works) by 31 July 2023. This submission therefore occurs more than halfway through our proposed timeframe for early works expenditure, which commences on 1 July 2021 and ends on 31 December 2024.

The timing of our Revenue Proposal has important implications for the information that we provide to support our proposed early works expenditure. Specifically, our submission must:

- Report and explain our actual early works expenditure to date; and
- Explain our forecast of early works expenditure for the remainder of the period.

Specifically, our approach is to provide information which demonstrates that our proposed early works expenditure (i.e., the actual plus forecast) is prudent and efficient in accordance with Chapter 6A of the Rules. In this regard, our forecast early works expenditure must be informed by our actual expenditure in two respects:

- The actual expenditure to date provides important information about the costs of delivering the early works activities to date, which needs to be taken into account for the remainder of the period; and
- The early works activities are already underway in accordance with agreed plans and resource commitments. MLPL's capacity to amend these plans and commitments by revising the scope is therefore limited.

While our forecast early works expenditure is, to some extent, constrained by the existing plans and resource commitments, the reviews described in Chapter 2 provide confidence that every effort has been made to verify that these plans are prudent and efficient.

### 3.2 Standardised approach and presentation

Our early works expenditure covers a broad range of activities, ranging from landowner and community engagement programs through to technical designs and specifications. While these activities differ markedly in relation to scope, we have developed a standardised approach to presenting and explaining our expenditure for each activity, which is described below.

- **Objectives**

The starting point for each early works category is to establish the objectives, noting that these objectives must reflect the overarching goal of improving the accuracy of the forecast construction costs and avoiding project delays.

- **Description of activities, resource requirements and milestones**

For each early works category, we describe the key activities that are required in order to achieve the stated objectives; the resource requirements; and milestones. For each of these elements, our focus is on establishing the prudence and efficiency of the proposed approach. In broad terms, we explain why the activities are appropriately scoped; the balance between internal and external resources; and the milestones having regard to the outcomes that must be achieved to enable FID.

- **Expenditure requirements**

For each early works category, we present the following information that provides a breakdown of the expenditure requirements:

- Labour costs for internal staff reflect the required allocation of full time equivalents (**FTEs**) based on the relevant scope for that early works activity.
- Where available, the costs of outsourced services reflect quotations from specialist service providers based on agreed scopes of work. Where this information is not available, estimates are based on historical actuals and/or indicative quotations from service providers.
- Materials costs and other payments, including procurement of equipment with long lead items, are based on quotations or estimates from specialist service providers. Other payments may include, for example, land acquisition and the costs of securing easement access.
- Establishment costs, which are the costs of establishing MLPL as a separate business, in accordance with the Memorandum of Understanding signed by the Commonwealth and Tasmanian Governments on 15 December 2020, to ensure that the project is able to be delivered within the timeframes specified in the 2020 ISP.
- Administrative costs, such as office space, travel and accommodation, training and conference fees.

- **Benchmarking and external verification**

Where available, cost estimates for each expenditure category have also been informed by benchmarking with other projects, including information from other TNSPs, or other external verification.

As explained in the remaining sections of this document, our view is that we have adopted a prudent and efficient approach for each of the early works activities. In addition, the MLPL Board has applied an overall top-down discipline to the total early works expenditure to ensure that the expenditure at a project level is appropriate. This top-down review, which has required cost reductions for each expenditure category, provides additional assurance that MLPL's early works activities and costs provide the best outcome for consumers.

## 4 Landowner and community engagement programs, including Traditional Owners, and stakeholder relations

### 4.1 Key objectives and activities

The below summarises the objectives of this early works category and describes the activities that are required to achieve these objectives.

**Table 2: Stakeholder engagement objectives and activities**

| Objectives  | Activities   |
|---|--|
| <ul style="list-style-type: none"> <li>To build community support for the project. This work is essential to optimise project design and avoid project delays.</li> <li>To ensure the project achieves planning and approvals from relevant regulators.</li> <li>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.</li> </ul> | <ul style="list-style-type: none"> <li>Engage with affected landowners and community stakeholders, including Traditional Owners, to understand and address their concerns.</li> <li>Work with Governments and other agencies to ensure that regulatory requirements and community expectations are understood and addressed.</li> <li>Actively engage with the CAP, electricity consumers and other stakeholders to ensure that their views are reflected in our project plans to the greatest extent possible.</li> <li>Work with industry stakeholders to maximise local content opportunities and inform tender documents.</li> </ul> |

While our engagement activities are much broader in scope than our engagement with the CAP, this does not diminish the importance of the CAP to the project or the development of our Revenue Proposal. In the interests of brevity, we have not provided details of our CAP engagement in the summary material presented below. For a detailed explanation of our engagement with the CAP, please refer to Chapter 2 of our Revenue Proposal.

Stakeholder engagement is complex, dynamic and fundamental for a project with the scale and potential of Marinus Link. Our approach involves multiple teams each with their own specific objectives, while contributing to the overarching objectives described above.

The table below provides an overview of our engagement groups, the rationale for engaging and the different delivery teams within Marinus Link that are primarily responsible for each engagement activity.

**Table 3: Overview of our engagement groups, rationale and delivery teams**

| Key engagement areas/groups                            | Rationale for engagement   | Delivery team/s  |
|--|--|--|
| <b>Local stakeholders and community</b>                | MLPL engages with local stakeholders and the community to establish relationships, build understanding of and advocacy for the project, and to identify issues and opportunities that need to be considered in the project's design.   | Whole of project   |
| <b>Landowners</b>                                      | MLPL engages with landowners to establish relationships, negotiate access and compensation, and confirm site conditions, opportunities and constraints that need to be considered in the project's design.   | External Affairs and Project Delivery  |
| <b>Traditional Owners</b>                              | MLPL engages with Traditional Owners in both Tasmania and Victoria on various areas of the project, including, but not limited to its Sustainability Framework, Participation Plan and cultural heritage requirements.   | External Affairs and Project Delivery  |
| <b>Gippsland Stakeholder Liaison Group (GSLG)</b>      | MLPL engages with the GSLG as a forum for regular face-to-face communication and engagement between MLPL and key local stakeholders in the Gippsland region.   | External Affairs   |
| <b>Sustainability Framework and community benefits</b> | MLPL engages with key and local stakeholders around the development of an organisational Sustainability Framework, and Community Benefits Sharing Plan.  | External Affairs   |
| <b>Environmental and Land Use approvals</b>            | MLPL engages with key Commonwealth, State and Local stakeholders including the community, landowners, traditional owners, key industry bodies, regulators and other authorities during the environment and planning approvals processes.                                       | External Affairs and Project Delivery  |
| <b>Technical Reference Group (TRG)</b>                 | MLPL engages with the TRG as a key component of the Victorian Government's Environmental Effects Statement process. The TRG includes Commonwealth and Tasmanian representatives and assists with the coordination of the review of the environment and planning documentation. | External Affairs and Project Delivery  |
| <b>Government, Owners and regulators</b>               | MLPL engages with governments across relevant jurisdictions to discuss regulatory issues, policy settings, and planning and environmental approvals.   | Executive, External Affairs,<br>Customer & Revenue,<br>Finance & Commercial,<br>Project Delivery,<br>and |

| Key engagement areas/groups     | Rationale for engagement  | Delivery team/s  |
|---------------------------------|---|--|
|                                 |   | Legal and Governance   |
| <b>Governance</b>               | MLPL engages with internal and external stakeholders for governance, decision-making and strategic purposes, to ensure the project achieves FID and that the project is delivered in a coordinated and efficient manner.  | MLPL Board, TasNetworks, Hydro Tasmania,                                 |
| <b>Social Impact Assessment</b> | MLPL engages with stakeholders, communities and groups across the project footprint, to understand the social and economic characteristics and values of the study area, explore stakeholder perceptions about direct and indirect opportunities, explore stakeholder perceptions regarding the potential issues, concerns, and impacts and identify ways to reduce impacts and enhance the project's social and economic benefits. | External Affairs and Project Delivery                                    |
| <b>Energy sector</b>            | MLPL engages with the energy sector (including market bodies, system planners, industry participants and analysts) around the ISP, market rules, revenue and price setting, policy directions and requirements, trends, and economics and technical aspects of network connection.  | Executive, External Affairs, Customer & Revenue, and Project Delivery    |
| <b>Future workforce</b>         | MLPL engages with students, education providers, skills providers, industry and employment organisations to generate awareness of the project and connect with interested future workers to upskill prior to delivery, addressing potential skills shortages and meeting Australian Industry Participation requirements.  | People Team, External Affairs and Project Delivery                       |
| <b>Consumers</b>                | MLPL engages with consumers to ensure consumers' needs are considered in the project and reflected in our Revenue Proposal.   | Customer & Revenue and External Affairs                                  |
| <b>Industry and suppliers</b>   | MLPL engages with industry and suppliers around the design, the major equipment tender process and to meet Australian Industry Participation requirements.  | Project Delivery, Commercial & Financial, External Affairs and Executive |



| Key engagement areas/groups | Rationale for engagement  | Delivery team/s   |
|-----------------------------|---|---|
| Commercial and financial    | MLPL engages with commercial, finance, insurance experts to shape procurement and commercial strategies for the project. Obligations and arrangements from owners/shareholders is also considered here, together with understanding risks, opportunities and structures to support FID. | Commercial & Financial,<br>Customer & Revenue<br>and<br>Executive |

## 4.2 Engagement phases

Our engagement strategy has four phases, which match the phasing of the project as shown in the figure below.

**Figure 3: Project phases and timeline**



As previously noted, our Revenue Proposal for early works relates to the period from 1 July 2021 to 31 December 2024 and, therefore, falls within the Design and Approvals phase of the project. While the other phases of engagement are not directly relevant to the early works expenditure, for context it is useful to provide a brief summary of each phase.

### 4.2.1 Phase 1 – Initial Feasibility Report, Final Feasibility Report and Business Case (July 2018 – December 2019)

During this (now complete) phase, the project team aimed to raise awareness of, and inform stakeholders and the community about, the project. This included:

- Stakeholder engagement topics:
  - The RIT-T;
  - The ‘who pays’ question;

- Interface with the ISP process (engagement with AEMO); and
- Business case assessment results.
- Community and local stakeholder engagement topics:
  - The preferred route;
  - The benefits and potential impacts of the project;
  - Project timing;
  - Our approach to addressing issues; and
  - Feedback on their views and sentiment regarding the project.

As already noted, this phase of the project was prior to the commencement of the early works period and the costs associated with the above activities are not included in our Revenue Proposal.

## 4.2.2 Phase 2 – Design and Approvals ('early works')

This phase of the project is relevant to our Revenue Proposal, as it covers the early works period. The engagement activities include a range of environmental, social, cultural heritage and geotechnical studies that will – alongside landowner and stakeholder feedback – inform the project's design. Our engagement activities also cover the commercial and regulatory frameworks, and engagement to support procurement, revenue-setting and the 'who pays' question.

Our engagement activities are aligned to project milestones, including achievement of land use planning and environmental approvals and revenue determinations. The following dot points provide a summary of the range of early works engagement activities.

- Stakeholder engagement activities:
  - Regular engagement and briefing of shareholders, Government departments and Ministers, as well as local members and government representatives across Tasmania, Victoria and the Commonwealth.
  - Engaging with Victorian landowners to provide up to date information on what landowners can expect from the project, opportunities and compensation, and items for negotiation. Feedback from landowners will inform the micro-siting of the final route selection and the location of infrastructure such as joint pits and access tracks.
  - Engaging with key Bass Strait stakeholders regarding design and impacts, to ensure access and agreements are in place prior to the project progressing to tender.

- Engaging with a range of jobs, career, education and employment providers to raise the project's profile and build its position as a provider of “jobs of the future” in both Tasmania and Victoria.
  - Engaging with energy sector and local stakeholders to identify opportunities to mitigate cumulative impacts and align with cumulative benefits in the regions.
  - Engaging with key and local stakeholders in the development of the organisation's Sustainability Framework and Community Benefits Sharing Plan.
  - Engaging with sector and government stakeholders to ensure the project is meeting governance, revenue and regulatory expectations, including progressing the agreement around ownership, funding and cost allocation.
  - Engaging with representative groups, including the Consumer Advisory Panel, the Gippsland Stakeholder Liaison Group, and the North West Transmission Developments Stakeholder Liaison Group to understand representative stakeholder issues, expectations and opportunities for alignment.
  - Engaging with internal stakeholders and delivery teams to ensure the approach is efficient, effective and transparent and that they can act as project advocates and communicators.
  - Engaging with industry to meet statutory obligations associated with the project's Australian Industry Participation Plan.
- Community and local stakeholder engagement activities
    - Providing a diverse range of opportunities for communities in Victoria and Tasmania to learn about, and provide informed feedback on, the project. Local knowledge will be considered in scoping impact assessments and in developing ways to minimise impacts. Ongoing engagement will help MLPL to better tailor its communications and engagement approach. Engagement locally will also help MLPL to maximise the value of the project's local benefit sharing program.
    - Engaging with key and local stakeholders to ensure that the project team understands and can respond to regulatory requirements and constraints that must be considered in the project's design, delivery and operation.
  - Establishing a First Peoples Advisory Group in Victoria and engaging with Traditional Owner organisations in Tasmania, to ensure the project provides appropriate opportunities for participation, employment and benefits.
  - Planning and preliminary engagement activities in the lead up to Phase 3 (Manufacturing and Construction), which includes industry, supplier, skills, finance, insurance and pre-construction engagement.

### 4.2.3 Phase 3 – Manufacturing, Construction and Commissioning (out of scope for ‘early works’)

Following FID in late 2024, the project will move into equipment manufacture, construction and commissioning. Further communication and engagement planning will be undertaken for this phase, in partnership with future engineering, procurement and construction providers, local and skills providers, including social and First Peoples enterprises, and suppliers.

Stakeholder and community engagement requirements will be prescribed in tender documents. Tenderer responses will be evaluated as part of the procurement process for construction contractors. MLPL will oversee engagements with key government, market body, regulators and local leader stakeholders, and be a point of escalation for any operational or local delivery stakeholder engagement matters.

### 4.2.4 Phase 4 – Operations (out of scope for ‘early works’)

Marinus Link is expected to be in service for between 40 and 50 years, and ongoing engagement planning will be undertaken to support community benefits, operations, refurbishment and maintenance.

Key questions are raised around this phase, including who will own and operate the link, how much it costs to operate, how many jobs will be required to operate the link, and how and when the asset will be decommissioned.

