

# **Transmission Gully Independent Post Construction Review**

*Executive Summary & Insights for the  
future*

**April 2024**

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# 1. Background & Recent Context

## ***Review Scope and Timing***

Following the release of the Interim Review into the Transmission Gully Project in April 2021 (<https://www.tewaihanga.govt.nz/assets/Uploads/Transmission-Gully-Interim-Review-2021.pdf>), the New Zealand Government instructed the New Zealand Infrastructure Commission | Te Waihanga to undertake a further review of the project once construction was completed ('Post Construction Review').

The scope for the Post Construction Review included three focus areas: project implementation, value for money and post completion readiness. Te Waihanga commissioned Steve Richards (Lead Reviewer) to complete the Post Construction Review with Lindsay Crossen (Peer Reviewer).

At the time the review was commissioned the Transmission Gully Project was scheduled for road opening in late 2021 and works completion in early 2022. The review commenced in parallel with these planned completion activities to ensure the findings could be released as soon as possible following completion, therefore providing immediate benefit for future project planning.

However, the period leading up to the opening of Transmission Gully was characterised by slippage against plan and a substantial amount of incomplete scope or delivered work not capable of achieving completion certification without rework or defect remediation. This was further complicated by Covid and significant market disruption, all contributing to areas of disagreement and claims between the project parties. The Post Construction Review continued in accordance with the scope areas set out in the Terms of Reference but did not directly consider the contemporaneously evolving matters leading to, or arising from, the eventual road opening in March 2022. Those events are outlined below to provide further relevant context.

## ***Events Leading to and Following Road Opening***

In September 2021, the planned service commencement date, works were not complete. At this time the New Zealand Transport Agency, Waka Kotahi (NZTA), WGP (the Contractor), and CPBHEB Joint Venture (the Construction JV sub-contracted by WGP to build the project) entered into a COVID-19 interim resolution agreement. The purpose of this was to enable NZTA to reach an agreement which met its outcome priorities, including a value for money financial settlement of a number of issues and confidence in achieving road opening by 15 December 2021 (with some non-safety critical works and tests deferred). This agreement was amended and extended from 15 October 2021 for the period until 15 November 2021 and again until 17 December 2021 and finally lapsed in early 2022.

After significant delays in completing the project and further inability to reach a settlement, at the request of Construction JV, in March 2022 NZTA issued the Contractor a direction to open the road on the basis that while incomplete it was safe to use and operate, offered motorists improved levels of service and regional resilience, and was the best way to get the road open to the public as soon as possible. The effect of the direction was to reset the practical completion date for the delivery of all remaining work to 30 June 2023. As at the date of publishing, practical completion remains unachieved.

In the period following the opening direction, Construction JV's progress towards meeting its obligations has been limited, which means the road has not achieved the contracted standard. The impact of this is that the operations and maintenance sub-contractor has not yet received the asset to the standard and in the condition originally intended, effectively compromising the operational phase of the Public Private Partnership (PPP) contract. However, the operations and maintenance sub-contractor is continuing to provide interim maintenance and operations services, and NZTA believes the road continues to provide good and safe service to motorists.



While the project team continue to administer the terms of the Transmission Gully PPP Contract to hold the parties to account for their existing completion and compliance obligations, the pathway to final completion and resolution of disputes will be complex. Our understanding from NZTA is that it is unlikely that the project will be completed by the current Consortium, and likely that NZTA will need to implement alternative arrangements in order to complete the project and then maintain and operate the road going forward.

### ***Lessons from the Review***

These developments have collectively hindered the ability of Te Waihangā and the Reviewers to complete and publish the Post Construction Review in full. It is now clear that formal dispute resolution may be protracted, and ultimate assessment of the costs and benefits of the project may not be possible for some time. Nonetheless, in our view the learnings captured by the Reviewers offer valuable insight for the planning and delivery of future projects and in the interest of balancing the availability of these lessons with the ongoing commercial sensitivity of the project, the Executive Summary of the Review is being released at this time (Appendix A). With an unprecedented need for infrastructure investment, New Zealand must continue to proactively capture lessons learnt and rigorously apply these across all tiers of the industry.

An overview of key insights for future project success is discussed at Section 2. The full Executive Summary and recommendations from the Post Construction Review can be found at Appendix A. The views set out in Section 2 are the views and opinions of Te Waihangā and they may present different views to the Lead Review and Peer Reviewer as presented in Appendix A.

The Terms of Reference for the Post Construction Review were publicly released in April 2022 and are appended at Appendix B.

We thank Steve Richards (Lead Reviewer) and Lindsay Crossen (Peer Reviewer) for conducting the Post Construction Review.

***“The overwhelming view from interviewees is **TG has been successful in delivering on the intended benefits** contemplated in TG’s 2012 Detailed Business Case. **The benefits of regional economic growth and activity, travel time savings, safety, and network resilience all stand out as key benefits** achieved in TG’s first six months of use. **Construction delivery has also seen impressive engineering results** and the resilience to recover from the significant COVID impacts.”<sup>1</sup>***

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<sup>1</sup> Richards, S (2023). *Transmission Gully Post Construction Review - Executive Summary* (refer Appendix A)

## 2. Insights for the Future

Te Waihangā summarises key insights and themes from the Post Construction Review that should be considered as part of any future project planning.

### 2.1. The Affordability Threshold must be sufficient to deliver the project outcomes, and validated at key milestones

The success of any project, including PPPs, relies heavily on the accuracy of the budgets proposed during the planning stage.<sup>2</sup>

A critical stage of a PPP procurement, and a direct responsibility of Project Governance, is the setting of the Affordability Threshold (AT) due to its potential impact on the level of market competition, the feasibility of the private sector delivering the project and the level of value for money received by the public sector.<sup>3</sup> The fact that a PPP requires a fixed price to manage complex risks over the construction and operating phase of a project makes it essential to ensure that the AT is appropriate. Inaccurate or optimistic cost estimates at the procurement phase may place excessive stress on the ability of the Contractor to deliver the project outcomes, resulting in undesirable trade-offs occurring in real time during either the procurement or construction phase, and straining relationships between the parties.

Significant time can elapse between cost estimates being developed to inform the PSC and AT during the business case phase and the submission of a complying fixed price proposal at the conclusion of the RFP. During the procurement phase of the Transmission Gully Project the Public Sector Comparator – (PSC) was reviewed twice. The AT and PSC should be monitored during the procurement process and updated at appropriate milestones if inputs or assumptions change materially. Typical milestones may include:

- **Detailed Business Case:** as part of the assessment of whether the project can be procured as a PPP and deliver value for money.
- **Issue of the RFP:** the PSC should be reviewed and, if required, updated to assist in setting the AT to be included in the RFP.
- **During the RFP:** the AT may need to be refined if a significant error or omission is discovered, or if new information comes to light that changes the procuring entity's estimate of the costs to deliver the project (for example, as a result of new geotechnical information that has a significant impact on design and construction requirements).

