

Report – Interim Project Review of Transmission Gully PPP Project

Report prepared for the New Zealand Infrastructure Commission/Te Waihanga

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Foreword – Peer Reviewers

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 of the Transmission Gully motorway project. Those aspects 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. Issues such as whether the project represented value for money are not part of this review.

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 Confidence and Supply Agreement between the Labour-led Government and the United Future Party in 2002 provided for looking at alternative forms of funding for roading projects. In 2008 the PPP model was specifically considered in the context of the Waterview 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 programme 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. This kind of procurement model was new to Waka Kotahi and had had limited use in New Zealand. 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. A review at this stage is, therefore, appropriate to learn what has gone well and what has gone less well.

Following Minister Twyford’s announcement in August 2020, the New Zealand Infrastructure Commission, Te Waihanga sought to appoint a reviewer and were fortunate to obtain the services of Steve Richards of Brisbane, a highly experienced professional expert in this field. We were appointed by the Commission as peer reviewers to assist with the process, bringing engineering, construction, management, governance and government processes skills to the table. The review began in mid-October.

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

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1. Executive Summary

In August 2020¹, the New Zealand Government asked the New Zealand Infrastructure Commission, Te Waihangā to oversee an urgent and wide-ranging Interim Review (IR) into the Transmission Gully Project (TGP). The IR's focus was 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.

This 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 the IR is set out in the Terms of Reference (ToR) which is publicly available (see Section 1.2.2). In summary, the IR's scope was on the project development and procurement process requiring consideration of three focus areas (and specific matters). The scope excluded project implementation and value for money matters.

Review Focus Area	Specific Matters
Business Case	• Development of the Public Sector Comparator (PSC), specifically was the budget in the business case supported by a reasonable analysis and assessments of costs and risks • Commercial case for the selection of the Public Private Partnership (PPP) model
Risk Transfer	• Whether the Affordability Threshold (AT) was sufficient, and how it was set and approved • Whether the consenting strategy was appropriate, including the allocation of consenting risk and the impact Consenting Authorities may have had on project outcomes
Governance & Timeframes	• Whether sufficient time was allowed for approvals, commencement and completion of the tender process • Whether the project governance structure had the knowledge and experience of delivering PPP construction projects

We understand one of the main reasons for establishing the IR was in response to concerns about TG's delays and increased costs. To answer that question, we have identified four primary causes:

- A consented, non-PPP scheme design was used to procure a PPP project. This meant, in our view, that it was inevitable cost changes would occur as the TGP was better defined and an inputs-focussed design was adapted through PPP procurement to focus more on service needs and performance standards;
- The AT was set too low. The RFP Respondents realised this early in the RFP phase which saw Waka Kotahi revise the PSC and AT during the procurement phase. Also, and importantly, the decision to set the AT too low resulted in bid-responses that were value managed down (e.g. on design and timelines, as the main examples) to fit the AT number. These value-management changes represented risks that would eventually manifest themselves after procurement once construction commenced;
- Consenting risk could have been better managed by all the parties involved. In terms of Waka Kotahi's role, there was no formal/documented consenting strategy, the RFP issued to RFP Respondents was based on a Board of Inquiry (BOI) consents for a non-PPP project, which meant many of the 355 designation and resource consent conditions covered in the issued RFP would have required revisiting with consequential design, scheduling, and cost impacts; and
- From the review documents and interviews, we saw information that indicated that the TGP project governance could have been better, particularly the transparency as to how key PPP decisions were made. As we have raised already above, the main example we saw was that it appears the Project Team made the decision to set the AT – we expected to see stronger checks and balances when making key PPP decisions, particularly the clear articulation of the consequential impacts from setting the AT too low.

Note, we did identify that Waka Kotahi did initiate several design and safety changes during the procurement phase. We categorised these design changes as secondary causes to the increase in costs. Our reasoning for this view is that changes to the PSC post the Detailed Business Case (DBC) phase is a normal part of the PPP development process (and for non-PPP projects as well) as more detailed information becomes available.