## 4.3 First Nations engagement

Marinus Link acknowledges the Traditional Owners of the Country on which Marinus Link is proposed in Tasmania, across Bass Strait and in Victoria. We recognise the opportunities, challenges and impacts the project may present and are committed to listening to, and working with, Traditional Owners throughout the project’s development.

In the Gippsland region, Marinus Link is focused on building trusting relationships with First Peoples State Relations and Traditional Owners including the Boonwurrung Land and Sea Council, Bunurong Land Council Aboriginal Corporation and Gunaikurnai Land and Waters Aboriginal Corporation. Marinus Link is engaging with all three parties equally and will seek to ensure a high and genuine level of participation throughout all project activities.

Marinus Link has appointed Aboriginal Engagement Advisors in recognition of the importance of building strong and respectful relationships with Traditional Owners and Community and has established the Marinus Link First Peoples Advisory Group, which is made up of Traditional Owners and Marinus Link people. The Group formed in late 2022, providing a forum for ongoing conversations related to the impacts and opportunities of

Marinus Link across a broad range of social and heritage topics. Importantly, the Group is supporting the development of the project's Cultural Values Assessment, looking at both tangible and intangible cultural heritage.

The project's Technical Reference Group includes a representative of Gunaikurnai Land and Waters Corporation. This platform allows a Traditional Owner perspective to be incorporated throughout the development of the project and importantly, how Marinus Link activities through design, then construction, may impact on cultural heritage.

Marinus Link is developing its Cultural Heritage Management Plan and has engaged with all Traditional Owner Groups in Gippsland equally to participate, observe and feed into On Country activities such as walk overs, and land and geotechnical surveys. Traditional Owner presence at these activities, ensures the integrity of practice On Country and provides direct input between Traditional Owners and the project.

Further, we have engaged with Traditional Owners throughout the development of the Marinus Link Sustainability Framework, acknowledging the importance of building and maintaining respectful relationships and working together to deliver positive, sustainable outcomes with the First Peoples.

Across Tasmania and Victoria, the project will consult with Traditional Owners to develop its First Peoples Participation Plan, its Community Benefits Sharing Scheme and its First Peoples Commitment Strategy, demonstrating a further commitment to the important work currently underway with First Peoples. In Tasmania, Marinus Link has been further guided by Heritage Tasmania and is engaging with key First People stakeholders on an ongoing basis.

## 4.4 Environmental Impact Statements

An important aspect of the engagement process is to ensure that the ground work is undertaken to achieve planning approvals in accordance with the relevant Commonwealth and State requirements. In relation to our engagement activities, a key deliverable is the Environmental Impact Statement Consultation Plan which plays an important role in securing approvals by:

- Informing the community and stakeholders about potential impacts from the project;
- Creating multiple opportunities for the community and stakeholders to provide feedback about the project and potential impacts;
- Identifying issues and opportunities important to the community and stakeholders, which can be used to inform construction and impact mitigations; and
- Ensuring the project can meet the requirements under relevant laws and regulations.

Further details on the Environmental Impact Statement requirements and the associated early works activities are discussed in Chapter 6.

## 4.5 Resource requirements

It is evident from the discussion in the previous sections that the scope of the early works activities in relation to the landowner and community engagement programs is both diverse and significant. Providing the appropriate level of engagement across these activities is a highly specialised task that requires a mix of highly skilled internal staff members with support from a range of external experts.

In contrast to other actionable ISP projects, the challenges involved in meeting the engagement requirements of the Tasmanian, Victorian and Commonwealth authorities introduces a further element of complexity. In relation to benchmarking, it would be reasonable to expect our engagement costs to exceed those of a standard transmission project, noting that the latter will not raise the range or complexity of issues as those arising from Marinus Link. We discuss the benchmarking data shortly.

The table below shows the build-up of our proposed early works expenditure for our landowner and community engagement programs, including Traditional Owners, and stakeholder relations.

**Table 4: Actual and forecast expenditure for landowner and community engagement programs, including Traditional Owners, and stakeholder relations (\$m nominal)**

|  | 2021-22    | 2022-23    | 2023-24    | 6 months to 31 Dec 2024 | Total \$m   |
|--|------------|------------|------------|-------------------------|-------------|
| Internal labour requirements (FTEs)            | 9.9        | 17.5       | 23.2       | 11.5                    |             |
| Internal labour costs (\$m)                    | 1.3        | 2.5        | 3.4        | 1.8                     | 8.9         |
| Service provider costs (\$m)                   | 2.4        | 2.8        | 3.7        | 1.6                     | 10.6        |
| Materials cost and other payments (\$m)        | 0.1        | 0.2        | 1.3        | 0.5                     | 2.2         |
| Administrative costs (\$m)                     | 0.2        | 0.5        | 0.5        | 0.2                     | 1.5         |
| <b>Stakeholder engagement total cost (\$m)</b> | <b>4.0</b> | <b>6.0</b> | <b>9.0</b> | <b>4.1</b>              | <b>23.2</b> |

In relation to service provider costs, MLPL has competitively procured external advisors for specialist expertise where required to support effective engagement, noting the wide range of specialist activities involved. Further details of these costs have been provided to the AER in Spreadsheet 2 – Early works expenditure, which has been submitted as part of this Revenue Proposal. The service provider cost information is confidential and is therefore subject to commercial confidentiality.

The following table provides further information on the composition of internal labour resources for this early works category. As already noted, the scope of activities associated with landowner and community engagement programs including Traditional Owners and stakeholder relations is wide ranging and significant. This is reflected in the wide range of specialist skills required to manage those activities.

**Table 5: Actual and forecast internal labour resources for landowner and community engagement programs, including Traditional Owners, and stakeholder relations (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     | -       | -       | -                       |



|                              | 2021-22    | 2022-23     | 2023-24     | 6 months to 31 Dec 2024 |
|------------------------------|------------|-------------|-------------|-------------------------|
| Community engagement support | 1.0        | -           | -           | -                       |
| <b>Total</b>                 | <b>9.9</b> | <b>17.5</b> | <b>23.2</b> | <b>11.5</b>             |

Our view is that our proposed early works expenditure in relation to our landowner and community engagement programs, including Traditional Owners, and stakeholder relations is prudent and efficient because:

- Prior to the 'early works' period, we developed a well-defined engagement plan that identified our key stakeholder groups and tailored our engagement initiatives to address their concerns and build community support for the project.
- By specifying our objectives, we were able to ensure that the engagement will deliver tangible outcomes, such as a Cultural Heritage Management Plan, a First Peoples Engagement Plan and an Environmental Impact Statement Consultation Plan. In addition, the engagement delivers key project information and collateral, including fact sheets, maps, updates and advertising, as well as the maintenance of an accessible website for project information.
- We have engaged experts to ensure that our engagement is effective in understanding and actioning the particular stakeholder concerns, recognising the complexities that arise from a project that is significant from a Commonwealth and State perspective.
- Our engagement with the CAP has reflected best practice by taking a collaborative approach to engagement, recognising Marinus Link's specific characteristics that make it different to other transmission projects.

As explained in chapter 2, benchmarking was undertaken prior to the commencement of the early works period. GHD's assessment of the forecast stakeholder engagement costs at that time (December 2020) is reproduced below.<sup>17</sup>

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<sup>17</sup> GHD Advisory, Marinus Link Design and Approval Phase: Cost and Constructability Technical Advice, 16 December 2020, page 76.

Figure 4: GHD's assessment of stakeholder engagement costs, December 2020

| Program element                                 | Pre-FID budget costs (\$ million) | Comparative estimates (\$ million) | Comments  |
|---|-----------------------------------|------------------------------------|---|
| Stakeholder and environmental engagement (HVDC) | 28                                | 28                                 | <i>Stakeholder engagement costs are higher than other transmission infrastructure projects but in line with comparative estimates with large road and rail projects</i> |

We note that the scope of our engagement has changed markedly since GHD's assessment, as we have better understood the requirements of our stakeholders and the engagement requirements arising from our planning obligations. Furthermore, the timelines for FID have been extended since GHD produced its report, which naturally puts upward pressure on engagement costs, other things being equal. Nevertheless, our actual and forecast costs remain closely aligned with GHD's assessment. In addition, our forecasts of \$23.2 million are lower with those reviewed by BCG in October 2019, which were \$30 million. At that time, BCG noted that our forecasts were higher than typical for HVDC projects, but noted that Marinus Link has a higher on-land component relative to other HVDC projects.<sup>18</sup>

More recently, we note that Transgrid proposed community and stakeholder engagement costs for HumeLink of \$18.56 million, which Transgrid expressed as 9.5% of the total labour and indirect capex forecast.<sup>19</sup> On a comparative basis, our engagement costs are approximately 12% which, in our view, reflects the more complex issues arising from such a major project as Marinus Link, which requires engagement with many diverse stakeholder groups, including engagement with Commonwealth, Tasmanian and Victorian Governments.

Our assessment is that the available benchmarking information supports our view that our expenditure in relation to our landowner and community engagement programs, including Traditional Owners, and stakeholder relations is prudent and efficient.

<sup>18</sup> Boston Consulting Group, Project Marinus Strategic Advisory, 1 November 2019, page 69.

<sup>19</sup> Transgrid, A.3 Capex Forecasting Methodology HumeLink - Stage 1(early works) Contingent Project Application, 5 April 2022, page 34.

## 5 Land and easement acquisition

### 5.1 Key activities and objectives

The table below summarises the objectives of the land and easement acquisition early works category and describes the activities that are required to achieve these objectives.

**Table 6: Land and easement acquisition objectives and activities**

| Objectives   | Activities   |
|--|--|
| <ul style="list-style-type: none"> <li>To improve the accuracy of the costs of land and easement acquisition and ensure that these costs are minimised and risk of project delays minimised.</li> <li>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 delay.</li> </ul> | <ul style="list-style-type: none"> <li>Develop accurate assessment of land and easement acquisition requirements.</li> <li>Obtain reasonable land valuations and commence genuine negotiations to minimise compulsory acquisition.</li> <li>Negotiation of interim access agreements for survey purposes to inform the environmental assessment processes and route design.</li> </ul> |

The successful delivery of the project depends on securing access to land, both for planning and construction purposes:

- In relation to planning, land access is necessary to conduct field surveys and investigations, including geotechnical surveys, and ecology, cultural heritage and environmental studies. This work is essential in order to optimise the route design; address the planning approvals requirements; and determine the preferred construction methods.
- For the construction phase, securing Easement Option Agreements now will reduce the risk of project delay and assist in managing the total costs of land and easement acquisition. Strategic land acquisition of key project sites also plays an important role in reducing the total project costs and avoiding project delay.

For the above reasons, our early works activities in relation to land and easement acquisition play an important role in the overall success of the project. While we have established a separate early works category for land and easement acquisition, these activities are closely related to our landowner and community engagement programs, as successful negotiation with landowners depends on engaging effectively to build community support for the project. Similarly, our early works activities in relation to Environmental Impact Assessments cannot be completed without securing sufficient access to the proposed route to conduct the required investigations and consultations.

In October 2019, we developed a set of principles (**Guiding Principles**) to guide our negotiations with both private and public landowners for land access and easement rights in relation to approximately 430 properties on corridors identified in Victoria and Tasmania. An execution plan was also developed to implement the Guiding Principles, which has five stages including the negotiations, calculations, and associated payments:

1. Land access licence negotiations and payments (for surveys);
2. Easement compensation calculation;
3. Easement right option agreement and option payment;
4. Exercise of easement option; and
5. Asset installation, easement registration and payment of easement compensation.

Our early works activities relate to stages 1 to 3, while stages 4 and 5 would occur during the construction phase, i.e., after FID.

The Guiding Principles, including the execution plan and associated payments, underwent legal review by Herbert Smith Freehills and Page Seager and a review by our land access agents, Land Access and Management Services (**LAMS**), to ensure they reflect best practice in Victoria and Tasmania. While the details of our approach is commercially sensitive, our approach is to work closely with landowners with a view to obtaining access and easements by consent.

MLPL needs to undertake a number of activities and incur costs in order to negotiate compensation payments, which are briefly summarised below

- **Determine impact on market value of property**

The impact on the market value of the property will be determined through an assessment of the value of the land by an appropriately qualified, licenced and experienced valuer, having regard to whether there are additional interests such as a long term lease or contract. This value will form the basis of the compensation offer.

- **Professional expenses**

It is normal practice to offer to pay the landowner's professional expenses (including legal and valuation expenses, as applicable) up to a fixed amount when negotiating an easement option. The fixed amount is usually determined on a per landowner basis, irrespective of the number of parcels of land owned by a landowner, and is reimbursed on execution of the easement option.

- **Landowners' other loss or expenses**

There is a range of further matters that could be raised by landowners when negotiating the agreed consideration. For example, the landowner could seek compensation for any disruption to their activities through construction of the easement, if the easement option is exercised.

On signing of the easement option agreement an option fee would be payable. The option fee is up to 10% of the total easement compensation payable to the landowners. This option fee is not refundable in the event that the option is not exercised but if the option is exercised it would reduce the total amount of compensation payable. Following a decision to commence with construction, Stage 4 of the plan would be executed and the easement option would be exercised. At that time, MLPL would pay the balance of the easement compensation to the landowners.

## 5.2 Resource requirements

The activities described in the previous section have the following implications for the resources and costs relating to land and easement acquisition:

- The total cost of land and easement acquisition depends on the proposed route design and its impact on landowners. In this regard, the expected costs are highly project-specific and cannot be determined through a benchmarking exercise.
- It is essential to seek professional advice to determine the market value of the affected land and to adopt an approach to negotiating land access and easement acquisition that is fair to the landowners and, ultimately, delivers a good outcome for consumers.
- A balance needs to be struck between securing access options to minimise the risk of project delay and minimising costs if the project does not proceed. In this regard, MLPL does not intend to obtain 100% of the required land and easement acquisition in its early works phase.
- Strategic land acquisition has an important role to play in managing the risk of project delay and reducing uncertainty regarding the total project costs. We have secured land that provides for the converter stations and also facilitates efficient construction in Victoria given its location is approximately at midpoint of the proposed route.

In relation to early works expenditure for land and easement acquisition, our forecast internal and external labour is informed by our actual expenditure to date. Specifically, we have a good understanding of the scope of work as we progress negotiations with landowners to secure options for land and easement acquisition. The compensation payments are subject to greater uncertainty as the amounts paid will be subject to negotiation and the number of options that can be agreed prior to FID. Despite this unavoidable uncertainty, we have a

good understanding of the likely cost outcome, as negotiations will be conducted within an overall budget constraint.