*“Because of the **low AT** set during the procurement phase, the TG Project was effectively always **under-priced** given the complex risks involved. As a result, **it was inevitable the projects costs would change** during the construction phase”<sup>4</sup>*

<sup>2</sup> Singer, L. S. J. (2018). *Creating Value Through Procurement: A Report into Public Sector Procurement of Major Infrastructure Projects*. <http://www.entwine.works/the-entwine-report.html>

<sup>3</sup> The Interim Project Review of Transmission Gully PPP recommended that Te Waihangā develop whole-of-government PPP guidance on improved governance and delegations for the setting and approval of the AT.

<sup>4</sup> Richards, S (2023). *Transmission Gully Post Construction Review - Executive Summary* (refer Appendix A)

Given the importance of the AT to a successful procurement, Te Waihangā recommends that:

- the project governance group should consider and interrogate the AT to be included in the RFP. This is to ensure that appropriate governance checks are in place and that governance considers the risks and trade-offs in setting the AT too high or too low;
- design or scope changes that are likely to impact on a bidder's ability to meet the AT should be limited;
- the governance group should consider any feedback from bidders on the sufficiency of the AT during the RFP process to determine whether the AT should be revised (particularly where there is clear and consistent evidence that the AT may be set too high or too low).

## 2.2. Capability is key

Successful project delivery requires the right teams of people with the necessary capability across all stages of the project from initial planning to procurement and delivery. During early planning, it is critical that the development of the procurement strategy is supported by key project information and documentation. The procurement strategy cannot be developed in isolation of the project or its people. The strategy should reflect the particular features of the project and capability of the procuring entity.

This requires the procuring entity to undertake an objective assessment of its own skills, resources and experience at both project management and governance levels. This should include consideration of:

- the experience and capability of the procuring entity in managing complex supplier relationships and contractual arrangements;
- the procuring entity's capability and capacity to manage risks retained or shared under the chosen procurement model;
- the level of resourcing the procuring entity is able to apply to the project, and how this integrates with its existing procurement and contract management functions;
- the ability of the procuring entity to contract for external advice in areas where it may lack experience or capability.

## 2.3. Strong governance is critical

Poor project governance has been identified as a significant and growing concern in NZ<sup>5</sup>. Good decision-making is critical to getting the most from our infrastructure. To achieve the best results from our major infrastructure projects, governance enables:

- decisions to be made effectively, efficiently and transparently;
- robust decision-making processes;
- reliable decisions made in a timely fashion.

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<sup>5</sup> Governance capability on major NZ infrastructure projects has been raised in a number of reviews, including New Zealand Gateway Reviews – Lessons Learned Report 2017, *Creating Value Through Procurement* (Entwine, 2018) and the Interim Project Review of Transmission Gully PPP Project (2021).

***“Effective decision making was a re-occurring problem for the two key governance groups set out in the TG Project Agreement...We think the problem here partly lies in the structure of the governance schedule (i.e., Schedule 7) to the TG Project Agreement, which seemed to lack a clear structure/reporting lines. Without the best available contract governance framework available, the TG Project then relied on the quality and tenacity of project team members.”<sup>6</sup>***

Governance groups should be established from project inception with clear structure, delegations, reporting and escalation lines. There should be a clear mandate, direction and a cohesive dedication to resolving identified issues.

Te Waihangā will review the governance structures within the New Zealand standard PPP documentation to ensure a robust best practice governance framework.

## 2.4. New Zealand’s consenting system may become an unpriceable risk

The New Zealand planning and consenting system has become more complex over the past decade. It is often a long and costly process. A report published by Te Waihangā entitled “The cost of consenting infrastructure projects in New Zealand”<sup>7</sup> finds that:

- A typical New Zealand infrastructure project requires a firm to spend, on average, 5.5% of their total project budget seeking a resource consent (although costs vary depending on the project and the sector);
- The time taken to make decisions on consent applications for infrastructure projects may have increased by as much as 150% from 2014/2015;
- The complexity of a project impacts consenting costs, regardless of how long a council takes to reach a decision. A high complexity project incurred, on average, \$7,000 in direct consenting costs each day that a council takes to consider a consent application.”

The PPP model is designed to allow innovation, but realising this benefit requires a consenting framework that enables innovations to be delivered. The tender submission from the Consortium required it to seek and achieve modified consent conditions. When these consent changes were not all secured, the Consortium was not able to deliver the time and cost benefits it expected from its design and delivery methodology, and/or it became progressively non-compliant with some consenting elements. This became an early stressor for the project and cascaded into strained project relationships between all parties.

***“The international member of the Construction JV in the PPP Consortium appears to have not grasped fully nor appreciated the collaborative management approaches needed to work with the New Zealand consenting regime”<sup>8</sup>***

The Consortium’s approach to working with Consenting Authorities did not reflect a full appreciation of the importance of the New Zealand consents/resource management regime to the success of large and complex horizontal infrastructure.

<sup>6</sup> Richards, S (2023). *Transmission Gully Post Construction Review - Executive Summary* (refer Appendix A)

<sup>7</sup> Te Waihangā (2021). *The cost of consenting infrastructure projects in New Zealand*. <https://www.tewaihangā.govt.nz/assets/The-cost-of-consenting-infrastructure-projects-in-NZ-final-report.pdf>

<sup>8</sup> Richards, S (2023). *Transmission Gully Post Construction Review - Executive Summary* (refer Appendix A)

There is a risk for future projects with complex consenting environments that contractors will be unwilling to accept and price consenting risks. This is a fundamental challenge to the New Zealand PPP model as it is currently framed – which is a model predicated on a strong transfer of design and consent management responsibility to the delivery consortium.

Finding ways to mitigate and manage consenting risks to ensure these are priceable and do not lead to unmanageable programme slippage risk will be a key issue for procuring entities to consider in future projects.

## 2.5. It’s not the procurement model

While the Post Construction Review found aspects of how the PPP model was applied could have been done better, the Review concluded that the PPP model alone is not to blame for the challenges encountered by the Transmission Gully Project. All procurement models for infrastructure projects of scale come with inherent complexities that demand proactive and constant management by project and governance teams. There is no ‘set and forget’ in successful project delivery.

The Transmission Gully Post Construction Review reviewers were specifically asked whether, given all the key risks and events that transpired for the Transmission Gully Project, the outcome would have been different if a non-PPP procurement/contracting model had been used. The Reviewers took the view that nearly all of the key events and risks that they identified could have happened under any procurement model.