Having made the above comments, we note that Waka Kotahi has embraced positively and diligently the need to ensure lessons learnt from the TGP are largely captured to improve future PPP road projects – this is happening with the Puhoi to Warkworth (P2W) project for which Waka Kotahi should be commended.

¹ See Joint Ministers Media Statement (released 21 August 2020) - <https://infracom.govt.nz/assets/Uploads/Review-into-Transmission-Gully-announced.pdf>.

We also have another observation – the review facts show that, in a very short period of time, Waka Kotahi was required to prepare a PPP DBC using a consented scheme design developed for non-PPP delivery. If a “PPP-version” of the TGP had started around 2009, when the use of PPP was first signalled by the then Minister of Transport, then possibly the development of the TGP would have been more influenced by PPP requirements, potentially avoiding some of issues that the TGP has encountered.

Based on our review findings, we believe there are several changes that could be made by Waka Kotahi for future PPP projects, and also to aspects of New Zealand’s PPP policy management. Table 1 (below) summarises our Review recommendations.

Table 1: Summary of Review Recommendations

1. Business Case (BC)
BC1. Waka Kotahi include an outline of a Service Need Specification in future road PPP business cases. BC2. Waka Kotahi consider developing benchmarks (both from local and international PPP experience) on ranges of estimated O&M costs and project risks for comparable motorway projects. BC3. Te Waihanga considers publishing additional information for internal and external stakeholders related to the use of the PPP model.
2. Risk Transfer (RT)
RT1. Te Waihanga considers reviewing the definition of the PSC to provide clearer guidance that it represents the most efficient likely method of providing the defined output currently available to the public sector. RT2. Te Waihanga considers developing whole-of-government PPP guidance on improved governance and delegations for the setting and approval of the AT. RT3. Waka Kotahi considers developing for future PPP projects, a structured consenting strategy document as a key project control document/artefact, including for use in procurement/tender documents.
3. Governance & Timeframes (GT)
GT1. For future PPP projects, the Waka Kotahi Board should receive advice on a proposed PPP project governance approach and endorse a recommended governance structure. GT2. To ensure separation of decision making and clarity of roles and responsibilities, an approved PPP decision making matrix and responsibility assignment (RACI) document should be ratified by the Waka Kotahi Board for future PPP projects, with management and currency maintained by a lower-level governance group. GT3. The Waka Kotahi Board should consider appointing their own specialist and experienced PPP adviser (reporting directly to the Board) that can provide independent and open advice on PPP project matters when presented to the Board. GT4. The Waka Kotahi Board considers forming a board sub-committee with the charter to focus specifically on PPP project matters, so that important project decisions can be discussed independently of standing agenda items and other important matters. GT5. Te Waihanga considers developing model guidelines on PPP project management structures to assist line agencies when developing PPP governance structures. GT6. Te Waihanga considers a whole-of-government PPP policy requiring all departments, agencies and authorities delivering projects using the PPP delivery model to ensure their proposed PPP governance structures are based on benchmark/model PPP governance structures, with departures clearly explained with supporting reasons/justification.

With reference to our Review’s key focus areas, our high-level findings behind the above recommendations are summarised below (with detailed information provided in Sections 3, 4 and 5).

- **Development of the PSC**

Our view is that the budget presented in the 2012 PPP DBC was based on a reasonable supporting analysis and assessments of costs and risks, given the circumstances that the Project Team were facing at that time. Costs and risks were considered when developing the PSC which, using the definition available at the time to the Project Team, is the risk adjusted capital and operating costs of the project if it were to be delivered by Waka Kotahi, NZ Transport Agency using conventional procurement methods.

We noted from the review documents that Waka Kotahi were asked during a very short period of time (i.e. between August and September 2012) to convert what effectively was a non-PPP project, with an existing consented scheme design, into an initial PSC estimate that could be used to inform the DBC to confirm PPP delivery for the TGP. This

situation meant Waka Kotahi had to use a design that was less developed than what they would normally include in a DBC.