The table below shows the actual and forecast land and easement acquisition expenditure for early works.

**Table 7: Actual and forecast land and easement acquisition expenditure (\$m nominal)**

|   | 2021-22    | 2022-23    | 2023-24    | 6 months to 31 Dec 2024 | Total \$m  |
|---|------------|------------|------------|-------------------------|------------|
| Internal labour requirements (FTEs)                   | 1.0        | 1.5        | 4.0        | 2.0                     |            |
| Internal labour costs (\$m)                           | 0.1        | 0.2        | 0.7        | 0.3                     | 1.3        |
| Service provider costs (\$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 costs (\$m)                            | 0.0        | 0.1        | 0.1        | 0.0                     | 0.2        |
| <b>Land and easement acquisition total cost (\$m)</b> | <b>2.6</b> | <b>1.8</b> | <b>2.5</b> | <b>1.1</b>              | <b>8.0</b> |

In relation to service provider costs, 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. Further details of these costs have been provided to the AER in Spreadsheet 2, which has been submitted as part of this Revenue Proposal. The service provider cost information is confidential and is therefore subject to commercial confidentiality.

The table below details the internal labour resources required to achieve the acquisition of land and easements objectives for early works. Although the internal team is modest in size, MLPL considers that it is appropriately resourced to manage the external services that form a significant portion of the labour component of the expenditure.

**Table 8: Actual and forecast internal labour resources for land and easement acquisition (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 Agent                            | -       | 0.5     | 2.0     | 1.0                     |

|       | 2021-22 | 2022-23 | 2023-24 | 6 months to 31 Dec 2024 |
|-------|---------|---------|---------|-------------------------|
| Total | 1.0     | 1.5     | 4.0     | 2.0                     |

Our view is that our proposed early works expenditure for land and easement acquisition is prudent and efficient because:

- Our approach to negotiating agreements with landowners has been informed by expert advice from land valuation experts and our legal advisors to ensure that the approach reflects best practice.
- Guiding principles and an execution plan were developed prior to the commencement of the early works period, so that we adopted a consistent and soundly based approach to negotiations.
- By negotiating option agreements, we have secured the value of land and easement access without having to pay the full compensation amount until project construction proceeds.

We remain flexible in our negotiations with landowners with a view to securing an appropriate number of option agreements having regard to the value they provide in terms of avoiding project delay and improving our understanding of the total project costs. This approach ensures that our expenditure provides value for money from the perspective of electricity consumers.

In relation to benchmarking, as previously noted, the costs of land and easement acquisition are driven principally by the route design. As such, it is not meaningful to benchmark land and easement acquisition costs across projects. This point was made by BCG in its October 2019 report, in which it commented that:<sup>20</sup>

“Supporting transmission work and underground land cable crossing over 300 properties adds easement acquisition and community engagement costs.”

Subsequently, it is worth noting that the estimate of affected properties for Project Marinus is approximately 400, not 300 – while there are approximately 110 affected properties for Marinus Link. Evidently, land and easement acquisition costs depend on the number and value of the affected properties, which will vary significantly across projects. We also note that for HumeLink, Transgrid forecast land access and acquisitions

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<sup>20</sup> Boston Consulting Group, Project Marinus Strategic Advisory, 1 November 2019, page 27. It should be noted that this report provided advice in relation to Project Marinus, rather than Marinus Link.



costs of \$22.12 million (real 2017-18), which is 6.9% of the forecast early works expenditure.<sup>21</sup> While Marinus Link's costs are less in absolute terms and closely aligned in percentage terms<sup>22</sup>, comparisons of this kind are not particularly meaningful given the project-specific nature of these costs.

For the reasons set earlier in this section, our view is that our land and easement acquisition expenditure is prudent and efficient.

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<sup>21</sup> Transgrid, A.3 Capex Forecasting Methodology HumeLink - Stage 1(early works) Contingent Project Application, 5 April 2022, page 19.

<sup>22</sup> If land acquisition costs are included in MLPL's costs to achieve a like-for-like comparison, MLPL's costs are \$13.1 million or 6.4% of forecast early works expenditure.

## 6 Environmental impact assessment

### 6.1 Key objectives and activities

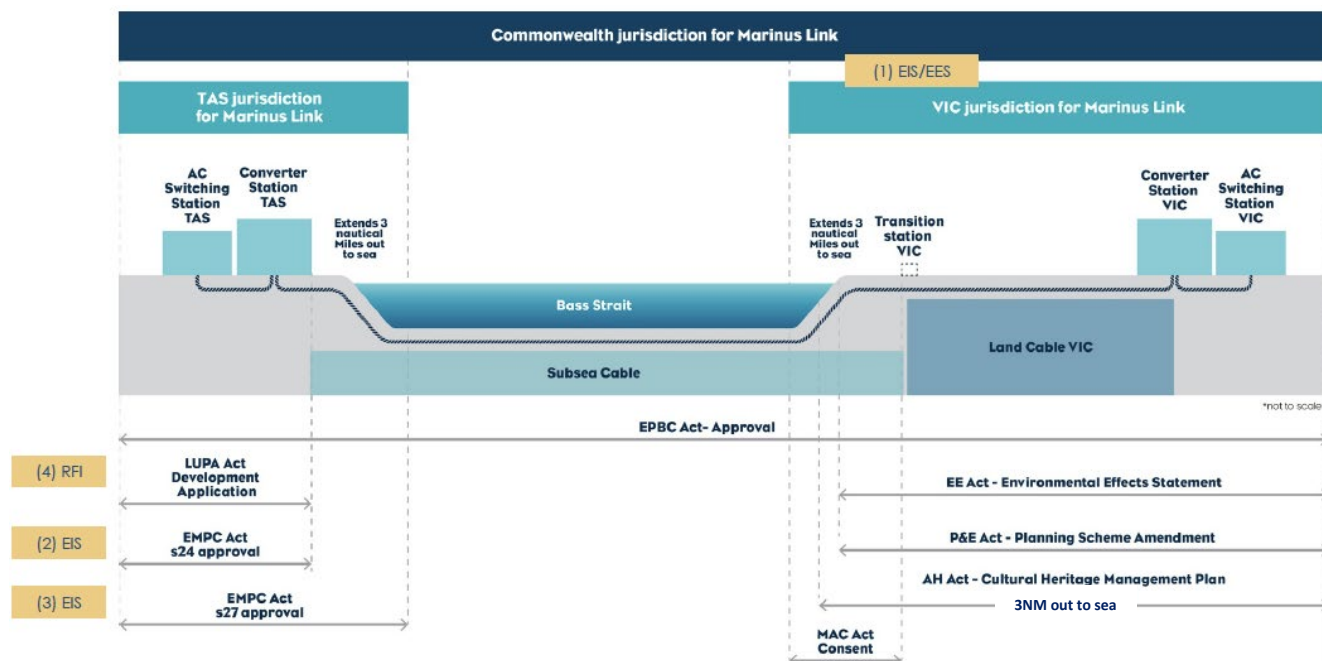
The table below summarises the objectives of the environmental impact assessment early works category and describes the activities that are required to achieve these objectives.

**Table 9: Environmental impact assessment objectives and activities**

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

The figure below shows how the key Commonwealth, Tasmanian and Victorian environment and planning approval requirements apply to Marinus Link.

**Figure 5: Key environment and planning approval requirements applied to Marinus Link.**



As shown in the above figure, Marinus Link spans Commonwealth (Bass Strait), Victorian and Tasmanian jurisdictions. It will be assessed under the following key pieces of Commonwealth, State and Local environment and planning legislation during the early works phase:

- Commonwealth *Environment 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**); and
- Victorian *Environment Effects Act 1978* (**EE Act**), *Planning and Environment Act 1987* (**P&E Act**) and *Aboriginal Heritage Act 2006* (**AH Act**)

To address these requirements, Marinus Link will prepare:

- One Environmental Impact Statement (**EIS**) / Environmental Effects Statement (**EES**) to address Commonwealth and Victorian matters;
- One EIS and one Development Application (**DA**) (Request for Information) for the Converter station in Tasmania;
- One EIS for the Shore crossing and cables in Tasmania;
- One Planning Scheme Amendment (**PSA**) in Victoria; and
- Two Cultural Heritage Management Plans (**CHMP**) in Victoria.

Referral applications have been submitted under the EPBC Act, EMPC Act, EE Act and LUPA Act. Guidelines have been issued by the relevant regulators which detail the information that must be addressed in the environmental impact documentation to be used for assessment purposes. The guidelines are used to frame the field surveys, technical reports and impact assessment documentation as described in more detail below.

A Project Assessment Plan (**PAP**) Group has been established under the Commonwealth EPBC Act. The PAP Group includes representatives from the Commonwealth Department of Climate Change, Energy, the Environment and Water (**DCCEEW**), the Victorian Department of Transport and Planning (**DTP**) formerly the Department of Environment, Land, Water and Planning (**DELWP**), Tasmanian Environment Protection Authority (**EPA**) and Marinus Link. The Group meets monthly and its main purpose is to oversee the coordination of the review and assessment of the approval documentation under the related approval pathways.

As noted in section 4, a Technical Reference Group (**TRG**) has been established under Vic EE Act. The TRG has been convened by the then DELWP now the DTP to facilitate advice from approximately 25 government agencies with a statutory, policy or technical interest in the project during the preparation of the EIS/EES. While

the TRG is Victorian-led, representatives from Commonwealth and Tasmanian agencies have been invited to attend.

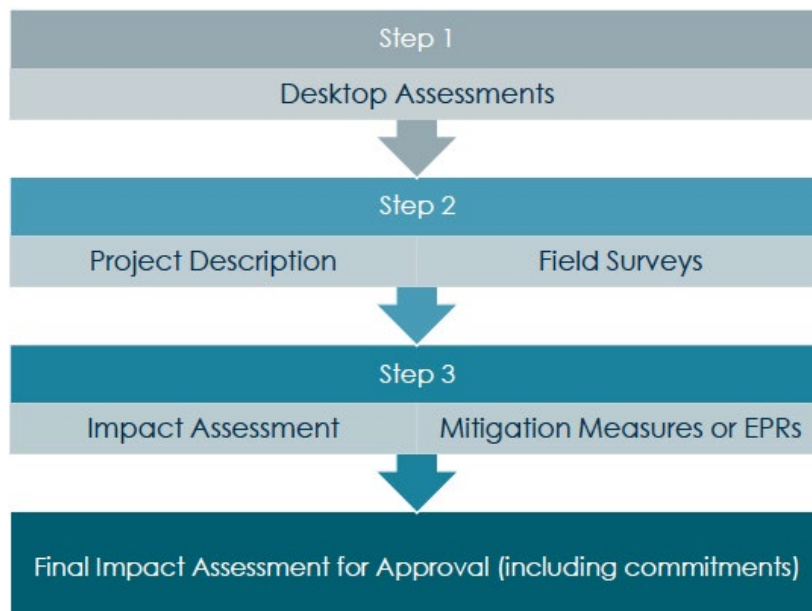
Section 4 of this document provides further details of the communications and engagement activities that have been undertaken to support the development of the environmental approval documents.

An Environmental Management System (**EMS**) is being established for the project which will assist in ensuring compliance with commitments made in referral applications and conditions of approval, clearly define roles and responsibilities and provide for improving overall environmental performance.

### **Environmental Impact Statements/Environmental Effects Statement/Development Application**

A high-level overview of the EIS process is depicted in the figure below.

**Figure 6: An overview of the EIS process**



The high-level presentation of the EIS process substantially understates the complexity of each step in the process. For example, the Project Description in Step 2 requires detailed information relating to: design; construction; operation and maintenance; and decommissioning phases of the project. This detailed information requirement is further complicated because the design of the project is necessarily occurring in parallel with the environmental, land use planning and heritage assessments. For that reason, it is essential that modifications to the design and the EIS process is carefully managed; so that:

- All technical assessments and impact assessment documentation is based on the same information and assumptions;
- Approval is sought for the project design that MLPL is seeking to construct and operate; and

- The provision of information to technical specialists and the project team is communicated efficiently to avoid unnecessary iterations or changes to documents.

Step 3 of the EIS process depends on the completion of technical reports to identify the potential environmental impact of the project and proposed mitigation measures. For Marinius Link, Technical Reports are being prepared for 23 disciplines which address the different jurisdictional requirements, and incorporate desktop studies and in many cases field surveys. The Technical Reports are completed by specialists in each field and represent their independent professional opinion regarding the potential impacts of the project, which will inform the environmental impact assessments.

To provide an indication of the work required for each of these Technical Reports, we provide a brief summary of the scope of each report in the table below. For each report, we also note whether it is required to address the requirements of Tasmanian, Victorian and/or Commonwealth jurisdictions. In a number of cases, separate reports have had to be prepared for each jurisdiction specific to the discipline to address the requirements. Naturally, addressing multiple jurisdictional requirements adds complexity to ensure that each jurisdiction's requirements have been satisfied.