Regardless of procurement model, successful infrastructure delivery demands proactive management and dedicated resource commensurate with the size and scale of the project.

*“We were specifically asked if given all the key risks and events that have transpired for TG would the outcome have been different if a non-PPP procurement/contracting model been used. Our answer is no – this is because we believe nearly all of the key events and risks that we identified could have happened under any procurement model.”<sup>9</sup>*

## 2.6. Relationships are fundamental

Due to the long-term nature of infrastructure projects, it is important to maintain a strong partnership between the procuring entity and the delivery partners throughout the project lifecycle. Co-operation and open and clear communication are fundamental to effective contract management and delivering successful project outcomes. Establishing and maintaining strong relationships will enable the parties to constructively manage service delivery issues, changes or disputes that arise.

There are several important factors that help to establish and maintain a good relationship between the parties and other project stakeholders. In summary, these factors are:

- **Understanding of objectives:** The procuring entity, the delivery partners and other consortium members should understand each other’s objectives and those they have in common. These should be set and shared early in the procurement phase and remain central to service delivery. They should be revisited regularly. It is important that the parties also understand each other’s higher-level expectations, strategic objectives and potential for changes to service need.
- **Understanding of roles:** The contract management team should have clearly defined roles and responsibilities and an appropriate mix of skills and experience with adequate resources. The

<sup>9</sup> Richards, S (2023). *Transmission Gully Post Construction Review - Executive Summary* (refer Appendix A)



team should have a clear understanding of the different members of its delivery partners and their respective roles.

- **Mutual benefit mindset:** Irrespective of procurement model or construction contract, the parties should approach the project as a mutually beneficial partnership between the procuring entity and the delivery consortium.
- **Trust:** Trust can only be built up over time. It is fostered by both parties seeking to achieve mutual benefit, through open and transparent communication and timely completion of obligations. It involves a consistent approach to doing business with ‘no surprises’.
- **Open communication:** Open communication is key to maintaining a good relationship. It fosters a spirit of cooperation and the alignment of common interests between the parties. Open communication does not mean the parties must share all information relating to the project. However, because open communication will enhance the relationship, the default approach should be to share information, except where commercial or legal reasons constrain sharing.

*“...two major settlement agreements (in December 2019 and 2020) were developed to handle the major settlement claims to date. In both cases, there was **an expectation these settlement agreements would allow both contracted parties to reset behaviours and timelines to achieve a road opening date**. Our observation is that despite best intentions, this simply did not happen and other initiatives to build better management and consenting relationships did not contribute to sustained solutions of project problems”<sup>10</sup>*

## 2.7. Performance track record is key

New Zealand has a significant infrastructure pipeline that needs to be met in the years ahead. It is important that procurement entities build the best team for their project using market engagement and selection processes that place adequate weight on:

- A track record in the contracting and relationship management model being procured;
- A track record of high performance delivery of the outcomes contracted for;
- An understanding of the New Zealand market and consenting regime.

<sup>10</sup> Richards, S (2023). *Transmission Gully Post Construction Review - Executive Summary* (refer Appendix A)

## NZ Transport Agency statement

NZ Transport Agency has been provided with a copy of the Executive Summary of the “Post Construction Review” report for its comment. We thoroughly support ongoing learning on large project planning and delivery through review of what has worked well and what could have been improved. We do not intend to provide a detailed response or commentary on all aspects – some of which we have a different view on – but we highlight the following points:

The report was prepared for a defined purpose and to cover discrete issues, as indicated in the Terms of Reference. Although the review is framed as a “post-construction” review, work on the project remains ongoing, and the construction phase is yet to be completed contractually. The construction phase was due to be completed by 30 June 2023 but there is significant work outstanding, and the pathway to final completion and resolution of disputes will be complex.

The report was produced in accordance with the process established by the Terms of Reference, which involved a review of a confined set of documents and was informed by discussions with selected interviewees. Given the complexities of the issues involved, it is understandable that reasonable individuals may hold differing recollections, interpretation or opinions of events that took place over a period spanning many years.

To date, there has been no forensic investigation (nor any expert delay or quantum analysis) as to the time and cost impacts of various events and the identification of “root causes impacting on the TG Project” must be approached with caution. Assessment of the causes of delay or disruption on any project is a complex matter that requires detailed and in-depth consideration of the underlying factual evidence and contemporaneous records.

The report appears to suggest that certain features of the structure of the Transmission Gully PPP model are unusual, such as the fact that contractual consenting risk was and is transferred to the PPP consortium. However, in our view it is not correct to suggest this is unusual. In New Zealand consenting risk is frequently transferred to the contractor in major horizontal construction projects, irrespective of the particular contracting model adopted. This is particularly so where the party responsible for design and construction is better placed to manage consenting requirements and risk.



## Appendix A – Executive Summary

# Executive Summary – Post-Construction Review of Transmission Gully PPP Project

*Executive Summary prepared for the New Zealand Infrastructure Commission/Te Waihanga*

*11 October 2023*





## Foreword – Peer Reviewer

*The Transmission Gully motorway is the first transport infrastructure to be procured under a Public Private Partnership (PPP). As a “horizontal project” through difficult terrain, subject to significant geotechnical and environmental challenges, it has been considerably more difficult than the two previous PPP projects undertaken in New Zealand (which were “vertical projects”). This fundamental factor needs to be understood when analysing how the project has proceeded.*

*A road through Transmission Gully was first proposed a little over a century ago. As the main route north (SH 1) became more and more congested various additional routes were considered, but Transmission Gully emerged as by far the most feasible. The main question then became what project construction model would be adopted. The PPP model had been under discussion for some time in New Zealand and, in the early years of this century, was being widely applied in some similar jurisdictions.*

*The Labour Government, in 2002 initiated looking at alternative forms of funding for roading projects. In 2008 the PPP model was specifically considered in the context of the Waterview Tunnel project in Auckland. In 2009, the new National Government signalled the possibility of Transmission Gully proceeding under some form of PPP as one of its programs of Roads of National Significance, though Waka Kotahi, NZ Transport Agency was not specifically instructed to consider this model until 2012. Funding pressures arising out of the high costs of the Canterbury sequence of earthquakes were important in leading to this decision.*

*The model adopted, an ‘Availability PPP’, incorporated advanced procurement and commercial models to refine design and carry out the construction delivery of the motorway with a 25-year operating phase using defined service and performance standards. In July 2014 when the Transmission Gully PPP Agreement was signed, this kind of procurement/contracting model was new to Waka Kotahi and the New Zealand roads sector with limited use in New Zealand to social infrastructure projects only. Subsequent physical, environmental, and commercial challenges in the delivery of the project have highlighted potential inadequacies in the PPP contract that suggest scrutiny and diligence of the procurement phase may be informative to future infrastructure procurement of this nature.*