Further, Waka Kotahi was also using project information that was not framed around a “PPP-lens” – for example, it is usual to see the outline of a Service Need Specification in a PPP detailed business case. Not having an outline Service Need Specification means that cost changes inevitably occur during the later procurement phase as a Service Need Specification is prepared, to inform the tender documents to which bidders are required to respond. A Service Need Specification is a vital element in PPP project’s development, as it sets outcomes and services to be delivered, and performance standards to be met, which together influence whole-of-life project costs. As we raise later under Consenting Risk, the facts show TGP prior to August 2012 was developed on a non-PPP basis which means important PPP definition work (such as the Service Need Specification) were not done when the consented scheme design was developed (which was subsequently used to inform the PSC estimate in the DBC).

The one area of difference in the business case’s costing methodology that we identified was for Operating and Maintenance (O&M) costs. The review documents explained that Waka Kotahi assumed a network/marginal costing approach to recurrent O&M costs – this is fundamentally different to the approach normally taken by a PPP consortium who would focus on specific recurrent costs and performance-related risks needed to maintain the TGP section as a standalone project from the rest of the road network.

We could not identify from the review documents if any PPP-benchmarking of O&M costs and estimates of transferred risk had been done for the DBC. We believe that Waka Kotahi should consider developing a cost and risk benchmarking database to assist managing their portfolio of road availability PPP projects. Note, we have also commented further under Other Matters about benchmarking once Transmission Gully (TG) commences the services phase after September 2021 (i.e. the revised date for construction completion).

The review documents showed Waka Kotahi advised the Waka Kotahi Board (Board) in December 2012 (after the PPP DBC was approved) of a planned review of the PSC in the first quarter of 2013, and that it was likely the PSC would change as the TGP was better defined as more information became available. A second review of the PSC was needed in August 2013 mid-way during the Request for Proposals (RFP) phase. This second review was in response to RFP Respondents’ feedback that they were having difficulty meeting the AT figure set by Waka Kotahi. The main reasons for these second-round changes appear to centre on:

- Waka Kotahi-initiated changes to design requirements that were not in the consented scheme costing, mainly around an increase in the design speed to 110 km/hr (from the 100 km/hr design speed in the consented scheme estimate), road safety requirements, and revised structural requirements for bridges; and
- More detailed information coming to light, particularly as both RFP Respondents conducted their own due diligence on the seismic and geotechnical conditions to inform their technical solutions, as well as their view on how they would need to manage their consent obligations.

Our advice is that post-business case reviews of the PSC are common practice in PPP procurements. Our view is the post-business case reviews of the PSC were structured in-nature and would normally occur during a project’s development (and also possibly if TG was implemented using non-PPP delivery methods). For example, the review documents show a total of \$151.5 million in changes to the PSC from the two cost reviews with the main changes covering:

- Changes to inflation estimates (\$32 million);
- Waka Kotahi-initiated scope changes, including changes to road design standards (\$69.2 million); and
- Changes to risk allocations including road safety, seismic and geotechnical (\$21.3 million).

Our main observation, though, is that the second review of the PSC in mid-Aug 2013 was triggered by concerns raised by the RFP Respondents about meeting the AT. Potentially, some of these cost impacts could have been incorporated into the first cost review of the PSC if they had been considered in more detail.

For example, from the review documents we identified the changes due to the design speed were being flagged by the Project Team in the weeks leading up to the release of the RFP in May 2013. From review documents, it appears that the revised design changes required confirmation in order to be included in the RFP documents, or potentially delay the issue of the RFP documents. The review documents record a decision made by the Project Team to include a revised design speed of 110 km/hr in the RFP documents and that the PSC risk allocation was sufficient to cover this requirement. The review facts, however, showed that the PSC costs needed to increase to allow for the greater design speed.

Our other key observation is that the record of that decision made by the Project Team regarding the cost impacts of changes to the design speed could have been supported by more detailed information. Further, such an important PPP decision should also have been endorsed by a higher-level governance group above the Project Team.