**Table 10: Description of the 23 disciplines of Technical Reports for required for Marinius Link**

| No. | Study                                     | Jurisdiction           | Description of purpose and scope   |
|-----|---|------------------------|--|
| 1   | Greenhouse gas                            | Tas, Vic, Commonwealth | <ul style="list-style-type: none"> <li>• The desktop study calculates greenhouse gas emissions from the project's construction and operation. It considers the net benefit of the project in terms of the access to increased renewable energy provided by the project, and the greenhouse gas abatement benefits this provides.</li> </ul>                                    |
| 2   | Climate change                            | Tas, Vic, Commonwealth | <ul style="list-style-type: none"> <li>• The desktop study assesses the potential impacts of climate change, such as sea level rise and extreme weather events, on the project. It describes how these impacts have been addressed in the project design.</li> </ul>   |
| 3   | Groundwater                               | Tas, Vic               | <ul style="list-style-type: none"> <li>• The desktop study identifies existing groundwater resources and describes water level and quality.</li> <li>• The study assesses potential impacts of the project, particularly at waterway crossings and horizontal direct drilling sites where shallow groundwater may be encountered and presents proposed mitigations.</li> </ul> |
| 4   | Contaminated land and acid sulphate soils | Tas, Vic               | <ul style="list-style-type: none"> <li>• This report requires a desktop study and field survey to identify land areas that are likely to be contaminated or subject to acid sulphate soils.</li> <li>• The report assesses the potential for the project to mobilise or intersect with these areas, and identifies mitigation measures.</li> </ul>                             |
| 5   | Waste                                     | Tas, Vic, Commonwealth | <ul style="list-style-type: none"> <li>• This desktop study considers the impact of the project in relation to waste and proposed mitigation measures.</li> </ul>  |

| No. | Study                           | Jurisdiction           | Description of purpose and scope  |
|-----|---------------------------------|------------------------|---|
| 6   | Land use and planning           | Tas, Vic               | <ul style="list-style-type: none"> <li>This desktop study describes the land use context, planning control and strategic framework applicable to the project in Victoria and Tasmania (above the high-water mark).</li> <li>The study includes a detailed assessment of land use planning impacts during construction and operation of the project.</li> </ul>  |
| 7   | Sustainability                  | Tas, Vic, Commonwealth | <ul style="list-style-type: none"> <li>This desktop study assesses how the project addresses and contributes to Sustainable Development Goals.</li> </ul>   |
| 8   | Air quality                     | Tas, Vic               | <ul style="list-style-type: none"> <li>This desktop study characterises the ambient air quality.</li> <li>An assessment is made of the potential impacts of construction activities on air quality, including emissions and dust.</li> <li>Details of mitigation measures are identified to reduce the impact on air quality during construction.</li> </ul>  |
| 9   | Hydrology                       | Tas, Vic               | <ul style="list-style-type: none"> <li>This report requires a desktop study and field survey to characterise the existing hydrology and surface water quality.</li> <li>The report assesses the potential impact of the project on waterways, including changes in waterway channels, flooding and sourcing. Mitigation measures to reduce impacts are identified.</li> </ul>   |
| 10  | Terrestrial noise and vibration | Tas, Vic               | <ul style="list-style-type: none"> <li>This report requires a desktop study and field survey. The terrestrial noise study characterises the ambient environment and background noise at nominal sites.</li> <li>Noise sensitive receivers near construction areas and operational noise sources are identified.</li> <li>Sound power levels for noisy construction activities and operational noise sources are compiled.</li> <li>Noise contour models are developed, and predictions of sound levels are made at the affected sensitive receivers.</li> <li>The terrestrial vibration study relates to the construction stage of the project. It accounts for the types of construction methods proposed and typical separation distances.</li> </ul> |
| 11  | Traffic and transport           | Tas, Vic               | <ul style="list-style-type: none"> <li>This report requires a desktop study and field survey. This work characterises the road network including pavement condition, road safety features and traffic volumes.</li> <li>Predictions are made of traffic volume increases during construction. Potential impacts of project construction and operation on travel times, road safety and road condition are assessed.</li> <li>Shipping activity in Bass Strait is characterised and potential impacts on shipping during project construction and operation are assessed.</li> <li>Mitigation measures are proposed.</li> </ul>  |

| No. | Study                           | Jurisdiction           | Description of purpose and scope  |
|-----|---------------------------------|------------------------|---|
| 12  | Ecology                         | Tas, Vic               | <ul style="list-style-type: none"> <li>This report requires a desktop study and field survey to characterise the existing terrestrial ecological values within the survey area and identifies threatened fauna species and their habitats.</li> <li>The study's assessment of potential ecological impacts informs approvals documentation and mitigation measures identified.</li> </ul>   |
| 13  | Landscape and visual assessment | Tas, Vic               | <ul style="list-style-type: none"> <li>This report requires a desktop study and field survey. The study characterises landscape values and identifies sensitive viewpoints and receptors.</li> <li>Visual amenity impacts of the project (in particular, converter stations) are assessed and photo montages are prepared.</li> </ul>   |
| 14  | Agriculture                     | Vic                    | <ul style="list-style-type: none"> <li>This report requires a desktop study and field survey to assess the project's impacts on agricultural land uses. It considers interruptions to farming activities and potential reductions in agricultural productive capability during construction and operation of the project and mitigations proposed.</li> </ul>   |
| 15  | Benthic ecology                 | Tas, Vic, Commonwealth | <ul style="list-style-type: none"> <li>This report requires a desktop study and field survey. This study will characterise, using underwater video, sensitive seabed habitats such as reefs, outcrops, sponge gardens and seagrasses. This baseline study will inform the marine ecology impact assessment and mitigations proposed.</li> </ul>   |
| 16  | Marine ecology / resource use   | Tas, Vic, Commonwealth | <ul style="list-style-type: none"> <li>The marine ecology component is a desktop study to characterise, and assess impacts to, the marine ecological environment (benthic and pelagic zones) as well as offshore diving birds and penguins.</li> <li>The characterisation will include describing sensitive habitats and threatened species, matters of national environmental significance and sensitive benthic communities. Management measures reducing impacts are outlined.</li> <li>The marine resource use component is also a desktop study. It will characterise existing marine resource uses (e.g., commercial and recreational fisheries, marine traffic and infrastructure) potentially impacted by the project and assess residual impacts to those uses.</li> </ul> |
| 17  | Marine noise                    | Tas, Vic, Commonwealth | <ul style="list-style-type: none"> <li>This desktop study characterises the ambient marine environment and determine predicted noise levels during project construction activities, develop noise management zones for marine species of interest and propose management measures to avoid or minimise impacts.</li> </ul>  |

| No. | Study                             | Jurisdiction           | Description of purpose and scope  |
|-----|-----------------------------------|------------------------|---|
| 18  | Cultural heritage                 | Tas, Vic               | <ul style="list-style-type: none"> <li>This report requires a desktop study and field survey to build on the priority baseline studies by undertaking an assessment of Indigenous and historic cultural heritage values and assessing the potential impact of the project.</li> <li>Consultation with traditional owners/Indigenous communities forms a key part of the assessment, with representatives present for all field surveys.</li> <li>The study includes a Cultural Values Assessment.</li> </ul>                      |
| 19  | Social impact assessment          | Tas, Vic               | <ul style="list-style-type: none"> <li>This report requires a desktop study and field survey to characterise the social environment, and assesses the social impacts and benefits of the project. The study proposes measures for limiting detrimental social impacts and maximising social benefits of the project.</li> </ul>   |
| 20  | Geomorphology and geology         | Tas, Vic               | <ul style="list-style-type: none"> <li>This report requires a desktop study and field survey to characterise the geology, geomorphology, landforms and soils throughout the project area.</li> <li>The potential impacts of the project are assessed.</li> <li>Constraints and risks that the geology and geomorphology may place on the project are identified.</li> <li>Measures to mitigate and manage adverse impacts on landforms and soils in the project area are proposed.</li> </ul>                                     |
| 21  | Maritime heritage and archaeology | Tas, Vic, Commonwealth | <ul style="list-style-type: none"> <li>This report requires a desktop study and field survey. This study characterises existing features of maritime heritage or archaeological significance along the interconnector route within the marine environment, and assesses residual construction impacts to those features.</li> <li>Measures are proposed for avoiding and/or managing heritage or archaeological sites if found along the route.</li> <li>Cultural Values Assessments are used to inform these surveys.</li> </ul> |
| 22  | Economic assessment               | Tas, Vic, Commonwealth | <ul style="list-style-type: none"> <li>This desktop study assesses local and regional economic benefits and impacts during construction, operation and decommissioning of the project.</li> </ul>   |
| 23  | Bushfire                          | Tas, Vic               | <ul style="list-style-type: none"> <li>This desk-top study provides a characterisation of the bushfire risk, identification of assets at risk, recommended risk mitigation strategies (both risk to and risk from) during construction, operation and decommissioning phases of the project.</li> </ul>   |

As already noted, the Technical Reports provide an essential input to the preparation of the EIS documentation that must be prepared to address the jurisdictional requirements. However, these reports are only part of a much larger process, which includes extensive engagement with stakeholders in each jurisdiction. Chapter 4 provides further detail on this activity.



Owing to the complexity of the various jurisdiction's processes, timing and assessment requirements, it is proposed that four environmental impact assessment documents be prepared. That is: one EIS/EES to address Commonwealth and Victorian assessment requirements, two EISs to address Tasmanian requirements and a Development Application to address the Tasmanian Burnie City Council's requirements.

The documents are large and complex with the combined EIS/EES containing over 50 chapters and the two Tasmanian EISs containing over 20 chapters each. In addition to the Technical Study assessments including impact assessment and proposed management arrangements as discussed above, topics to be addressed in the documents include project rationale, route selection, project alternatives, project description, consultation, monitoring and decommissioning.

### **Planning Scheme Amendment (PSA)**

In Victoria, assessment of the EES does not result in an approval decision, so approval of the PSA is the key approval decision by the Minister for Planning. Victorian processes allow for a PSA to be prepared by the Minister for Planning as planning authority and exhibited and scrutinised by a panel in conjunction with an EES under the Environment Effects Act 1987 (Vic). In March 2023 the Victorian Minister for Planning agreed to Marinus Link preparing a draft PSA. The planning scheme amendment (PSA) process includes the preparation of a draft PSA (on behalf of the minister), setting out the justification for the proposed amendment (in an Explanatory Report) and providing an Incorporated Document that would be inserted into the planning scheme, facilitating development of the project.

### **Cultural Heritage Management Plans (CHMP)**

Marinus Link will require consent to disturb Aboriginal heritage sites in Victoria. This will be obtained through the preparation and approval of CHMPs. The baseline characterisation and impact assessment completed for the EIS will inform the CHMPs, however the CHMPs are separate approval documents that will be prepared and assessed separately to the EIS. The Aboriginal Heritage Act 2006 (Vic) recognises Aboriginal people as the primary guardians, keepers and knowledge holders of Aboriginal cultural heritage. Registered Aboriginal Parties (**RAPs**) are Aboriginal organisations recognised under the Act with responsibilities for the management and protection of Aboriginal cultural heritage. They are also responsible for evaluating and approving CHMPs prepared for activity areas located within their RAP boundaries.

The CHMPs will include a desk-top assessment, a standard assessment (e.g. ground survey), a complex assessment (e.g. sub-surface excavation) and an assessment of the nature, extent and significance of all Aboriginal cultural heritage identified within the study area.

Two CHMPs will be required in Victoria. A CHMP will be prepared for and evaluated by Gunaikurnai Land and Waters Aboriginal Corporation in their capacity as a RAP for the section of the proposed route between Mirboo North and Hazelwood. Aboriginal Victoria will evaluate a CHMP prepared for the non-RAP section of the proposed route between Waratah Bay and Mirboo North. This CHMP will be prepared in consultation with the three parties claiming rights to the area: Gunaikurnai Land and Waters Aboriginal Corporation, Bunurong Land

Council Aboriginal Corporation and Boon Wurrung Foundation. In August 2021, the Victorian Department of Premier and Cabinet provided Project Numbers for Marinus Link's two Notices of Intent to Prepare CHMPs.

Cultural Values Assessments (**CVAs**) are being prepared to inform both the terrestrial and marine cultural heritage assessments being undertaken as part of the EIS (e.g. Underwater Cultural Heritage Surveys and Assessments) and the CHMPs. CVAs assist in understanding intangible values and are undertaken by traditional owner groups or managed on behalf by cultural heritage advisors. MLPL continues to consult extensively with traditional owners and regulators on the development of the CHMPs which is further discussed in Section 4 of this document.

## 6.2 Resource requirements

The activities described in the previous section have the following implications for the resources and costs for the environmental impact assessment early works category:

- The scope of the early works activities is driven principally by regulatory requirements across the Tasmanian, Victorian and Commonwealth jurisdictions. In this regard, Marinus Link faces a higher level of complexity and cost than is typical of other ISP projects.
- Given the specialist nature of the tasks involved, Tetra Tech Coffey Pty Ltd (**Coffey**) has been engaged to provide environment, land use planning and heritage advisory services. While Coffey has been appointed as the lead consultant, the Technical Reports require the engagement of external specialists that have expertise in each field.
- To manage the complexity of the environmental impact assessment work, MLPL requires internal staff to actively manage the external engagements; monitor progress and identify issues arising from each study; and provide feedback to and from the broader project team in relation to potential impacts and mitigation measures. In addition, MLPL requires internal staff to engage with stakeholders and interested parties in each jurisdiction.
- The nature of the environmental impact assessment is that it is project-specific both in terms of the scope of required studies and the potential findings. Therefore, it is difficult to forecast the costs of undertaking the environmental impact assessment early works prior to commencing the process. In this regard, the timing of our Revenue Proposal is helpful because MLPL is approximately half-way through the early works timeline (from July 2021 to December 2024), and therefore has a much better understanding of the likely total costs.

In addition to the inherent uncertainty of environmental impact assessment costs for MLPL, the scope and costs of this work have been adversely affected by:

- Impacts and delays to technical study fieldwork due to COVID19 and land access constraints;

- Changes in project description, including Victorian land route, marine cable route and Victorian converter station locations;
- Regulatory and Traditional Owner assessment requirements increasing over the duration of the project including an additional Tasmanian approval process; and
- Additional environmental support requirements for geotechnical and route negotiations activities.

The table below shows the actual and forecast expenditure for our environmental impact assessment activities that comprise early works.

**Table 11: Actual and proposed environmental impact assessment expenditure (\$m nominal)**

|   | 2021-22    | 2022-23    | 2023-24    | 6 months to 31 Dec 2024 | Total \$m   |
|---|------------|------------|------------|-------------------------|-------------|
| Internal labour requirements (FTEs)                     | 2.8        | 1.8        | 5.0        | 2.5                     |             |
| Internal labour costs (\$m)                             | 0.4        | 0.4        | 0.9        | 0.5                     | 2.2         |
| Service provider costs (\$m)                            | 2.2        | 6.6        | 8.4        | 2.5                     | 19.7        |
| Materials costs and other payments (\$m)                | 0.0        | 0.2        | 0.5        | 1.5                     | 2.1         |
| Administrative costs (\$m)                              | 0.0        | 0.3        | 0.2        | 0.1                     | 0.5         |
| <b>Environmental impact assessment total cost (\$m)</b> | <b>2.7</b> | <b>7.4</b> | <b>9.9</b> | <b>4.6</b>              | <b>24.5</b> |

In relation to service provider costs, as already noted, MLPL has relied on external expertise to conduct the required technical works. MLPL has conducted periodic reviews of its external costs to ensure that the expenditure is prudent and efficient. Further details of the service provider costs will be provided to the AER on a confidential basis for their review.

Actual and forecast internal labour resource requirements to support the environmental impact assessment early works activities are set out in the table below. The volume of internal labour resources required is modest compared to the wide range of issues and reports that need to be managed in this early works activity.