*In August 2020, the then Ministers of Transport (Hon. Phil Twyford) and Infrastructure (Hon. Shane Jones) announced that a review would be undertaken into various aspects of the Transmission Gully motorway project.*

*An Interim Review (up to procurement/Financial Close) was commissioned. Aspects reviewed were how the project was awarded for the agreed price; whether the price was realistic; and whether the risks then identified were appropriately considered and taken into account.*

*The Interim Review identified four primary features:*

- *A consented non-PPP scheme design was used to procure a PPP project, thus creating a challenge to adapt design with a focus on service need and performance standards.*
- *The Affordability Threshold was set too low resulting in tender respondents’ value managing design and timelines to fit, with potential manifestation of risk.*
- *Consenting risk could have been managed better by all parties, to align with a PPP project and avoidance of risk for consequential design, scheduling and cost impacts.*
- *Transmission Gully Project governance could have been better, particularly the transparency as to how key PPP decisions were made.*

*The Interim Review was completed and publicly released in April 2021.*

*As construction of the project neared completion to road opening for use on 30<sup>th</sup> March 2022, the (then) Deputy Prime Minister and Minister for Infrastructure (Hon. Grant Robertson) requested a Post-Completion Review be undertaken. Continuing physical, environmental, global pandemic and commercial challenges during the delivery of the project have highlighted potential inadequacies that suggest scrutiny and diligence of the construction phase may be informative to future infrastructure PPP developments of this nature.*

*Aspects reviewed were; (i) project implementation identifying key events and risks adversely impacting on project construction delivery; (ii) value for money and benefit realisation; and (iii) post completion readiness for the 25 years operations phase. A review at this stage is, therefore, appropriate to learn what has gone well and what has gone less well.*



*Development of the Transmission Gully route, as a secure and efficient transport 'gateway' to Wellington, has been an aspiration for many decades. The highway being used today, and built over the past eight years, is a well-engineered and constructed safe route. Transmission Gully is also 'an environmental project with a road through it' - highlighting the challenging design and construction through sensitive ecology and highly variable geology and materials. During the project the Covid 19 pandemic hugely disrupted people resourcing and progress, and although the project took two years longer than planned, due acknowledgement is accorded to the people involved for their dedication to resolving the construction challenges and completing this nationally significant highway for use.*

*The New Zealand Infrastructure Commission, Te Waihanga sought to appoint a reviewer and were fortunate to again obtain the services of Steve Richards of Brisbane, a highly experienced professional expert in this field. Lindsay Crossen of Christchurch was appointed by the Commission as peer reviewer, to assist with the process, bringing engineering, construction, management, and governance skills to the review. The review began in February 2022.*

*I have been impressed with the way Steve Richards has gone about his task and am pleased to support careful consideration by the relevant agencies of the recommendations in this report.*

*Lindsay C Crossen  
BE(Hons), DistFEngNZ, FNZIML*

# Executive Summary

Following the release of an Interim Review into the Transmission Gully Project (TGP) in April 2021, the New Zealand Government asked the New Zealand Infrastructure Commission, Te Waihanga to undertake a further review of the project once construction was completed. The Terms of Reference (ToR) for this post-construction review were publicly released/formally announced in April 2022.

This Summary Report outlines the approach undertaken, project-related documents/information reviewed and identified (i.e. review documents), interviews conducted, conclusions and findings, and recommendations.

The scope of this post-construction review focuses on the following specific matters.

Review Focus Area	Specific Matters
1. Project Implementation	<ul style="list-style-type: none"> <li>Identify key events and risks that have adversely impacted on project costs and programme during the construction phase.</li> <li>Track how these events and risks were identified, assessed and managed throughout the project process from procurement and through delivery.</li> </ul>
2. Value for Money	<ul style="list-style-type: none"> <li>Assess whether the PPP project has achieved value for money to date, considering project outcomes and key risks that have eventuated.</li> <li>Evaluate the likely/hypothetical value for money outcomes if the project, and its attendant risks, both planned and unplanned, had been delivered through an alternative procurement methodology commonly used for large-scale and complex road infrastructure projects, (for example, construct-only, design and build, or competitive alliance contracting models).</li> </ul>
3. Post Completion Readiness	<ul style="list-style-type: none"> <li>Review preparatory contract management and governance arrangements put in place by Waka Kotahi to manage and monitor contract performance, including benefits' realisation after the construction completion phase of the project.</li> <li>Make recommendations in relation to any potential improvements.</li> </ul>

Our summary findings/observations with regard to the above three review focus areas are summarised below.

## 1. Project Implementation:

- To guide our analysis of this review focus area, we established that TG's road opening date is about two years late (with four contractual road opening dates needed, versus the original expected opening date of April 2020) and during the construction phase there have been \$400.3 million in reported settlement payments to early road opening in March 2022.
- Using this information together with the review documents provided and from interview discussions, we identified the following five main events and risks impacting on TG:
  - COVID-19;
  - The Kaikoura Earthquake and wet weather events;
  - Consenting management issues reflected in the Consortium's 2019 Enabling Works Management Plan (EWMP) Claim;
  - Pavement Changes to use asphalt for part of TG; and
  - Several contract approval processes need to achieve the road opening date (i.e. approving Final Design Documentation before starting construction works, signing-off Work Completion Tests of various construction works and the Consortium's quality assurance of required contract documents).

### Impact of COVID-19

- On COVID-19, the time and cost impacts have been major given the pandemic's wide-reaching effects on all global construction works and associated supply chains. The reported settlement costs (to the date of early road opening) are \$159.4 million, and we estimate the time impact has been at least 5 months. This event is typically Force Majeure events (i.e. external factors outside of the control of contracted parties) under any contracting model.
- We were impressed with the structured governance discussions and arrangements used by Waka Kotahi, the Board and the New Zealand Government (including the central agency support roles played by Te Waihanga and Treasury). The success of managing the COVID interruptions is reflected in the fact that the TG project (and contract) was kept on foot and the significant risk and cost of contract termination was avoided. We have no concerns to note regarding governance by Crown parties for this major event and risk.
- The role played by the PPP Consortium and particularly the Builder/Construction Joint Venture (JV) to recover quickly from the COVID interruptions is also worth special noting and commendation, particularly given the

border closures significantly impacted on international members of the PPP Consortium and their labour force. Also, having a large international construction partner able to weather the financial and supply chain storm caused by COVID is probably an unintended project benefit.