- **Commercial case for the selection of the PPP model**

Our overall opinion is that the commercial case used to justify the PPP model in the DBC to deliver the TGP was based on internationally accepted approaches and was informed through a structured decision-making process using valid qualitative and quantitative PPP assessment criteria.

Our only observations regarding the PPP commercial case relate to what we think could be clearer explanations for stakeholder groups on the following aspects of using the PPP model:

- The primary purpose of PPP business case is to decide if a PPP procurement is worth doing – a PPP business case does not, however, guarantee “cost certainty”. It is usual during the procurement of PPP projects that costs will change as the project is better defined. We note the latter point can also apply to non-PPP delivery of major and complex infrastructure projects;
- The strategic policy/funding considerations about how to accelerate delivery of nationally significant infrastructure (such as the TGP) sometimes involves governments considering more borrowings, and that the PPP model represented a structured way of linking increased borrowing to better quality infrastructure and performance standards; and
- Using the PPP delivery model does not mean the financing impact for the commercial case is based on 100 percent private financing. If under non-PPP delivery the government would have financed a project through government borrowings, then technically the cost of private sector finance using PPP delivery is the difference between the risk-adjusted private and public sector borrowing rates.

- **Whether the AT was sufficient, and how it was set and approved**

Based on the review documents and interviews conducted, we conclude that the setting of the AT was done using a lower P-value of the PSC approved by the Board as the borrowing/funding limit for TG, with the aim of driving the RFP Respondents’ behaviour in the achievement of innovation and efficient whole of life solutions. (Note, in simple terms a “P-value” is a probability-based cost estimate that assumes a project’s total cost will not be exceeded – i.e. an “upper limit”).

This “innovation and efficiency” principle may be double counting insofar as a definition of the PSC should represent the “efficient” method of the government delivering the PPP project to the same specification and performance expected by the private sector. Consequently, the TG Project Team may not have fully appreciated that using the risk-adjusted PSC would have served their intended purpose of setting an “innovation and efficiency” target. As a result, the TG Project Team effectively set two “efficiency” targets (i.e. a risk-adjusted AT and risk adjusted PSC).

We think the Project Team may have been genuinely working to put a definition in place for the AT that was not available in the New Zealand PPP Policy at the time. However, we did note in the review documents another Project Team view that setting an AT too high created a risk of “gold plated” responses from the PPP market.

In terms of how the AT was approved, the review documents show that the Project Team made the final decision on where the AT was set. Whether any one member of the PT took the lead in this is unclear. We could find no evidence that this decision was either recommended to or endorsed by any higher level governance group. The Board appears only to have been advised that the AT was set using a (lower) P-value of the PSC to drive additional value.

Our view is the impact of setting the AT too low had major implications for the TGP – that is, RFP Respondents would have thought to be successful they had to “chase the AT”. RFP Respondents were driven to submit a price set by the AT by value managing design and timelines in their bids (as main examples). We believe the risk and financial implications of making these value management changes would be reflected later in the construction phase when cost and timing pressures became evident.

Note, the review documents showed that the Board were advised by Waka Kotahi of the lesson learnt feedback that the tight AT had a direct impact on both commercial and technical aspects of bids, but it was considered that a tight AT is part of driving a good value solution and that these impacts are part of the process. Our view is the AT-related impacts and the confirmation that they were part of the process, as advised to the Board, did not appear to be the impacts that actually transpired.

- **Whether the consenting strategy was appropriate, including the allocation of consenting risk and the impact Consenting Authorities may have had on project outcomes**

Our observations on this specific matter based on the review documents and interviews are:

- The DBC only contains a one-page statement outlining the TGP’s “consenting strategy”. We did not see a formal project artefact that we would class as a *management* strategy for consenting risk, which also could have been used to provide more information to the RFP Respondents on what they needed to take into consideration when developing their RFP responses regarding managing consents;
- The TGP Agreement risk allocation matrix reflected a *contractual* strategy that all consenting risk is transferred to the PPP Consortium. This contractual strategy appears fine in-principle, but it is an approach structured on a

risk allocation of BOI² approved consents rather than the different requirements that were set as part of the RFP documentation and which came to light during the Preferred Bidder phase (and eventually into the construction phase);