**Table 12: Actual and forecast internal labour resources for environmental impact assessment (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                     |
| <b>Total</b>                              | <b>2.8</b> | <b>1.8</b> | <b>5.0</b> | <b>2.5</b>              |

As already noted, the nature of the environmental impact assessment is that it is project-specific, which makes it difficult to benchmark MLPL's early works activities and costs against other transmission projects. BCG commented that the environmental requirements across three jurisdictions were likely to lead to higher costs compared to other projects:<sup>23</sup>

"Increased time and legal costs to navigate multiple approval bodies and processes across the regulatory landscape."

In its report, prior to the commencement of the early works period, GHD noted that the forecasts were being presented at an early stage of the project. In addition to the uncertainty in the forecasts at that time, GHD noted the potential for rework to be required as environmental impacts are identified:<sup>24</sup>

"The marine survey and geotechnical reports provide identification of route risks / constraints. [...]"

As there are numerous environmental issues to be assessed across the project it will be important to ensure there is enough time to consider any risks identified. This could in turn result in changes to the route and this may require additional assessments."

<sup>23</sup> Boston Consulting Group, Project Marinus Strategic Advisory, 1 November 2019, page 27.

<sup>24</sup> GHD Advisory, Marinus Link Design and Approval Phase: Cost and Constructability Technical Advice, 16 December 2020, page 34.

As explained in the previous section, the scope of the required work (including the 23 disciplines of Technical Reports) is more extensive than originally envisaged, which has led to increased costs. In comparison to HumeLink, we note that Transgrid forecast expenditure of \$18.79 million (real 2017-18) for EIS development is less than the \$24.5 million (nominal) for our early works activities. Having said that, it is evident from the material presented in the previous section that it would not be meaningful to benchmark MLPL's environmental impact assessment costs against those for HumeLink because the scope of work is substantially different, not least because HumeLink does not require any Technical Reports regarding marine impacts and does not cross three jurisdictional boundaries. It should also be noted that the cost of consultancy services has also significantly increased in recent years owing to demand and labour shortages.

Our view is that our proposed early works expenditure for environmental impact assessment is prudent and efficient because:

- MLPL has worked closely with stakeholders to understand the jurisdictional requirements. This consultative approach has enabled MLPL to develop a program schedule that will meet the jurisdictional requirements within the required timeframes.
- GHD reviewed our initial project schedule prior to the commencement of the early works period and did not identify any areas for improvement, other than noting the potential risks to the proposed timelines.
- MLPL engaged external experts at an early stage of the process to guide the development of the environmental impact assessment work program.
- MLPL has actively managed the engagement of external experts by engaging an appropriate level of internal resources throughout the project.

## 7 Technical designs and specifications

### 7.1 Key objectives and activities

The table below summarises the objectives of the technical designs and specifications early works category and describes the activities that are required to achieve these objectives. As explained further in this section, separate design and specification work is undertaken for the cables and converters.

**Table 13: Technical designs and specifications objectives and activities**

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

Technical designs and specifications for the project play an important role in relation to the early work activities already discussed in sections 5 and 6 relating to:

- Land and easement acquisition; and
- Environmental impact assessments.

In relation to our environmental impact assessment early works, technical designs and specifications is a key input to the 23 Technical Reports that examine the impact of the project on the terrestrial and marine environments. In addition to acting as a key input to the environmental impact assessments, modifications to project specifications and designs may be adopted to ameliorate these impacts. In this sense, there is a two-way relationship between these workstreams. A similar observation applies to land and easement acquisition, as the project specification and route selection drives land and easement acquisition requirements and may, in turn, lead to changes in technical specifications and route selection.

In addition to playing a major role in relation to the two early works activities discussed above, technical designs and specifications early works is essential in relation to the procurement strategy and execution early works (discussed in section 8). Specifically, technical designs and specifications must be detailed for work packages to facilitate:

- Tender specifications, preparation, support and evaluation; and
- Negotiation of contracts for the work packages.

While tenderers are able to submit responses that deviate from MLPL's technical specifications (as well as the terms and conditions), the success of the tender process depends on the preparation of comprehensive documentation that enables tenderers to submit compliant bids. Poorly defined specifications for work packages creates inefficiencies and delays in the tender process as tenderers seek clarification prior to lodging submissions. Furthermore, poorly specified work packages would also expose MLPL and electricity consumers to additional costs and risks associated with contract variations.

In addition to facilitating the tender process and contract negotiations, the technical designs and specifications early works is also required to achieve pre-construction readiness, including:

- Negotiation of interface and connection agreements with AEMO, AusNet and TasNetworks; and
- Initial system studies prior to conducting detailed system studies using vendor models supplied as part of the tender process.

Evidently, the nature of the work described above is highly technical and requires the engagement of specialist external resources, managed by a team of experienced in-house engineers. In the following tables, we provide details of the studies and other work completed to date and planned for the remainder of the early works period.

Table 14 shows the studies completed to date during the early works period. These studies have been undertaken principally by Jacobs and have been managed by MLPL's internal engineers.

**Table 14: Project Design and Specifications – completed studies**

| No. | Study                          | Scope and objective  |
|-----|--------------------------------|--|
| 1   | Land Access Coordination Study | <ul style="list-style-type: none"> <li>• Perform technical review of land access route to develop details for design of cable land access</li> <li>• This work is required to update engineering and design documentation</li> </ul>   |
| 2   | Ground Condition Assessment    | <ul style="list-style-type: none"> <li>• Perform ground condition assessment to develop design documents for converters and cable design</li> <li>• Review ground condition assessment report</li> <li>• This work is required to update engineering and design documentation</li> </ul> |

| No. | Study  | Scope and objective  |
|-----|--|--|
| 3   | Surveying and GIS Management                 | <ul style="list-style-type: none"> <li>Perform surveying and GIS work to develop design parameters for design documents</li> <li>This work is required to update engineering and design documentation</li> </ul>   |
| 4   | Climate Study                                | <ul style="list-style-type: none"> <li>Perform Climate Study to develop technical scope for design documents.</li> <li>This work is required to update project Basis of Design document.</li> </ul>  |
| 5   | Land Geotech Investigation                   | <ul style="list-style-type: none"> <li>Perform site geotech investigation and analysis in order to determine ground conditions for design development of cable and converter sites.</li> <li>This work is required to update engineering and design documentation.</li> </ul>  |
| 6   | Planning support                             | <ul style="list-style-type: none"> <li>Planning / Scheduling support for management of ML engineering and project development activities.</li> <li>This work is required to evaluate and schedule current and future engineering and design work activities as they relate to project milestones and detailed schedule activities.</li> </ul>  |
| 7   | Landfall Geotech                             | <ul style="list-style-type: none"> <li>Perform site geotech investigation and analysis in order to determine ground conditions for design development of the cable landfall sites.</li> <li>This work is required to update engineering and design documentation.</li> </ul>   |
| 8   | Engineering 2021                             | <ul style="list-style-type: none"> <li>Perform Specific Engineering activities in order to advance engineering design for the cable and converters including: <ul style="list-style-type: none"> <li>DC subsea cable specification;</li> <li>DC land cable specification;</li> <li>Converter specification including site layouts;</li> <li>Cable burial risk assessment;</li> <li>Civil and site preparation;</li> <li>Design specification and drawings for converter sites;</li> <li>Civil design for land routes; and</li> <li>System study deliverables.</li> </ul> </li> </ul> |
| 9   | Metoccean Studies                            | <ul style="list-style-type: none"> <li>Perform combined wind, wave and ocean studies which are needed for the development of the marine cable laying design parameters.</li> <li>This work is required to update engineering and design documentation.</li> </ul>  |
| 10  | GIS Strategy and Implementation Support      | <ul style="list-style-type: none"> <li>GIS Strategy and high level roadmap to facilitate GIS activities required by the project.</li> <li>This work is required to update engineering and design documentation.</li> </ul>   |
| 11  | Marine Geotech - site investigation services | <ul style="list-style-type: none"> <li>Perform marine geotechnical investigations to develop design parameters for the subsea cable.</li> <li>This work is required to update engineering and design documentation.</li> </ul>   |



| No. | Study                                    | Scope and objective  |
|-----|--|--|
| 12  | Metocean Studies                         | <ul style="list-style-type: none"> <li>Combined wind wave and ocean studies Phases 2 and 3.</li> <li>The studies perform combined wind, wave and ocean studies which are needed for the development of the marine cable laying design parameters.</li> <li>This work is required to update engineering and design documentation.</li> </ul>  |
| 13  | Hazelwood Geotech Site Investigation     | <ul style="list-style-type: none"> <li>Perform site geotech investigation and analysis of the Hazelwood Site in order to determine ground conditions for the engineering design.</li> <li>This work is required to update engineering and design documentation.</li> </ul>   |
| 14  | Climate Study Phase 2                    | <ul style="list-style-type: none"> <li>Perform Phase 2 Climate Study to develop technical scope for design documents by analysing additional climate data, risk assessment and reporting.</li> <li>This work is required to update the project Basis of Design document.</li> </ul>  |
| 15  | Technical and Engineering Services       | <ul style="list-style-type: none"> <li>DC Subsea Cable specification, DC Land Cable Specification, Converter Station Technical Specification, Cable Burial Risk Assessment, Design drawings for Converter Station sites, Scoping of land cable route, support to systems study team.</li> <li>This work is required to facilitate preparation and support of tender activities.</li> </ul> |
| 16  | Vic Land Geotechnical Site Investigation | <ul style="list-style-type: none"> <li>Perform site geotech investigation and analysis in order to determine ground conditions for design development of the cable route in Victoria.</li> <li>This work is required to update engineering and design documentation.</li> </ul>  |
| 17  | Heybridge Jackup Supervision             | <ul style="list-style-type: none"> <li>Perform geotech boreholes at Heybridge site.</li> <li>This work is required to update engineering and design documentation.</li> </ul>  |
| 18  | Value and Optioneering                   | <ul style="list-style-type: none"> <li>Perform value and optioneering review of engineering and technical design documentation.</li> <li>This work is required to update engineering and design documentation</li> </ul>   |
| 19  | Vic Land Route Tranche 2 Scoping         | <ul style="list-style-type: none"> <li>Perform engineering review of Victoria Land Route Tranche 2 to develop scoping for engineering work packages and site walkovers.</li> <li>This work is required to update engineering and design documentation.</li> </ul>  |
| 20  | Update of Ground Condition Report        | <ul style="list-style-type: none"> <li>Update ground conditions report with latest information from Tranche 1 and 2 campaign information.</li> <li>This work is required to refine and update engineering and technical design documentation.</li> </ul>   |

Table 15 shows the cable studies that have either commenced or are planned during the early works period. For each study, we briefly describe the scope and objectives. For convenience, where a study is required for both cables and converters, it is included in this table.

**Table 15: Project Design and Specifications – Cable studies, underway or to be completed**

| No. | Study   | Scope and objective  | Status   |
|-----|---|--|--|
| 1   | Technical and Engineering Services  | <ul style="list-style-type: none"> <li>DC Land Cable Civils Specification, Converter Station Balance of Plant (BoP) Specification, Update to Cable Burial Risk Assessment and support to systems study team.</li> <li>This work is required to facilitate preparation and support of tender activities.</li> </ul> | <ul style="list-style-type: none"> <li>DC land cable specification requires a number of smaller updates following tender negotiations.</li> <li>BAS has been completed by Tenderers however there are some areas that need additional survey input such as Waratah Bay geophysical and geotechnical investigations.</li> </ul> |
| 2   | Technical review of Cable 1 Tender Submissions  | <ul style="list-style-type: none"> <li>Undertake technical review of Cable 1 tender submissions.</li> <li>This work will facilitate the awarding of the contract for Cable 1.</li> </ul>   | Ongoing  |
| 3   | Technical review of Cable 2 Tender Submissions  | <ul style="list-style-type: none"> <li>Undertake technical review of Cable 2 tender submissions.</li> <li>This work will facilitate the awarding of the contract for Cable 2.</li> </ul>   | Ongoing  |
| 4   | Engineering evaluation and determination of civil scope for and between stage 1 and stage 2 cable contractors   | <ul style="list-style-type: none"> <li>Preconstruction activity involving engineering work to split out Victorian land cable civil works.</li> <li>This work will facilitate the tendering of land civil works contract(s).</li> </ul>   | Not yet started – however the current DC Cable specification for both stage 1 and stage 2 tender will assist in completing this task.  |
| 5   | Finalisation of scoping any remaining civil works which fall outside agreed stage 1 and stage 2 packages  | <ul style="list-style-type: none"> <li>Draft engineering pre-qualification of land civil contractors.</li> <li>This work will facilitate awarding of land civil works contract(s).</li> </ul>  | Not yet started  |
| 6   | Preparation of market sounding, pre-qualification and tendering of the remaining civil scope  | <ul style="list-style-type: none"> <li>Prepare tender for Land Cable Civil construction contractors.</li> <li>This work will facilitate the awarding of contracts.</li> </ul>  | Not yet started  |
| 7   | Evaluation and selection of civil tenderer for any scope which has fallen outside of the stage 1 and stage 2 cable contracts but will be needed to be completed | <ul style="list-style-type: none"> <li>Undertake technical review of land cable civils tender submissions.</li> <li>This work will facilitate awarding of cable civil works contract(s).</li> </ul>  | Not yet started  |

| No. | Study   | Scope and objective   | Status  |
|-----|---|---|---|
| 8   | Technical and design of Cable 1 Early Engineering Work  | <ul style="list-style-type: none"> <li>Manage technical and design Cable 1 early engineering work.</li> <li>This work will enable the preparation of design for construction.</li> </ul>  | <ul style="list-style-type: none"> <li>High level preliminary discussions occurring during tender phase</li> <li>Detailed design not yet started</li> </ul> |
| 9   | Technical and design of Cable 2 Early Engineering Works | <ul style="list-style-type: none"> <li>Manage technical and design Cable 2 early engineering works.</li> <li>This work will enable the preparation of design for construction.</li> </ul> | <ul style="list-style-type: none"> <li>High level preliminary discussions occurring during tender phase</li> <li>Detailed design not yet started</li> </ul> |
| 10  | Manage and review Cable 1 Design Contractor submittals  | <ul style="list-style-type: none"> <li>Manage and review Cable 1 design contractor submittals.</li> <li>This work will enable the preparation of design for construction.</li> </ul>      | <ul style="list-style-type: none"> <li>High level preliminary discussions occurring during tender phase</li> <li>Detailed design not yet started</li> </ul> |
| 11  | Manage and review Cable 2 Design Contractor submittals  | <ul style="list-style-type: none"> <li>Manage and review Cable 2 Design Contractor submittals.</li> <li>This work will enable the preparation of design for construction.</li> </ul>      | <ul style="list-style-type: none"> <li>High level preliminary discussions occurring during tender phase</li> <li>Detailed design not yet started</li> </ul> |
| 12  | Review Cable Contractor monthly reports and schedules   | <ul style="list-style-type: none"> <li>Review cable contractor monthly reports and schedules.</li> <li>This work will enable the preparation of design for construction.</li> </ul>       | <ul style="list-style-type: none"> <li>High level preliminary discussions occurring during tender phase</li> <li>Detailed design not yet started</li> </ul> |

Table 16 shows the converter studies that have either commenced or are planned during the early works period. As noted in relation to the earlier tables, we briefly describe the scope and objectives for each study.