#### *The Kaikoura Earthquake and wet weather events*

- Together these two events involved relatively minor cost impacts (i.e. around \$4 million) with a time impact of around 2 ½ months. These events are typically Force Majeure events (i.e. external factors outside of the control of contracted parties) under any contracting model, so we had no concerns with how these claims for these events were managed and settled.

#### *Pavement Changes*

- This “value” change was approximately a \$50 million contract variation to use asphalt over approximately one-third of TG, and in doing so aiming to achieve a four-month time benefit. This time benefit, in our view, probably became a two months nett loss when the construction works did not achieve the rates of progress expected. The reported road user benefits from asphalt appears extremely positive.
- An important note, though, is that reportedly the condition and durability of the chip seal pavement on the rest of TG is exhibiting some areas of distress and criteria for smoothness and texture is also deficient.

#### *Enabling Works Management Plan Claim*

- The EWMP Claim (settled for \$186.5 million, with a time impact of at least 12 months) concerns a consents management plan strategy by the Consortium as part of its accepted offer during the procurement/Request for Tenders (RfT) phase.
- While having a consents focus, our view is the EWMP issue is more about it being a procurement phase bid strategy used by the Consortium so it’s winning bid would come under the low Affordability Threshold (AT) set by Waka Kotahi. When the required relaxation, etc in consents was not achieved by the Consortium, the EWMP was not able to deliver the expected time and cost benefits that the Consortium was hoping for. This signalled the first signs of project distress cascading onto strained project relationships between all parties.
- This included straining relationships with Consenting Authorities, who were simply trying to regulate the 2012 Board of Inquiry (BoI) consents that were always going to change when construction works commenced and TG’s technical and construction risks and challenges would need to be managed.

#### *Contract Approval Processes needed to achieve the Road Opening Date*

- From the review documents provided to us, we noticed there was a consistently reported trend of the Construction JV starting construction works before having Final Design Documentation (FDDs) signed off. This is a contractual breach under the TG Project Agreement, which Waka Kotahi notified their concerns several times during the construction phase.
- Another contractual process that has not gone as planned is timely completion of all Work Completion Tests (WCTs) needed to contractually sign-off construction works to enable road opening to happen.
- Underneath the FDD and WCT issues were the reported lack of quality assurance controls by the Builder needed by Consenting Authorities and the Independent Reviewer (who has a key certification role in the TG Project Agreement) to do their job.
- While we have not been able to directly establish the cost impact of these specific matters, what we did see from the review evidence is these matters appear to be a consistent concern by all parties (particularly Waka Kotahi). Our best estimate is the time impact of these issues is at least six months (being the delay in one of the rescheduled road opening dates from September 2021 to early road opening in March 2022).
- The latter issues above are, in our view, very significant as they say to us that the Consortium did not have all the required project controls in place and attention to quality assurance control of some contract documents during the construction phase. Continued focus and emphasis will be needed after the March 2022 early road opening to ensure the Builder and Contractor meet their contractual obligations regarding all required completion and quality tests for technical acceptance of the constructed road.

As a consequence of identifying five main events/risks impacting on time and cost of the TG Project, we also identified several other project implementation matters that appeared to also have impacted on the construction phase:

- While Waka Kotahi’s project management and governance was sound and fit-for-purpose from late 2017 onwards, in the early years of construction Waka Kotahi had a light-on approach that we don’t believe was commensurate with implementing a major infrastructure project reflecting a Road of National Significance (a 27 km expressway to provide secure, safe access to a metropolitan city). It appears to us that Waka Kotahi might have been convinced that a PPP contract would be largely self-managing and required few resources – in fact, it is usually the opposite.

- Consents management has not been a positive experience for any party across the entire construction phase. Our view is once construction started it was inevitable the 2012 BoI-approved consents would require more management effort to implement. Assuming the PPP model would handle this major risk was an optimistic view on the part of Waka Kotahi. Not helping consents management was the Consortium's less than collaborative approach of working with Consenting Authorities and appreciating the importance of the New Zealand consents/resource management regime.
- A change in ownership structure from early 2015 saw a less integrated cohesive and coordinated Consortium structure (compared to what Waka Kotahi had evaluated during the RfT stage). Our view is such ownership changes during a long-term PPP contract are to be expected. However, in TG's case once time and cost pressures began to build then it appears to us that individual Consortium members may have retreated to their individual positions (rather than presenting as a coordinated "PPP team"). Also, some of this behaviour may have been caused by optimistic pricing by some Consortium members when the RfT proposal was being developed to come under the AT.
- The two key project governance groups stipulated in Schedule 7 of the TG Project Agreement (i.e. the Relationship Management Group and Project Governance Group) do not appear to have worked as intended. In fact, it appears these governance groups lacked direction and decisiveness when key decisions were needed. This meant individuals needed to fill the gap – we commend those persons for working under what must have been very trying circumstances.
- Role of the IR did not extend to approving design documentation before construction works. The usual practice in other jurisdictions using Availability PPPs for transport/road projects (e.g. Victoria) is for the IR to have this role. If that had been in place for TG, we believe it may have helped manage better the contractual approval processes (where design documentation approvals are concerned).
- While a Contract Management Manual was developed by Waka Kotahi for the construction phase, we could not confirm that it had been approved by a project governing body nor used frequently. In terms of other normal project control documents, we could not identify that Waka Kotahi had a specific construction phase Project Management Plan was in place prior to 2017 – this is an important control document that should have been in place.

Our summary of all the above points is that project implementation has not gone well and could have been far better managed by all contracting parties. We specifically note that two major settlement agreements (in December 2019 and September 2020) were developed to handle the major settlement claims to date. In both cases, there was an expectation these settlement agreements would allow both contracted parties to reset behaviours and timelines to achieve a road opening date. Our observation is that despite best intentions, this simply did not happen and other initiatives to build better management and consenting relationships did not contribute to sustained solutions of project problems.

Section 3 in our accompanying detailed Report provides more information on our key findings and conclusions for this first review focus area.