- In effect, we believe the RFP issued could be considered to be an “unconsented RFP”, given the number of changes that were required to be made. The review documents we saw listed a total of 355 designation and resource consent conditions requiring attention, and these conditions would all have needed to be factored into the detailed design for TG and preparation of outline (management) plans for implementing consents. Added to these 355 conditions were the subsequent consents, and changes to conditions from the local/regional government required to implement the BOI approvals and other conditions. Working through all these issues would have time and cost implications for TG;
- Waka Kotahi was aware during the procurement phase of the need for the Preferred Bidder to put more effort and resources into managing their consent obligations and took active steps to work with the Preferred Bidder to work on this aspect of their performance. However, this effort was being focussed after a Preferred Bidder had been selected when all parties would have been focussed on achieving Financial Close – obviously and in hindsight, providing more consenting-risk information and assistance to RFP Respondents earlier in the procurement process would have been a better approach; and
- The impact of consenting authorities is perhaps better explained as the responsibility left to the five local/regional authorities to manage the implementation of the BOI-approved consents. The review documents and interviews suggest these parties were genuinely trying to implement the intent of the BOI conditions, but there may not have been a common understanding amongst all project participants about how this was to be done in a coordinated and collaborative manner. Added to this the obviously challenging situation is that the local/regional authorities were also themselves coming up to speed with the availability PPP model and a major road infrastructure project.

Our overall observation from the review documents and interviews is that the TGP’s consenting strategy clearly could have been better managed by all parties involved. For example, this includes both improving information to the market about their consenting obligations, but also using a “flexible” consenting strategy that aligns the consents with an outcomes-focussed procurement rather than being directly linked to a particular road design. These and other consenting management issues was reflected in lessons learnt information provided in the P2W DBC about how consenting would be done differently for P2W compared to the TGP. We specifically note Waka Kotahi has actively worked to implement many of these lessons learnt to ensure consenting risk is better managed for future PPP projects.

• ***Whether sufficient time was allowed for approvals, commencement and completion of the tender process***

Our opinion is that generally the procurement timelines for TG were in line with international examples for similar road and availability PPPs. None of the interviewees highlighted major concerns to us regarding this focus area. The procurement timelines appeared to us to be benchmarked to example PPP procurements, and took into consideration that a drawn-out PPP tender has cost implications for the private sector participants.

Our view is the procurement timetable outcome was a major achievement given TG: (i) was the first road availability PPP by the New Zealand Government and for Waka Kotahi as an organisation, and (ii) is a highly complex infrastructure project and transaction.

• ***Whether the project governance structure had the knowledge and experience of delivering PPP construction projects***

From the review documents and interviews, we saw good work by Waka Kotahi to mobilise quickly after the November 2012 decision to proceed with a PPP to procure experienced resources, leverage existing New Zealand capability and experience in PPPs, and set up an initial project governance structure. Waka Kotahi’s ability to mobilise quickly and set up a project team management structure reflects its extensive capital works delivery experience.

We believe that the governance structure used for the TG PPP was an amalgam of how Waka Kotahi would traditionally deliver a major infrastructure project supplemented by PPP-specific advice. While we can appreciate that Waka Kotahi put in place a governance model that could have the best interfaces/alignment with the rest of the Waka Kotahi business, we think for a first availability PPP project that Waka Kotahi should have relied more on a benchmark PPP governance structure.

Our view is that the TGP governance structure may have inadvertently led to some expert advice not being heard at some of the right forums, or at the right time. This result can happen if (as reported in the Lessons Learnt reports about feedback on the TG procurement) a governance structure is perceived as complex, with multiple groups involved, and the respective roles/distinction between them is not clear. From the review material, it appeared to us

² In New Zealand, nationally significant developments seeking approval under the Resource Management Act 1991 (RMA) may be assessed and approved by a Board of Inquiry. The RMA is the key legislation governing the assessment and approval of development in New Zealand, including major projects.

the project governance structure could have had much clearer lines of distinction between governance/decision making versus advisory/management functions. The lack of such clarity not only results in a perception of a complex governance structure, but the real problem then becomes that the governance could possibly see too little of what they should be seeing - not just details but whole areas of decisions. Two examples of the latter we raise in this Report include setting the AT and sufficiency of risk allocations in the PSC to meet the increased cost associated with design changes.