**Table 16: Project Design and Specifications – Converter studies, underway or to be completed**

| No. | Study   | Scope and objective   | Status   |
|-----|---|---|--|
| 1   | Technical reviews of Converter Tender submissions | <ul style="list-style-type: none"> <li>Undertake technical reviews of converter tender submissions.</li> <li>This work will facilitate the awarding of the converter contract.</li> </ul> | <ul style="list-style-type: none"> <li>Underway</li> </ul> |

| No. | Study  | Scope and objective   | Status  |
|-----|--|---|---|
| 2   | Review technical submittals - Converter Long Lead Time Items     | <ul style="list-style-type: none"> <li>Review technical submittals for converter long lead time items.</li> <li>This work will enable the preparation of design for construction.</li> </ul>  | <ul style="list-style-type: none"> <li>Underway</li> </ul>      |
| 3   | Manage and review Converter Package Contractor design submittals | <ul style="list-style-type: none"> <li>Preconstruction activity involving the management and review of converter package contractor engineering submittals.</li> <li>This work will enable the preparation of design for construction.</li> </ul>                     | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 4   | Heybridge Noise Mitigation                                       | <ul style="list-style-type: none"> <li>Undertake technical and engineering review of noise mitigation proposals at Heybridge.</li> <li>This work will enable the preparation of design for construction.</li> </ul>   | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 5   | Heybridge Footings Assessment                                    | <ul style="list-style-type: none"> <li>Undertake assessment of Heybridge Footings.</li> <li>This work will enable a greater understanding of what remediation works are required.</li> </ul>  | <ul style="list-style-type: none"> <li>Underway</li> </ul>      |
| 6   | Heybridge Pre NTP Site Remediation                               | <ul style="list-style-type: none"> <li>Undertake technical and engineering assessment required for soil remediation work at Heybridge Converter Station.</li> <li>This work will enable the pre NTP early works to be undertaken or prior to award of NTP.</li> </ul> | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 7   | Hazelwood Geotech  | <ul style="list-style-type: none"> <li>Undertake site geotechnical analysis at Hazelwood Converter Station.</li> <li>This work will enable the preparation of design for construction.</li> </ul>   | <ul style="list-style-type: none"> <li>Underway</li> </ul>      |
| 8   | Review Converter BOP Design Documents                            | <ul style="list-style-type: none"> <li>Review converter BOP design documents.</li> <li>This work will enable the preparation of design for construction.</li> </ul>   | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 9   | Review Converter Contractor monthly reports and schedules        | <ul style="list-style-type: none"> <li>Review converter contractor monthly reports and schedules.</li> <li>This work will enable the preparation of design for construction.</li> </ul>   | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 10  | Prequalify Converter BOP Construction Contractors                | <ul style="list-style-type: none"> <li>Prequalify converter BOP construction contractors.</li> <li>This work will facilitate the awarding of contracts.</li> </ul>  | <ul style="list-style-type: none"> <li>Underway</li> </ul>      |

| No. | Study   | Scope and objective   | Status  |
|-----|---|---|---|
| 11  | Prepare tender for Converter BOP Construction Contractors         | <ul style="list-style-type: none"> <li>Prepare tender for converter BOP construction contractors.</li> <li>This work will facilitate the awarding of contracts.</li> </ul>          | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 12  | Evaluate Converter BOP Construction Contractors tender submittals | <ul style="list-style-type: none"> <li>Evaluate converter BOP construction contractor's tender submittals.</li> <li>This work will facilitate the awarding of contracts.</li> </ul> | <ul style="list-style-type: none"> <li>To be started</li> </ul> |

Table 17 shows the marine studies that have either commenced or are planned during the early works period, together with the scope and objectives for each study.

**Table 17: Project Design and Specifications – Marine studies, underway or to be completed**

| No. | Study  | Scope and objective  | Status  |
|-----|--|--|---|
| 1   | Engineering and technical input to Geophysical surveys | <ul style="list-style-type: none"> <li>Provide engineering and technical input to Geophysical surveys.</li> <li>This work will enable the preparation of design for construction.</li> </ul> | <ul style="list-style-type: none"> <li>Reconnaissance and preliminary Geophysical surveys have largely been completed.</li> <li>The engineering requirements for the pre-lay surveys in tender requirements covered standard industry practices and ongoing negotiations with tenderers is currently being completed to finalise the scope.</li> </ul>        |
| 2   | Engineering and technical input into pre-survey work   | <ul style="list-style-type: none"> <li>Provide engineering and technical input into pre-survey work.</li> <li>This work will enable the preparation of design for construction.</li> </ul>   | <ul style="list-style-type: none"> <li>Survey requirements were developed by using a number of technical experts from the appropriate field including both electrical / cable engineering teams and geotechnical specialists.</li> <li>Scope of all survey works has been completed and a number of surveys are in the process of being completed.</li> </ul> |
| 3   | Engineering and technical input into fieldwork         | <ul style="list-style-type: none"> <li>Provide engineering and technical input into fieldwork.</li> <li>This work will enable the preparation of design for construction.</li> </ul>         | <ul style="list-style-type: none"> <li>Completed.</li> </ul>  |

Table 18 shows the agreements and system studies that have either commenced or are planned during the early works period.

**Table 18: Project Design and Specifications – Agreements and system studies, underway or to be completed**

| No. | Study   | Scope and objective  | Status  |
|-----|---|--|---|
| 1   | Provide engineering inputs, negotiate and sign AEMO Agreements        | <ul style="list-style-type: none"> <li>Preconstruction activity involving provision of engineering inputs, negotiation and signing of AEMO agreements.</li> <li>Signed agreements with connecting TNSPs will be a condition precedent of CEFC finance.</li> </ul>        | <ul style="list-style-type: none"> <li>Underway</li> </ul>      |
| 2   | Provide engineering inputs, negotiate and sign TasNetworks Agreements | <ul style="list-style-type: none"> <li>Preconstruction activity involving provision of engineering inputs, negotiation and signing of TasNetworks agreements.</li> <li>Signed agreements with connecting TNSPs will be a condition precedent of CEFC finance.</li> </ul> | <ul style="list-style-type: none"> <li>Underway</li> </ul>      |
| 3   | Provide engineering inputs, negotiate and sign AusNet Agreements      | <ul style="list-style-type: none"> <li>Preconstruction activity involving provision of engineering inputs, negotiation and signing of AusNet agreements.</li> <li>Signed agreements with connecting TNSPs will be a condition precedent of CEFC finance.</li> </ul>      | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 4   | Provide engineering inputs, and issue tender for System Strength      | <ul style="list-style-type: none"> <li>Provide engineering inputs, and issue tender for System Strength.</li> <li>This work will facilitate the awarding of the system strength contract(s).</li> </ul>  | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 5   | SPS specialist input to (NCSPS & FCSPS)                               | <ul style="list-style-type: none"> <li>Provide input to enable special protection schemes to be specified.</li> <li>This work will enable the preparation of design for construction.</li> </ul>   | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 6   | Development of Equivalent PS Models (Vic and Tas)                     | <ul style="list-style-type: none"> <li>Develop equivalent PS models for Victoria and Tasmania.</li> <li>This work will enable the preparation of design for construction.</li> </ul>   | <ul style="list-style-type: none"> <li>To be started</li> </ul> |

| No. | Study   | Scope and objective   | Status  |
|-----|---|---|---|
| 7   | Development of Operational Scenarios for System Studies | <ul style="list-style-type: none"> <li>Develop operational scenarios to provide a basis for system studies.</li> <li>This work will enable the preparation of design for construction.</li> </ul> | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 8   | Review tenders for System Strength                      | <ul style="list-style-type: none"> <li>Review tenders for system strength.</li> <li>This work will facilitate the awarding of system strength contract(s).</li> </ul>                             | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 9   | Perform and evaluate Power System Studies               | <ul style="list-style-type: none"> <li>Perform Power System Studies.</li> <li>This work is preconstruction activity.</li> </ul>   | <ul style="list-style-type: none"> <li>To be started</li> </ul> |
| 10  | Review and agree on Frequency Control                   | <ul style="list-style-type: none"> <li>Review and agree frequency control requirements.</li> <li>This work is preconstruction activity.</li> </ul>  | <ul style="list-style-type: none"> <li>To be started</li> </ul> |

## 7.2 Resource requirements

The activities described in the previous section have the following implications for the resources and costs for the technical designs and specifications early works category:

- The scope of the early works activities is driven principally by the nature of the project, which comprises approximately 255 km of undersea HVDC cables, approximately 90 kilometres of underground HVDC cable in Victoria; and two converter stations. The complexity of the issues are specific to Marinus Link and substantially greater than other (land based, HVAC) ISP projects, which has implications for the resource requirements.
- Given the specialist nature of the tasks involved, Jacobs, MMA Subsea Services and Coffey Services Australia have provided the majority of the external support for this early works category to date, although options remain open for obtaining support from other external providers for the remainder of the early works period.
- As noted in relation to the environmental impact assessment work, MLPL requires internal staff to actively manage the external engagements; monitor progress and identify issues arising from each study; and provide feedback to and from the broader project team as required. As already noted, for the technical designs and specifications early works, it is important that MLPL's internal staff are appropriately skilled to ensure that the external engagements address the project objectives prudently and efficiently.

The table below shows the actual and forecast expenditure for our technical designs and specifications activities that comprise early works.

**Table 19: Actual and proposed technical designs and specifications expenditure (\$m nominal)**

|  | 2021-22     | 2022-23     | 2023-24     | 6 months to 31 Dec 2024 | Total \$m   |
|--|-------------|-------------|-------------|-------------------------|-------------|
| Internal labour requirements (FTEs)                          | 7.7         | 8.4         | 9.4         | 5.0                     |             |
| Internal labour costs (\$m)                                  | 1.4         | 1.2         | 1.5         | 0.8                     | 5.0         |
| Service provider costs (\$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         |
| Administrative costs (\$m)                                   | 0.0         | 0.0         | 0.2         | 0.1                     | 0.2         |
| <b>Technical designs and specifications total cost (\$m)</b> | <b>17.4</b> | <b>12.2</b> | <b>11.7</b> | <b>2.6</b>              | <b>43.9</b> |

As explained in the previous section, we have relied on external expertise in relation to technical designs and specifications. Our principal advisors are:

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

Each 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. We consider that the service provider costs have been managed prudently and efficiently in accordance with good industry practice and under MLPL governance and cost management systems and procedures.

As noted in relation to the other early works categories, we have provided detailed information to the AER regarding the service provider costs on a confidential basis, given the commercial sensitivity relating to this information.

The table below details the internal resource requirements for early works technical designs and specifications. It shows that the forecast number of FTEs is largely consistent throughout the early works period, which



indicates that the internal resourcing for this activity has been understood since the start of the early works period.

**Table 20: Actual and proposed internal resource requirements for technical designs and specifications (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                     |
| <b>Total</b>                        | <b>7.7</b> | <b>8.4</b> | <b>9.4</b> | <b>5.0</b>              |

As already noted, the nature of the technical designs and specifications work is project-specific. Furthermore, the nature of this project, including its interface with a relatively complex environmental approvals process, makes Marinus Link relatively challenging in relation to technical designs and specifications early works. This observation is evidenced by the extent of the studies and other works presented in the previous section.

In its report, prior to the commencement of the early works period, GHD commented on the scope of the technical designs and specifications for the HVDC and HVAC elements of the project. While identifying no issues in relation to the scope for the HVAC technical solution, for the HVDC component GHD commented as follows:<sup>25</sup>

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<sup>25</sup> GHD Advisory, Marinus Link Design and Approval Phase: Cost and Constructability Technical Advice, 16 December 2020, page 48.

“The HVDC technical solution identified is considered appropriate for a D&A phase including the consideration of potential equipment manufacturers and appropriate procurement strategies.

GHD Advisory has not identified any missing critical tasks in the HVDC solution D&A schedule, indeed elements of budgeted cost and resourcing for the HVDC components of Marinus Link support a view that the level of detailed engineering planned suggests a very high level of pre-FID risk mitigation, which is not consistent with other HVDC interconnector projects. The resources incorporated for this task appears to be higher compared to many other comparable HVDC interconnectors.

It is recommended that DISER follow up with TasNetworks to obtain a more detailed breakdown of the resources allocated to the HVDC technical work program to understand what work is being undertaken and to obtain reports on current expenditure against budget and earned value (outcomes expected to be completed).”

GHD’s recommendation to DISER was considered by MLPL and it concluded that the level of technical detail being developed is appropriate and in line with other similar HVDC and HVAC projects.<sup>26</sup> While GHD’s findings on this point were not accepted, its comments led to a reconsideration of the issue. In this regard, it provided a timely cross-check some months prior to the commencement of the early works period adopted in our Revenue Proposal.

In comparison to HumeLink, we note that Transgrid forecast expenditure of \$32.86 million (real 2017-18) for project development (which includes development, engineering, legal and economic support<sup>27</sup>) which is lower than the \$43.9 million (nominal) for our early works activities. It is evident from the material presented in the previous section, however, that it would not be meaningful to benchmark MLPL’s technical designs and specifications costs against those for HumeLink because the projects are materially different from one another in terms of complexity.

Our view is that our proposed early works expenditure for technical designs and specifications is prudent and efficient because:

- MLPL has worked closely with its external advisors, Jacobs, to scope the required work program in accordance with the project objectives and timelines.
- GHD reviewed our initial project schedule prior to the commencement of the early works period and MLPL reviewed its approach in light of GHD’s comments.
- MLPL has an appropriately resourced internal team to manage the external support to deliver the required outcomes at the lowest cost in accordance with the project timeframes.

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<sup>26</sup> MLPL, Steering Committee paper: Agenda item 8.1, Project Marinus: GHD Report for Commonwealth of Australia, 10 February 2021.