## **2. Value for Money:**

- The overwhelming view from interviewees is TG has been successful in delivering on the intended benefits contemplated in TG's 2012 Detailed Business Case. The benefits of regional economic growth and activity, travel time savings, safety, and network resilience all stand out as key benefits achieved in TG's first six months of use.
- Construction delivery has also seen impressive engineering results and the resilience to recover from the significant COVID impacts. Using the PPP model (which spreads funding over 25 years) also allowed TG to be brought forward so it could be delivered now. Waka Kotahi has also learned a lot from implementing the first road Availability PPP in New Zealand.
- Having regard to the impact that PPP-specific events and risks have had on the 2014 Value for Money calculation used to confirm the PPP contracting model, we believe only the settlement amount of the EWMP Claim is relevant (noting that the PPP impact here is about the *application* of the PPP model via the setting of a low AT, rather than the PPP model per se). We believe all of the other reported settlement payments (e.g. COVID and Pavement Change) would have happened irrespective of the procurement/contracting model selected.
- Using the above approach (and based on reported settlement payments up until the March 2022 road opening), our calculation is the +2.9% "value" benefit between PPP and the PSC in mid-2014 has since been eroded to -11.2%. If different approaches had been taken with two procurement phase decisions (e.g. setting a low AT, and the change in design speed without full cost recognition in the PSC), then arguably the impact



of the EWMP Claim might have been significantly less (or not at all) meaning this PPP value erosion might have been avoidable.

- **Section 9(2)(h)**  
[REDACTED]  
[REDACTED] We essentially reached a similar conclusion in our Interim Review. This indicates the TG Project has been effectively subject to “cost resets” which would have affected both the PPP bid and the PSC.
- The positive impact of the decision to use asphalt pavements over approximately one-third of TG was mentioned by all interviewees, and this value-change appears to be exceeding user expectations. Also, the fact that Waka Kotahi has also chosen to use asphalt on the P2W project shows a change in thinking (since TG’s procurement phase) about the road user/maintenance benefits from using asphalt pavements.
- As part of our Review’s Terms of Reference, we were specifically asked if given all the key risks and events that have transpired for TG would the outcome have been different if a non-PPP procurement/contracting model been used. Our answer is no – this is because we believe nearly all of the key events and risks that we identified could have happened under any procurement model. Importantly, in giving this view our analysis focus on both the construction and services phases, because that is what a PPP model is designed to deliver. It would be unfair, in our view, to solely use the construction phase events as the sole test for determining PPP success. As international PPP guidance material quite rightly points out, the long-term nature of a PPP contract means it should be reviewed several times across its lifecycle, not just once after the construction phase.
- We were also asked to prepare a cost benchmarking assessment between TG and selected road projects in the Waka Kotahi portfolio. Using risk-adjusted construction costs as the point of comparison and selecting comparable projects, our overall conclusion from this benchmarking analysis is that, on a per lane km cost basis, we consider our estimate of TG’s risk-adjusted capital cost is on par with Waka Kotahi road projects of similar technical complexities. Our accompanying detailed Report provides more detail on this cost benchmarking analysis, as well as more information on our key findings and conclusions for this second review focus area.

### **3. Post Completion Readiness:**

- Learning the lessons from having a light-on approach early in the construction phase, we think Waka Kotahi has made a very reasonable start to managing the 25-year services phase of the PPP contract.
- While an Operating Term Contract Management Manual (and associated legal framework document) has been prepared, we think this Manual would benefit from a structural review with the view to putting into the Operating Term Contract Manual the key management and process information that non-legal, day-to-day contract managers and key decision maker in Waka Kotahi will need to monitor, report and manage performance of WGP under the Project Agreement for the remaining term of the 25 year PPP services phase.
- The TG Benefits Management Plan is a good foundation for ongoing benefits management – however, it could be linked better to other project control documents and accountabilities could be more clearly defined and explained.
- Waka Kotahi operational resourcing and capability would be informed by benchmarking with Australian states (i.e. Victoria and Queensland) that have implemented road availability PPP projects and contracts.
- We are concerned there is no contractual ability (under the TG Project Agreement) for Waka Kotahi to initiate a benchmarking/services review during the 25-year operating term, and that work on this matter has been deferred until after contractual road opening has been achieved. We identified this matter in our Interim Review report. We believe the one of the success factors for the 25 year operations phase will hinge on Waka Kotahi (and the Board) having their own periodic review mechanism to benchmark the cost (and hence value for money) of services provided in the PPP operations phase.

Section 5 in our accompanying detailed Report provides more information on our key findings and conclusions for this third review focus area.

### ***Our Assessment of the Root Causes Impacting on the TG Project***

In reaching the above findings and observations, we compiled what we believe to be the “root causes” of the difficulties and challenges faced by the TG Project going back nearly 10 years (to when the 2012 Board of Inquiry approvals were granted). Our view is the root causes are not due to the PPP model per se but are instead due to the following factors:

- The 2012 Bol-approved consents were for a non-PPP project, and being based on preliminary project information, meaning those 2012 consents were always going to change once construction started.

- Some decisions made by Waka Kotahi during the procurement phase were done after the 2012 Bol-approved consents. One example is the decision to change the design speed from 90 km/hr to 110 km/hr – this change had a major impact on the amount of earthworks needing to be moved and managed during the construction phase. This design change was not reflected in the 2012 Bol approvals or in direct cost line adjustments used to inform the RFP released to the shortlisted bidders. While some review evidence recorded the second August 2013 review of the PSC did have a cost line adjustment to reflect the impact of the change in design speed, this cost provision was done using top-down/judgement rather than bottom-up/elemental cost assessment. Our reading of the review material provided to us is this top-down/judgemental cost provision would have flowed through to the mid-2014 version of the PSC used to inform the Crown's eventual acceptance of the Consortium's winning bid. Accordingly, when we consider all of the review evidence presented to us it did not convincingly demonstrate that costing of some aspects of the PSC was as good as it could have been, compared to had an elemental bottom-up detailed costing of changes to the PSC been done.
- Also, we note the issue of a better calculated PSC (used to derive the AT) was raised during interviews by way of several interviewee comments:
  - *"...In hindsight, Waka Kotahi knew the project was always going to be tough because of the price.*
  - *The AT was always too low.*
  - *TG was a rushed PPP that was originally a D&C (but) converted in short timeframes with not enough time to rejig the AT. This legacy runs through nearly everything that happen(ed) on the job.*
  - *During the bid phase, there was a reasonably aggressive timetable to achieve financial close under the AT. Another comment made about the bid phase was that all parties knew they were taking a risk but a calculated risk.*
  - *To get under the AT, the Builder: (i) took on possibly some unmanageable risks; (ii) the Construction JV altered their design outside the consents and would then (subsequently) try and get consents to cover the design..."*
- When we consider both the review documents provided and interviewee comments, our conclusion is because of the low AT set during the procurement phase, the TG Project was effectively always under-priced given the complex risks involved. As a result, it was inevitable the projects costs would change during the construction phase.
- The impact of having a low AT affected other key events and risks. For example, one of the major reported settlement payments relates to the Consortium's EWMP needed to get construction underway as early as possible to hopefully finish before the first contract road opening date in April 2020. This Plan was a bid strategy by the Consortium to achieve time and cost efficiencies factored into their bid so they could get under the low AT. This Plan also required Consenting Authorities to agree to change/relax some of the Bol-approved consents (with all contracted parties were advised by Consenting Authorities in mid to late 2014 of the challenges involved with getting such changes). When during late 2014 and into 2015 this strategy couldn't be agreed with Consenting Authorities in the timeframes expected and required by the Consortium, the TG Project started to become stressed.
- Also during the procurement phase, a mature PPP model was used to transfer nearly all consenting risk to the Consortium. This was clearly a very optimistic view at that time, and in hindsight Waka Kotahi should have retained more of that risk – this is effectively what happened once Waka Kotahi realised it had to dedicate more time and resources to assist the Consortium manage the consents needed to construct TG.
- The international member of the Construction JV in the PPP Consortium appears to have not grasped fully nor appreciated the collaborative management approaches needed to work with the New Zealand consenting regime. As aptly put by one interviewee, TG is effectively an environmental project with a road going through it – thinking of TG this way might have brought a different mindset to construction management and stressed relationships with regulators. From all the review evidence we saw (including interviews), consents management caused difficulties across the entire eight years of construction (and, based on review information we saw, still continued post the early road opening in March 2022).
- Project management, by both contracted parties, could have been far better across various stages of the construction phase. While good project governance was in place from late 2017 onwards, rather than managing TG as a Road of National Significance requiring major project oversight, some in Waka Kotahi appeared to have thought early in the construction phase that a PPP contract would be able to manage itself with only a small project team needed, and only found out by the middle of the construction phase that more dedicated resources and skills were needed to handle a very complex project like TG.
- For the Consortium and particularly the Construction JV, the review evidence we saw and heard showed a consistent problem regarding quality assurance, control of documents and accuracy in reporting progress in meeting contractual timelines. Like consents management, this project management issue was repeatedly raised in project governance forums as a key concern, but never appeared to be solved.