To us, this suggests a governance structure that could have been tighter, particularly around who was making and approving key PPP recommendations. Our main example was the responsibility given to the Project Team to set the AT when the TG PPP decision making matrix assigned that responsibility, in the first instance, to a governance body above the Project Team. Even if the setting of the AT was “assigned” to the Project Team, this was not, in our view, clearly reported to the Board – this means a basic governance control of separating the setting of recommendations and approval/endorsement was not followed.

Another example we identified is the insufficient level of detail relating to the decision made by the Project Team to include a revised design speed of 110 km/hr in the RFP documents and that the PSC risk allocation was sufficient to cover this requirement. The review facts, however, showed that the PSC costs needed to increase to allow for the greater design speed.

Based on the above findings, we believe, for future PPPs, project governance and reporting to the Board should be reviewed and improved. This should include the Board endorsing a recommended PPP project governance structure and delegation matrix setting out roles and responsibilities for key PPP decisions.

We also noted from the review documents that the Board did not appear to have its own independent PPP adviser but instead relied on briefings from Waka Kotahi management, senior Project Team representatives, and experienced Project Team advisers (when invited to Board meetings for key decision papers). We believe the Board should appoint their own specialist and experienced PPP adviser, who would provide the Board with an independent view. Importantly also, the role of an independent adviser should be to flag to the Board PPP matters that it should be interested in.

We also note that during the TGP procurement, the Board would have been considering important PPP issues at the same time as normal Board matters. Our suggestion is that the Board may want to consider if a board sub-committee should be given the charter to deal with detailed PPP matters and report to the Board when key decisions are required.

In addition to the IR scope, we have summarised in Section 6, areas of best practice that we observed together with several “Other Matters” that Te Waihangā and key stakeholders may wish to consider. Our key recommendations raised in Other Matters are:

Benchmarking of Services in the PPP Contract

- The Board seek a briefing on benchmarking of the TGP-contract services in the lead-up to the completion of the TGP construction in September 2021, including how the benchmarking provisions in the current TGP contract will provide assurance to the Board that value-for money is being demonstrated during the services phase of the TGP; and
- Te Waihangā considers whether PPP five-year benchmarking provisions should be included in PPP guidance material available for government agencies, including a “departures” policy in circumstances where these benchmarking provisions are not being considered.

Establishing a PPP Contract Management Framework

- Waka Kotahi prepare for the Board’s consideration an implementation plan for establishing a PPP contract management framework and function to manage and monitor the services-phase of the TGP. The scope of this implementation plan should include both the TGP-specific contract obligations and also integration dependencies with network operations and management.

Use of the AT in the Value-for-Money Evaluation

- Te Waihangā considers whether future TGP reviews should also include lessons learnt from the use of the AT in the value-for-money evaluation.

We would like to thank all interviewees for their participation and assistance, and Te Waihangā for providing project support to deliver this IR. Once TG is opened for use, we expect users will be commenting on the improvement in the “travel-experience”. TG has been a difficult, first availability PPP for Waka Kotahi to deliver but the learnings have been largely captured and are being used positively to improve PPP capability and knowledge in their subsequent projects. Also, good and capable people have been involved in helping to get the TGP delivered – that commitment has also come from the PPP participants. The key challenge we now see for Waka Kotahi is making sure, post construction, that they have a focus on long-term contract management that is about how value-for-money and performance are to be monitored and measured for commercial outcomes over the long-term tenure of the TGP infrastructure investment.