<sup>27</sup> It is noted that the scope is not fully aligned with our category definition, which makes direct comparisons difficult.



## 8 Procurement strategy and execution

### 8.1 Key activities and objectives

The table below summarises the objectives of the procurement strategy and execution early works category and describes the activities that are required to achieve these objectives.

**Table 21: Procurement strategy and execution – objectives and activities**

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

As explained in the above table, the overarching objective of this early works activity is to develop and implement a procurement strategy that delivers the most efficient outcome for consumers. There is a strong interface with the technical designs and specifications early works, as that activity establishes the technical details that form the basis of the contracts that are subject to competitive tender. These technical details need to be informed by an understanding of the service provider market so that work packages are defined in a manner that enhances competition between tenderers and delivers the lowest cost outcome. The allocation of risk between MLPL and service providers is also an important consideration, as different risk allocations may be priced more or less competitive in the tender responses.

In the sections below, we explain:

- Our approach to developing the procurement strategy;
- An overview of the procurement strategy;
- The timetable for executing the strategy; and

- The treatment of pre-payments to secure manufacturing capacity.

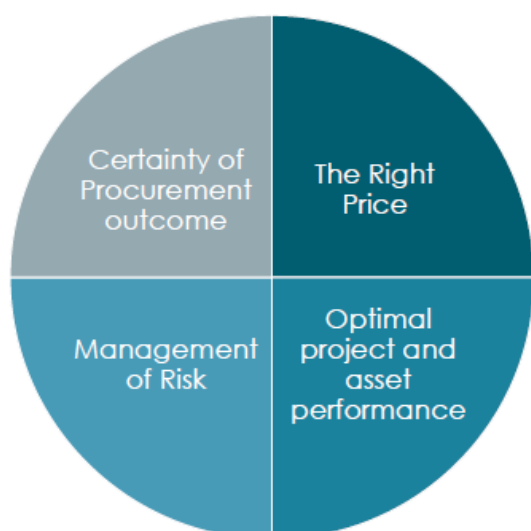
## 8.2 Development of the procurement strategy

With the assistance of its external advisers, MLPL has engaged in a rigorous and thorough assessment of relevant considerations in developing its procurement strategy. This included market testing and analysis with potential suppliers, insurance due diligence, site due diligence and risk assessment. The key external advisers who have been engaged in the development of this strategy include:

- Herbert Smith Freehills (Legal and Procurement advice);
- Jacobs (Australia) Pty Ltd, including its key subcontractor Elia Grid International (Engineering and specialist HVDC procurement advice) and previously Mott Macdonald;
- Coffey Services Australia (Environmental advice); and
- Lockton Australia (Insurance advice).

In preparing the procurement strategy, MLPL has sought to achieve an optimal life cycle cost for project delivery by considering the factors depicted in the figure below. This conception of total life cycle costs is consistent with the Rules requirements that our capital expenditure must be prudent and efficient.

**Figure 7: Factors in securing lowest total life cycle costs**



The considerations that have been factored into the development of the procurement strategy include:

- Marinus Link technical and capacity requirements assessed against available options;

- Constraints on the procurement including timing requirements and constraints, resourcing and budget;
- Complex power system integration challenges and the bespoke nature of the design;
- Regulatory requirements, including the need to ensure that the expenditure is prudent and efficient;
- Project risks and preferred allocation, during project delivery and operations;
- Market capacity and capability considerations, including:
  - competition within the relevant market;
  - cable manufacturing capacity;
  - track record;
  - metal price volatility;
  - fuel price volatility;
  - vessel availability;
  - competing projects;
  - strategic pricing;
  - supplier credit risk (for cable supply/install); and
  - supply chain capacity.
- land access arrangements and site conditions; and
- marine conditions and options for project delivery at sea.

## 8.3 Procurement strategy

Our procurement strategy is explained in further detail below. The strategy has been developed having regard to the considerations described in the previous section, with the objective of delivering the lowest life cycle costs as explained in section 8.2.

### 8.3.1 Work packaging

The tenders have been divided into three separate work packages, one for cables, another for converter system equipment and the third for converter station building works. Based upon knowledge gained from the pre-qualification process and market analysis, the required work has been split into two converter packages encompassing both stages, and two cable packages with one for each stage.

The split is driven by market capability and appetite, the need to provide for local content opportunities and will also provide MLPL with greater pricing transparency. The proposed packaging split has been tested with the pre-qualified suppliers and is anticipated to drive appetite to competitively tender. Having said that, MLPL will retain discretion to combine packages to optimise risk allocation and price at any time prior to contract award.

### 8.3.2 Contractual models

A bespoke Engineering, Procurement and Construction (EPC) delivery model is considered to be most suitable for the cable package. The EPC model has been decided upon based on consultants' advice, market research and feedback from potential service providers. This contract type is common for projects such as Marinus Link.

The converter equipment package encompasses the design, supply, install (of key components) and commission of the HVDC equipment. A Design and Supply contract type has been selected as the most suitable to manage for this package. The contract form retains key features of an EPC style contract to manage overall time, cost and performance risk of the project.

The converter station building package will be managed through a Design and Construct contract type. As noted above, this contract form also retains key features of an EPC style contract to manage overall time, cost and performance risk of the project.

### 8.3.3 Interface Agreement

All contractors will be party to an overarching Interface Deed outlining obligations in relation to how the parties will work together to achieve delivery of the overall project scope. Mechanisms within the individual package agreements will also support effective management and mitigation of interface risk (i.e. interface milestones and delay liquidated damage regimes, design management, handover inspection and acceptance regimes for key interface points).

## 8.4 Procurement timetable

The table below sets out the timeline for executing the procurement strategy. A number of the steps in the timetable have already been completed, as indicated by the 'estimated timing' column. The key decision points in the process are shaded for ease of reference. To ensure that MLPL delivers the best outcome for consumers, the procurement timetable is subject to ongoing refinement and development.

**Table 22: Timetable for executing the procurement strategy**

| Activity  | Estimated timing (Calendar Year) |
|---|----------------------------------|
| Preparation of tender pre-qualification documents cables and converter stations                           | Q3 2021                          |
| Board approval of tender pre-qualification cables and converter documentation                             | Early Q4 2021                    |
| Prequalification process cables and converter stations  | Late Q4 2021                     |
| Steering Committee approval of proposed applicants to participate in the Request for Tender (RFT) process | Q4 2021                          |
| Preparation of cable and converter equipment RFT documents  | Q4 2021 to Q4 2022               |
| MLPL Board approval of Tender Readiness Decision Gate   | Q3 2022                          |
| Submarine and land cable RFT issued   | Q4 2022                          |
| Converter systems equipment RFT issued  | Q1 2023                          |
| Board and State/Commonwealth approvals of proposed successful cable and converter tenderers               | Q4 2023                          |
| All cable and converter systems equipment contracts ready for award                                       | Q4 2023                          |
| Preliminary Investment Decision   | Q4 2023                          |
| Contract signing for cable and converter systems equipment contracts                                      | Q4 2023                          |
| Prequalification process for converter station building works   | Q1 2023 to Q4 2023               |
| Preparation of converter station building works RFT documents   | Q4 2023 to Q1 2024               |
| Converter building works RFT issued   | Q2 2024 to Q3 2024               |
| Board approval of converter station building works contract award   | Q4 2024                          |
| Final Investment Decision   | Q4 2024                          |
| Contract signing for converter station building works contract  | Q4 2024                          |



## 8.5 Treatment of pre-payments to secure manufacturing capacity

In developing and executing its procurement strategy, MLPL has recognised that it may need to make pre-payments to one or more successful tenderers in order to secure manufacturing capacity. This expenditure falls within the definition of early works, rather than construction costs because:

- It may be required to avoid project delays; and
- It may be required prior to making a Final Investment Decision.

As the terms and conditions relating to pre-payments will be determined through the tender process, the amounts (if any) to be paid will not be known until the tenders have been awarded. MLPL will be focused on securing the best terms and conditions for electricity consumers, which will include a consideration of the amounts to be paid; whether the amounts are refundable; and the risk of project delays (and loss of net benefits) if the pre-payments are not made.

Prior to completing the tender process and negotiations with the successful tenderers, our best estimate of the pre-payment amounts will be commercially sensitive. In this early works category, therefore, we have not included an estimate of the pre-payment amounts. Instead, we propose that the AER reviews the pre-payment amounts (if any) on a confidential basis and makes an allowance for these costs. Depending on the timing, it may be appropriate for the AER to conduct this review during its consideration of our Revenue Proposal for Part B (Construction costs). If this timing eventuated, the AER would be able to update the opening RAB as at 1 July 2025 to include the costs of any pre-payment amounts.

We propose to discuss this issue with the AER to ensure that an approach to pre-payment amounts can be adopted which is in the best interests of electricity consumers.

## 8.6 Resource requirements

The activities described in the previous section have the following implications for the resources and costs for the procurement strategy and execution early works category:

- The development of the procurement strategy involved extensive external support to ensure that the approach adopted is most likely to facilitate prudent and efficient outcomes in accordance with the long term interests of consumers.
- The development of the procurement strategy also involved extensive engagement with prospective service providers, in conjunction with our technical designs and specifications workstream, to ensure that the tender documentation would maximise competition and minimise the costs/risks borne by

MLPL. This work involved a mix of internal and external expertise to ensure that MLPL selected the best approach, given its particular circumstances.

- As noted in relation to other early works activities, the extent of the work required across the tender development and execution activities reflects the specific characteristics of Marinus Link. In particular, MLPL is seeking services in an international market where the capacity to deliver the project within the proposed timelines is highly constrained and impacted by heightened demand, in particular from HVDC transmission projects in Europe. The complexity of Marinus Link and the specific challenges of securing resources to construct an undersea HVDC cable impacts on the resource requirements needed to develop and execute an effective procurement strategy.

The table below shows the actual and forecast expenditure for our procurement strategy and execution activities that comprise early works.

**Table 23: Actual and proposed procurement strategy and execution expenditure (\$m nominal)<sup>28</sup>**

|  | 2021-22    | 2022-23    | 2023-24    | 6 months to 31 Dec 2024 | Total \$m   |
|--|------------|------------|------------|-------------------------|-------------|
| Internal labour requirements (FTEs)                        | 4.0        | 6.7        | 11.6       | 6.0                     |             |
| Internal labour costs (\$m)                                | 0.6        | 1.0        | 1.7        | 0.9                     | 4.3         |
| Service provider costs (\$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 costs (\$m)                                 | 0.0        | 0.1        | 0.1        | 0.1                     | 0.3         |
| <b>Procurement strategy and execution total cost (\$m)</b> | <b>2.4</b> | <b>4.6</b> | <b>8.8</b> | <b>3.1</b>              | <b>18.9</b> |

In relation to service provider costs, MLPL has obtained extensive support from external advisors such as HSF, Jacobs, Tetra Tech Coffey and Lockton. Our approach has focused on ensuring 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.

<sup>28</sup> Excludes pre-payments that may be required to secure manufacturing capacity. Any physical preparatory works associated with pre-construction will be treated as construction costs and included in our Revenue Proposal - Part B (Construction costs).

As noted in relation to other early works categories, we have provided further information on the breakdown of our service provider costs to the AER on a confidential basis. This information has been provided in Spreadsheet 2 – Early works expenditure.

Further details of our internal labour resources for our procurement strategy and execution early works are set out in the table below. It shows that we increased resources in 2022-23 in accordance with the work program and timelines for this activity. The forecasts to the end of the period reflect a continuation of existing resources.

**Table 24: Actual and proposed internal labour requirements for procurement strategy and execution (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                     |
| 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                     |
| <b>Total</b>                          | <b>4.0</b> | <b>6.7</b> | <b>11.6</b> | <b>6.0</b>              |

As discussed above, the scope of the procurement activity in relation to Marinus Link is complicated by the technical characteristics of the project and the highly constrained international market for service providers and materials, particularly in relation to undersea cables. The constraints in international markets has been exacerbated by the conflict in Ukraine, which is leading many countries to re-examine their energy supply security.

At the time of GHD's report in December 2020, it was noted that MLPL's procurement strategy was aligned with other large interconnect projects and had adopted reasonable timeframes and milestones:<sup>29</sup>

"Procurement strategy is in the early stages of development.

GHD Advisory supports the risk analysis, related to the risk transfer strategy and early views on EPC delivery.

The strategy has considered long lead times for LSE and the forward schedule outlines the planned procurement activities, with reasonable timeframes and the tender result milestones required to support RIT-T submissions.

The process in development is aligning with procurement process used in other large interconnect projects."

Subsequent to GHD's report, MLPL has continued to revisit its procurement strategy in light of feedback from tenderers and our external advisors, Jacobs. For example, we modified our procurement strategy for the cable and converter packages in response to both AEMO's final 2022 ISP calling for Project Marinus to be delivered with 'urgency' and the tightening international supply market conditions. This led to development of a streamlined procurement strategy enabling both earlier award (with limited notice to proceed), enabling MLPL to secure market capacity to deliver the project in accordance with the ISP's timing. MLPL regards these revisions to its procurement strategy as evidence of prudent and efficient decision-making, with the objective of maximising competition and minimising the total life cycle costs for consumers.

In comparison to HumeLink, we note that Transgrid estimated the cost of its procurement team to be \$7.19 million (real 2017-18), which is substantially lower than the \$18.9 million (nominal) for our procurement strategy and execution early works activities. However, from the information provided in Transgrid's contingent project application, it appears that its estimate only relates to internal labour. Our internal labour costs are lower than Transgrid's at \$4.3 million (nominal). More generally, it is difficult to compare the cost estimates because Marinus Link raises more complex and challenging issues relating to procurement than a typical actionable ISP project.

Our view is that our proposed early works expenditure for procurement strategy and execution is prudent and efficient because:

- MLPL has worked closely with its external advisors to develop and implement the strategy with the objective of maximising competition and minimising total life cycle costs.

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<sup>29</sup> GHD Advisory, Marinus Link Design and Approval Phase: Cost and Constructability Technical Advice, 16 December 2020, page 59.

- GHD reviewed our approach prior to the commencement of the early works period, finding that the approach was appropriate and aligned with other major interconnector projects.
- MLPL has an appropriately resourced internal team to ensure that the tender process can be managed efficiently in accordance with the project timeframes.