- Effective decision making was a re-occurring problem for the two key project governance groups set out in the TG Project Agreement (i.e. the Relationship Management Group and Project Governance Group). We think the problem here partly lies in the structure of the governance schedule (i.e. Schedule 7) to the TG Project Agreement, which seemed to lack a clear structure/reporting lines. Without the best available contract governance framework available, the TG Project then relied on the quality and tenacity of project team members.

When looking at the above root causes, aside from the last point (which we think is a structural problem with a schedule in the TG Project Agreement) we came to the view that if more time and preparation had gone into TG before construction commenced then perhaps many of the above issues may not have happened or, if they did, their impacts on the construction phase may have been far less.

**Based on our review findings, we have identified several areas for improvement for Waka Kotahi and other PPP projects to consider. Table 1 (below) summarises our Review recommendations.**

Table 1: Summary of Review Recommendations

Project Implementation (PI)	
<b><u>Recommendations – Project Implementation</u></b>	
PI1	<i>Given the challenges and difficulties faced by the TG Project when implementing consents, in the context of the current reforms to the New Zealand resource management system Te Waihangā discuss with the relevant government agencies about the merits of adopting an “outcomes-based” consents framework for major/nationally significant infrastructure projects.</i>
PI2	<i>Waka Kotahi and Te Waihangā to consider jointly investigating if existing major project delivery start-up controls warrant additional guidance being developed on establishing dedicated major project delivery divisions/units within the transport portfolio agencies (similar to governance models used in Victoria and other Australian States).</i>
PI3	<i>Waka Kotahi considers developing a risk-based framework that requires high-risk and high-profile infrastructure projects to undergo annual (or more regular) governance health checks.</i>
PI4	<i>Te Waihangā considers developing specific PPP guidance to help PPP agencies when making decisions related to PPP Consortium requests for ownership changes.</i>
PI5	<i>Te Waihangā considers undertaking a focussed review on the effectiveness of Schedule 7 of the TG Project Agreement to see if changes should be made to this schedule that will facilitate improvements in governance and decision making in PPP Projects.</i>
PI6	<i>Te Waihangā reviews the New Zealand Contractual Framework for the Standard Form PPP Project Agreement to determine if it needs to specifically define a review role for the IR for design documentation in linear (i.e. transport) PPP projects.</i>
PI7	<i>Waka Kotahi summarise and present to the Board (for noting) all the annual compliance certificates prepared by the Contractor during the construction phase.</i>
PI8	<i>Waka Kotahi considers amending the current version of the TG Project Management Plan to:</i> <ul style="list-style-type: none"> <li>- <i>Include a clearer description of the project governance structure, including accountability/responsibility links from the project team level up to the Board;</i></li> <li>- <i>Include a list of key accountabilities/delegations/responsibilities, possibly in the form of a RACI matrix; and</i></li> <li>- <i>Present to the Board for noting, as part of an overall project control framework for TG.</i></li> </ul>
Value for Money (VfM)	
<i>Given for this review area most of our commentary relate to observations about how key events and changes may or may not have impacted on the 2014 value for money assessment done during the procurement phase, we only have three specific recommendations to make:</i>	
VfM1	<i>Waka Kotahi consider the interviewee responses collected during this Review when conducting their own planned lessons learnt review.</i>
VfM2	<i>When undertaking the planned update of TG’s economic appraisal in the 2012 Detailed Business Case, consider international guidance on conducting ex-post economic updates including limiting the evaluation to a small number of critical areas such as demand forecasts and time savings.</i>
Post Completion Readiness (PCR)	
PCR1	<i>Consider a structural review of both the Operating Term Contract Management Manual and accompanying Operating Term Legal Framework document, with the view to putting into the Operating Term Contract Manual the key management and process information that non-legal, day-to-day contract</i>

## Project Implementation (PI)

*managers and key decision maker in Waka Kotahi will need to monitor, report, and manage performance of WGP under the Project Agreement.*

- PCR2 Review the current draft of the TG Benefits Management Plan to address the following implementation and management/reporting matters:*
- Set a date for finalising the Benefits Management Plan, and have it endorsed by an appropriate governance forum in Waka Kotahi;*
  - Ensure the Benefits Management Plan specifically identifies who in Waka Kotahi will be responsible for managing the Plan, and how often will it be reviewed for currency;*
  - Ensure the Benefits Management Plan specifically identifies which governance fora/forum in Waka Kotahi will receive regular reports/updates about this Plan; and*
  - Review both the Benefits Management Plan and the Operating Term Contract Management Manual to ensure both these documents will work effectively together to report and manage expected TG benefits.*
- PCR3 Waka Kotahi considers approaching the Queensland and Victorian Government transport department with the view to seeking benchmarking information/resources used by these Australian states to manage the PPP operations phase for the Toowoomba Range Second Crossing PPP and Peninsula Link PPP projects.*
- PCR4 Consider the Review Team's suggestions/observations provided under this review focus area for preparing the planned O&M/reviewable services benchmarking paper to the Board, including placing a higher priority on this work (versus waiting until contractual road opening is achieved).*

Importantly, we note the construction phase is still to be completed contractually yet the operations phase has already commenced with early road opening. This is not an ideal situation to be in for a PPP project, which usually has an orderly handover from construction to operations. The sooner this transition is effected, the better is the chance of PPP delivery success being realised – this is important, because a PPP is not just about the construction phase; it is the long-term service phase where a PPP project can show the benefits that the PPP model is designed to deliver. We believe it is very important to give TG that opportunity to shine, particularly given the very positive feedback noted by all interviewees about the benefits realised in less than six months of road use.