2. Background & Review Scope

2.1. Background – Transmission Gully Project

The TGP is a four-lane, 27-kilometre motorway that will run from Mackays Crossing at Paekākāriki to Linden. Originally comprising part of the Wellington Northern Corridor of the Roads of National Significance (RONS) programme, the TG motorway will act as a catalyst for economic growth in the Wellington region by bypassing the existing coastal route and thereby increasing road safety and improving network reliability with high levels of seismic resilience.

Key benefits of the TGP include:

- Providing an alternate and resilient transport corridor to and from Wellington;
- Reduce travel time, variability and congestion for motorists on State Highway 1 and the existing coastal route, and improve safety within communities like Porirua by significantly reducing through traffic;
- Significantly reduce the number of fatal and serious injury crashes, and provide a more reliable and safer journey for all transport users; and
- Facilitate economic development within the region and nationally.

TG is the first motorway in New Zealand to be delivered on behalf of the New Zealand Government under a PPP using the availability PPP model (but was the third availability PPP project at that time in New Zealand). In July 2014, Waka Kotahi signed a PPP contract with the Wellington Gateway Partnership (WGP) (a private consortium of construction contractors, operations and maintenance providers, and financiers) to design, construct, finance, and then operate and maintain the new motorway for 25 years following the construction period.

Under an availability PPP, whole-of-life services are purchased under a single contract with annual service payments made by Waka Kotahi to WGP based on availability and performance of the TG motorway. These annual service payments only commence once the TG motorway is certified as ready for operational use. During the 25-year services period, WGP is required to maintain the TG road to defined performance standards and, at the end of the services period, hand back the asset to Waka Kotahi in a certified, fit-for-purpose condition.

TG is a highly complex project, with difficult and steep terrain requiring large-scale earthworks during construction of the project, together with significant seismic and geotechnical risk factors. The scope of project works includes:

- The design, finance and construction of a 27-kilometre long expressway-standard motorway just north of Wellington, with a 25-year operations and maintenance contract;
- The design and delivery of 25 bridges and culverts (the largest of these structures, the Cannons Creek Bridge, will stretch 230 metres in length and sit 60 metres above the valley floor), four interchanges and two connecting link roads, and the movement of 10.2 million cubic metres of earth during construction of the project; and
- More than 534 hectares of ecological mitigation areas and 27-kilometre of stream remediation, restoring native landscapes and mitigating the sedimentation effects of the project on waterways.

The TG motorway is scheduled to be open for traffic in September 2021.

2.2. Review Scope & Terms of Reference

Table 2 (below) sets out the specific items to be covered under the ToR's three focus areas.

Table 2: Review Terms of Reference - Focus Areas of the Interim Review

Review Terms of Reference – Focus Areas
1. Business Case Whether the budget presented was based on reasonable supporting analysis and assessments of costs, including appreciation of the inherent and contingent risks and their associated financial implications. Particular consideration should be given to: i. The development of the PSC; and ii. The commercial case for selection of the preferred procurement model and the rationale for doing so.
2. Risk Transfer Whether key risks were appropriately allocated and communicated, with consideration to be given to: i. Whether the AT was sufficient given the nature of the risks transferred to the Contractor, including how was it set, the decision making pertaining to that process and the authorising environment, and what can be learned from the influence the AT had on the procurement; and ii. Whether the consenting strategy was appropriate, including the allocation of consenting risk and the impact Consenting Authorities may have had on project outcomes.
3. Governance and Timeframes i. Whether sufficient time was allowed for approvals, commencement, and completion of the tender process so as to allow the tendering parties to fully understand and appraise the project risks and Waka Kotahi to understand the nature of the proposals; and ii. Whether the project governance structure had the knowledge and experience of delivering PPP construction projects (including the nature of risks transferred to the private sector), to effectively oversee the project and address issues in a timely fashion.

In addition, this IR was also asked to identify areas of best practice that were implemented either during the business case, procurement, and/or delivery phases of TGP.

2.3. Review Exclusions

Project implementation and value for money matters were not included in the IR scope.

2.4. Review Methodology

Figure 1 (below) sets out an overview of the IR methodology conducted from mid-October 2020 to January 2021.