## 9 Program and project management

### 9.1 Key activities and objectives

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

**Table 25: Program and project management objectives and activities**

| Objectives  | Activities  |
|---|---|
| <ul style="list-style-type: none"> <li>To ensure the overall effectiveness of the project, including the efficient management of risk and costs for the benefit of electricity consumers.</li> <li>To ensure that the tender process maximises effective participation in the tender process for the benefit of consumers.</li> <li>To provide systems and processes that enable the efficient and timely delivery of the project.</li> </ul> | <ul style="list-style-type: none"> <li>The overall project management is the responsibility of the Project Director, supported by direct reports responsible for respective work programs.</li> <li>Development of the project execution strategy, which is a key input to the procurement strategy.</li> <li>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.</li> </ul> |

A major infrastructure project, such as Marinus Link, must have effective program and project management if the project is to meet its objectives prudently and efficiently. For early works, program and project management is principally focused on the following types of activities:

- Establishment of governance structure and appropriate forums with clear decision rights approved;
- Development and management of the project plan which forms the basis of:
  - the scope of works for the project;
  - the decision gates and key milestones;
  - the design and build of the schedule and cost estimates; and
  - identification and monitoring of key risks, assumptions and constraints;

- Design and implementation of the core project controls and commercial processes and systems to provide the 'backbone' of the project to inform timely, accurate and efficient decision-making;
- Introduction and management of the HSE management system to provide occupational health, employee safety, and environmental management to prevent or mitigate accidents, incidents and meet MLPL's legal obligations; and
- Development and management of the project schedule and cost baseline to inform overall progress and performance to identify specific areas to focus on, and provide assurance that key risks are proactively managed.

Our program and project management approach recognises the need to adapt to changing circumstances, driven by factors that are beyond MLPL's control. As already explained in relation to our procurement strategy, for example, MLPL modified its approach in response to the challenge of meeting the timeframes indicated in the 2022 ISP. From a program and project management perspective, this necessitated changes to our project plan to, amongst other things:

- Support the progressive breakdown of the scope into phases, sub-phases, workstreams and other key components to enable the development of the Project Marinus Work Breakdown Structure and Cost Breakdown Structure;
- Support clear communication to contractors, consultants and other supply chain entities regarding program and component project scopes, such that the opportunity for scope growth, with associated cost and schedule impact is minimised; and
- Ensure that the scope of works is correctly defined and allocated for funding and budgetary purposes.

## 9.2 Resource requirements

The activities described in the previous section drive our resource requirements and costs for the program and project management early works category. In addition to the internal labour required to conduct the day-to-day tasks, it has been necessary to seek external support to ensure that MLPL has the appropriate systems and processes in place to provide effective program and project management. Given the magnitude and complexity of the project, MLPL regards it as essential that effective systems and processes are in place to facilitate prudent and efficient project delivery.

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

**Table 26: Actual and proposed program and project management expenditure (\$m nominal)**

|  | 2021-22    | 2022-23    | 2023-24     | 6 months to 31 Dec 2024 | Total \$m   |
|--|------------|------------|-------------|-------------------------|-------------|
| Internal labour requirements (FTEs)                    | 4.7        | 9.5        | 14.5        | 7.5                     |             |
| Internal labour costs (\$m)                            | 0.6        | 1.5        | 2.4         | 1.2                     | 5.8         |
| Service provider costs (\$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         |
| <b>Program and project management total cost (\$m)</b> | <b>4.5</b> | <b>8.2</b> | <b>10.4</b> | <b>4.7</b>              | <b>27.8</b> |

Note: Numbers may not sum exactly due to rounding.

In relation to service provider costs, we have obtained specialist support from a number of providers including: Amazon Web Services Australia, Ernst & Young, Hays Specialist Recruitment, Hydro Tasmania, Ineight Pty Ltd, Jacobs Group (Australia) Pty Ltd, and Safety Culture Pty Ltd. By making use of this external expertise, we have been able to minimise the level of internal resourcing.

As explained in relation to the other early works activities, further information on our service provider costs will be provided to the AER on a confidential basis. For the purposes of this document, it is worth noting that the engagements have been subject to competitive tender processes to ensure that MLPL obtains the best value for money on behalf of consumers.

The table below provides further information on our internal labour resource needs for program and project management. It indicates that the team is expected to be unchanged during the remainder of the early works period.

**Table 27: Actual and proposed program and project management internal labour (FTEs)**

|  | 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 & En | 0.3     | 1.0     | 1.0     | 0.5                     |
| Safety Partner                           | 0.1     | 1.0     | 1.0     | 0.5                     |
| Cost Controller                          | -       | -       | 1.0     | 0.5                     |



|                               | 2021-22    | 2022-23    | 2023-24     | 6 months to 31 Dec 2024 |
|-------------------------------|------------|------------|-------------|-------------------------|
| 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                     |
| Governance Specialist         | -          | 0.2        | 2.0         | 1.0                     |
| <b>Total</b>                  | <b>4.7</b> | <b>9.5</b> | <b>14.5</b> | <b>7.5</b>              |

GHD's report in December 2020 explained that its benchmarking indicated that project and program management costs (including procurement) should be approximately \$47 million compared to the budget at that time of \$55 million.<sup>30</sup> It should be noted that for our Revenue Proposal, we have adopted separate categories for 'procurement strategy and execution' and 'program and project management'. Our combined expenditure for these categories is \$46.7 million, which closely aligned with the benchmark estimated by GHD. We note, however, that benchmarking program and project management for early works is challenging because:

- Cost allocations and scope definitions may vary across projects, which means that it is difficult to make like-for-like comparisons;
- Projects vary in complexity and therefore require different levels of management support; and
- Economic cycles and inflationary changes can impact demand for and costs of goods and services.

As evidenced by the information presented in earlier sections of this supporting document, Marinus Link is a relatively complex project.

In addition to providing high level benchmarking analysis, GHD's review made the following conclusions regarding MLPL's program and project management:<sup>31</sup>

"GHD Advisory has not identified any concerns with the resources and activities reviewed in the project governance, management and assurance works program.

<sup>30</sup> GHD Advisory, Marinus Link Design and Approval Phase: Cost and Constructability Technical Advice, 16 December 2020, pages 75 and 76.

<sup>31</sup> GHD Advisory, Marinus Link Design and Approval Phase: Cost and Constructability Technical Advice, 16 December 2020, page 22.

The upfront investment in the strategic framework has resulted in consistent planning and a coordinated approach as evidence in GHD Advisory's review of each work program."

In our view, GHD's positive review of our program and project management activities provides strong assurance that our expenditure is prudent and efficient. As already noted, GHD's report was conducted prior to the commencement of the early works period, thereby providing MLPL with an opportunity to make changes if GHD had recommended any improvements. In fact, GHD's review did not identify any concerns.

## 10 Corporate costs and support

### 10.1 Key activities and objectives

The table below describes the objectives for our corporate costs and support early works and describes the activities that are required to achieve those objectives.

**Table 28: Corporate cost and support activities and objectives**

| Objectives   | Activities  |
|--|---|
| <ul style="list-style-type: none"> <li>To ensure that the project is supported by corporate functions, governance processes and IT systems to promote the timely and efficient delivery of the project.</li> </ul> | <ul style="list-style-type: none"> <li>MLPL's corporate activities include: governance, business establishment, finance, human resources, legal and regulatory support, including transmission pricing analysis.</li> </ul> |

As noted in relation to program and project management, effective corporate support is essential if MLPL is to achieve its project objectives prudently and efficiently. As an intending TNSP, MLPL must invest in people, processes, and systems so that it has the capability in place to deliver Marinus Link in accordance with the timeframes envisaged by the 2022 ISP. As such, MLPL's circumstances differ significantly from existing TNSPs that already have corporate functions in place. For existing TNSPs, therefore, the incremental corporate expenditure to deliver an actionable ISP project is relatively modest.

For MLPL, it would not be prudent or efficient to deliver Marinus Link without first establishing effective corporate support. In particular, a number of fundamental governance; human resources; business processes and systems; and compliance requirements could not be met in the absence of a corporate function. For that reason, MLPL has invested significantly in building its corporate function in readiness to deliver and operate Marinus Link prudently and efficiently.

In addition to undertaking the corporate functions of a typical transmission business, MLPL also faces the task of establishing its own systems and processes to enable the business to operate independently of TasNetworks. These establishment costs would not ordinarily be included in the expenditure forecasts for an actionable ISP project, as these projects are usually progressed by an existing TNSP. In MLPL's case, however, a decision was made by the Commonwealth and Tasmanian Governments<sup>32</sup> that Marinus Link should be progressed by a separate entity in order for the project to be delivered within the timeframes specified by the 2020 ISP.

<sup>32</sup> Memorandum of Understanding, dated 15 December 2020.

MLPL engaged EY to develop a transition plan, based on a 'current state' and 'future state' business review to enable MLPL to operate as a standalone entity. EY's approach recognises that the future state must be:

- **Fit for purpose.** To have the right capability and expertise required for the construction of Marinus Link only, recognising the project life cycle will be 7 to 10 years.
- **Agile & scalable.** To be flexible to adapt to changing circumstances and requirements of the project and scale to meet increasing operational or regulatory requirements.
- **Culturally integrated with project delivery.** To be operationally and culturally integrated with project teams, enable collaboration and alignment between support services and the construction activities.

In light of the above objectives, EY identified and reviewed a total of 269 processes to determine whether they should be delivered in house, through TasNetworks, a third party, or through a hybrid arrangement. EY's advice concluded that in the desired end state:

- All services, infrastructure, and data transitioned from TasNetworks to MLPL corporate functions;
- Corporate functions operating model would be embedded, with key roles and capacity addressed (either in house or through a third party); and
- Approximately 22% of MLPL's corporate function processes to have some reliance on third parties.

Accordingly, the transition plan and the associated business establishment costs have been developed in accordance with independent expert advice from EY. MLPL considers that the transition will enable MLPL to operate prudently and efficiently without undue reliance on third party systems or processes, so that MLPL is able to deliver the best outcome for consumers.

## 10.2 Resource requirements

The table below provides a breakdown of our corporate and support expenditure for the period 1 July 2021 to 31 December 2024.

**Table 29: Actual and proposed corporate support expenditure (\$m nominal)**

|   | 2021-22    | 2022-23     | 2023-24     | 6 months to 31 Dec 2024 | Total \$m   |
|---|------------|-------------|-------------|-------------------------|-------------|
| Internal labour requirements (FTEs)       | 15.7       | 18.2        | 33.8        | 17.5                    |             |
| Internal labour costs (\$m)               | 2.6        | 3.4         | 6.6         | 3.5                     | 16.1        |
| Service provider costs (\$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         |
| Establishment expenditure (\$m)           | 0.5        | 3.7         | 8.7         | 2.9                     | 15.9        |
| Administrative costs (\$m)                | 0.6        | 2.6         | 2.2         | 0.9                     | 6.3         |
| <b>Corporate support total cost (\$m)</b> | <b>6.6</b> | <b>13.9</b> | <b>21.0</b> | <b>8.7</b>              | <b>50.2</b> |

In relation to our service provider costs, we have obtained services from a wide range of specialist providers including Ernst & Young, FTI Consulting, Hays Specialist Recruitment, Herbert Smith Freehills, Mercer Consulting (Australia) and Jacobs Group (Australia) Pty Ltd. These expert providers have been engaged in accordance with industry best practice to address specific tasks relating to the corporate and support activities. Further details of these costs have been provided to the AER in Spreadsheet 2 – Early works expenditure, which has been submitted as part of this Revenue Proposal.

Further information on our internal labour resource needs for corporate support are set out in the table below. The table provides further information on the range of activities that comprise MLPL's corporate functions.

**Table 30: Actual and proposed corporate and support internal labour (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     | -       | -       | -                       |

|  | 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   | Not applicable | Not applicable | Not applicable | Not applicable          |

|       | 2021-22 | 2022-23 | 2023-24 | 6 months<br>to 31 Dec<br>2024 |
|-------|---------|---------|---------|-------------------------------|
| Total | 15.7    | 18.2    | 33.8    | 17.5                          |

MLPL's corporate activities are also supported by external resources to provide strategic advice and specialist skills relating to independent reviews and assurance. In addition, external resources are engaged to undertake specific tasks, such as the development of a Rule change proposal to enable the AER to make a revenue determination for an Intending TNSP.

MLPL's corporate functions have been appropriately scoped, having regard to industry best practice and the needs arising from Marinus Link. MLPL has engaged an efficient complement of internal staff supported by specialist external service providers. For those reasons, MLPL considers that its corporate and support costs are prudent and efficient.

# 11 Why our early works expenditure is prudent and efficient

The purpose of this section is to summarise why MLPL considers its early works expenditure to be prudent and efficient.

- Independent expert reports prepared by BCG and GHD were commissioned prior to the commencement of the 'early works' period covered by our Revenue Proposal. Both reviews provide useful insights regarding the efforts that were made to ensure that the D&A phase is well managed, appropriately resourced and properly scoped.
- Both reviews were completed prior to 1 July 2021, so the early works activities and costs that are the subject of our Revenue Proposal have benefited from external scrutiny and advice, including benchmarking. Consequently, the independent expert reviews provide a high degree of assurance, albeit at a high-level, that our proposed early works expenditure is prudent and efficient.
- MLPL has had regard to benchmarking information in managing its early works expenditure. In applying benchmarking data, including HumeLink's early works expenditure, to each early works category, MLPL has found that:
  - there are a range of cost outcomes for large projects, which vary depending on the characteristics of each particular project;
  - there are good reasons to expect the early works expenditure for MLPL to be towards the upper end of the benchmark range; and
  - there are inherent limitations of benchmarking early works expenditure, not least because the duration of this phase of the project may be subject to change. For MLPL, we note that the target date for conclusion of early works has been extended from an original timeframe of early 2023 to late 2024.
- MLPL has worked closely with its external advisors to develop and implement its early works activities with the objective of maximising competition and minimising total life cycle costs.
- MLPL has an appropriately resourced internal team to ensure that the early works activities can be managed efficiently in accordance with the project timeframes.
- MLPL's internal teams have been augmented by appropriately qualified external resources that provide targeted support in accordance with MLPL's work schedule.



- Program and project management and corporate support activities have been scoped to provide the necessary business processes and systems to ensure that Marinus Link can be delivered prudently and efficiently.
- While MLPL's expenditure may appear high compared to other actionable ISP projects for some early works categories, the higher costs are justified given Marinus Link's relative complexity and MLPL's unique circumstances as an Intending TNSP.

This document provides a summary of the information that is available to explain MLPL's early works expenditure. MLPL looks forward to working with the AER and its consultants to provide further supporting information as required.