In addition to our Review's Terms of Reference, we have summarised in our accompanying detailed Report some areas of best practice that we observed. Of note is the work done by Crown parties during the height of the COVID-19 Pandemic to give this and all infrastructure projects the best opportunity to navigate through what were clearly unprecedented events across the globe and for major infrastructure project delivery.

We would like to thank all interviewees and Waka Kotahi representatives for their participation and assistance, and Te Waihanga for providing project support to deliver this post-construction Review.



# Appendix B – Terms of Reference

## Background

In August 2020, following Waka Kotahi's announcement of the conclusion of commercial negotiations with the Transmission Gully Project (TGP) contractor related to the COVID-19 shutdown impacts, and in consideration of the significant cost and time escalations that had impacted the project pre-COVID-19, the then Ministers for Infrastructure and Transport announced that they had directed the NZ Infrastructure Commission, Te Waihanga (Te Waihanga) to oversee an urgent and wide-ranging Interim Review into TGP.

## The Interim Review

The Interim Review focused on how the TGP agreement was awarded for the price agreed, whether this was a realistic price, and whether the risks identified were appropriate, properly considered and taken into account. The Interim Review was completed in January 2021 and following Cabinet consideration, was proactively released on Te Waihanga's website on 20 April. Following the release of the Interim Review, the Minister for Infrastructure directed Te Waihanga to undertake a further review of the project once construction was completed.

## Designing the Post-Construction Review (the Review)

TGP has been in construction since 2014, with major settlements concluded in late 2019 and again in 2020, following the COVID-19 related disruption. TGP is currently scheduled for road opening in late 2021 and works completion in early 2022 (subject to settlement of new 2021 COVID-19-related claims).

Given the breadth of material that will need to be considered as part of this review, it is important to plan and proceed as early as possible (the preparatory work will focus on document review and research so it does not adversely impact resources deployed in completing the project).

The proposed scope and approach to carrying out the Review is described below.

## Proposed scope for the Review

The Review will be undertaken by an Independent Expert Reviewer, supported by a local Peer Reviewer, and overseen by Te Waihanga (consistent with the approach taken with the Interim Review).

The Review will focus on how well TGP has delivered on its investment objectives as outlined in the approved business case, tender documents and final signed PPP agreement.

It will also assess how issues that have impacted delivery performance have been managed to derive lessons that could be applied to future procurement of major infrastructure projects, including future PPP procurement. The scope of this work includes:

### 1. *Project Implementation*

- identify key events and risks that have adversely impacted on project costs and programme during the construction phase.
- track how these events and risks were identified, assessed and managed throughout the project process from procurement and through delivery.

The Review will:

- consider the PPP agreement/contract mechanisms and contract management processes used to manage such events and risk, and the effectiveness of the project delivery phase governance structures;
- make recommendations based on the findings as to potential improvements for future projects; and
- make observations on areas of good practice.

## 2. Value for money

- assess whether the PPP project has achieved value for money to date, considering project outcomes and key risks that have eventuated.
- evaluate the likely/hypothetical value for money outcomes if the project, and its attendant risks, both planned and unplanned, had been delivered through an alternative procurement methodology commonly used for large-scale and complex road infrastructure projects, (for example, construct-only, design and build, or competitive alliance contracting models).
- This evaluation should include benchmarking against the performance of similar projects in the Waka Kotahi portfolio, subject to the availability of data.

## 3. Post Completion Readiness

- Review preparatory contract management and governance arrangements put in place by Waka Kotahi to manage and monitor contract performance, including benefits’ realisation after the construction completion phase of the project; and
- make recommendations in relation to any potential improvements.

## Indicative Timeline

It is anticipated that the review will take approximately 30 weeks from the appointment of the reviewer based on the indicative timeline below (subject to the date of construction completion, the resolution of any subsequent relevant claims and agreement with the selected reviewers):

Phase	Expected duration	Tasks
1	4 weeks	Review start-up, prepare Completion Review Inception Plan, and undertake initial document gathering and review
2	6 weeks	Detailed Document review and interview planning
3	4 weeks	Interviews (Pre-construction completion- excluding individuals currently involved in the Project), gather and review additional evidence, and produce Initial Findings/Themes report
4	2 weeks	Discuss findings from Phase 2, and agree further interviews/document reviews
5	2 weeks	Additional interviews and document reviews
6	2 weeks	Consolidate review findings and confirm key themes
7	4 weeks	Prepare Draft Report for consultation
8	4 weeks	Consultation and comments
9	2 weeks	Review comments and issue <i>Final Report</i>
<b>Total</b>	<b>30 weeks</b>	

The Final Report will be provided to responsible Ministers for consideration and will then be proactively released in coordination with the Minister for Infrastructure's office.

## Method

Review documentation available from Waka Kotahi, Treasury, and the Ministry of Transport, the Wellington Gateway Partnership and any other information that may be publicly available.

Interview key individuals involved in the delivery and oversight of the Project, including the Wellington Gateway Partnership, the Builder (CPB-HEB), the Independent Reviewers, Waka Kotahi, the Treasury and the Ministry of Transport.

## Expert and Peer Reviewer

Given the quality of the performance of the Independent Reviewer and Peer Reviewers in the Interim Review and the depth of their knowledge gained through that process, we recommended that the available incumbents are re-appointed for the Post Completion Review. Reviewer Steve Richards and Peer Reviewer Lindsay Crossen have confirmed that they are available to undertake the task. Sadly, Sir Michael Cullen passed away in August 2021. We do not propose to replace Sir Michael as a Peer Reviewer – but we acknowledge the invaluable contribution he made to the Interim Review.

## Governance

Te Waihangā management will oversee the Review and provide direction and support to the Expert Reviewer and monitor the progress of the review and provide monthly progress updates to its Board as required. Resources from the Te Waihangā Infrastructure Delivery Team will be used to support the Expert Reviewer.