Figure 1: Overview of Review Methodology

The IR was structured around the following three key phases:

- An initial project inception phase focussed on an initial document review, preparation of a project inception report, developing an initial list of interviewees, developing interview questions to assist interviewees and scheduling interview sessions;
- A second phase comprising interviews, additional document reviews, scheduling of additional interviews and amended/refined interview questions, and progressive collation/discussion of key review themes based on supplied review documents and interviews; and
- A reporting phase involving preparation of draft and final reports, including consultation and feedback.

2.5. Approach to Presenting the Review's Analysis & Findings

As explained in Section 2.4 (above), this IR has taken into consideration information sourced from review documents and interviews. (i.e. Review Evidence). We have summarised this information to identify key review themes (and recommendations) relevant to the IR's three focus areas. To assist readers of this Report, we have structured the presentation of the IR's analysis and findings (as set out in Sections 3, 4 and 5) using the following approach:

- What relevant information did we identify from the review documents?
- What relevant information did we identify from the interviews?
- Based on the review information, what are our conclusions/findings?

2.6. Interviewees

Interviews were conducted over a six week period, with a broad range of interviewees contacted to help inform the IR's understanding of the key issues relevant to the IR's scope and focus areas. The individuals involved in interviews either represented or were ex-employees of the following organisations/groups ranging from Crown representatives and advisers, Councils, and the private sector:

- Waka Kotahi, New Zealand Transport Agency;
- New Zealand Treasury;
- Advisian;
- PricewaterhouseCoopers;
- Russell McVeagh;
- Bond Construction Management;
- Bank of New Zealand;
- Accident Compensation Corporation;
- Greater Wellington Regional Council (GWRC);
- Wellington Gateway Partnership (PPP) Consortium; and
- Positive Connection (PPP) Consortium.

Key criteria used to determine the pool of interviewees included:

- Involvement in the phases covered by the IR's scope (i.e. the business case and procurement phases), having a substantive role in the Crown Project Team and/or key decision forums;
- Industry involvement in the Expression of Interest (EOI) and RFP responses; and
- Parties/organisations with an interest in the New Zealand PPP and major infrastructure sectors.

Appendix A to this Report provides a high-level summary of the interviewees and their project roles. Note, GWRC declined the opportunity for an interview and instead provided a written response to selected interview questions.

2.7. Documents Reviewed & Confidentiality

Appendix B to this Report summarises the key project-related documents taken into consideration during the course of the IR and the preparation of this Report. The scope of these documents covered:

- Waka Kotahi Board papers and minutes;
- Project Team meeting papers and minutes;
- Waka Kotahi internal memorandums;
- Expert advice provided by the Crown's advisers;
- Cabinet submissions and decision;
- Cabinet briefing papers;
- Ministerial briefing papers; and
- New Zealand Government policy papers and guidelines relevant to the TGP.

As a general principle, our approach to document discovery was to rely mainly on the provision of documents by Waka Kotahi as appropriate custodian of the relevant project records/documents.

The following information and confidentiality protocols were established to manage the collection and use of Review Evidence, and use of relevant information in this Report:

- Confidentiality agreements were signed by review persons before accessing review documents;
- A secure document directory was established between NineSquared and Te Waihangā to store all supplied review documents and detailed summaries of the review documents;
- Recognising that some Waka Kotahi Board papers are confidential and legally privileged, legal advice and extracts of legal advice will not be published or summarised;

- For Gateway Review reports provided for review, copies of these reports have only been provided to Reviewers and other agreed persons. Specific extracts from the reviews have not been included in this Report to respect the confidentiality and independence-principles of a Gateway Review; and
- In keeping with accepted Gateway Review Principles, no specific attribution has been made in this Report to any of the interviewees unless consent was given.

Also, given the commercial-in-confidence nature of project costings to Waka Kotahi's business, we have presented only changes in cost lines.

2.8. Key Project Timelines/Milestones Relevant to this Review

Given the IR's focus is only on TG's development and procurement process, Figure 2 below sets out key milestones and dates covering the IR's scope.

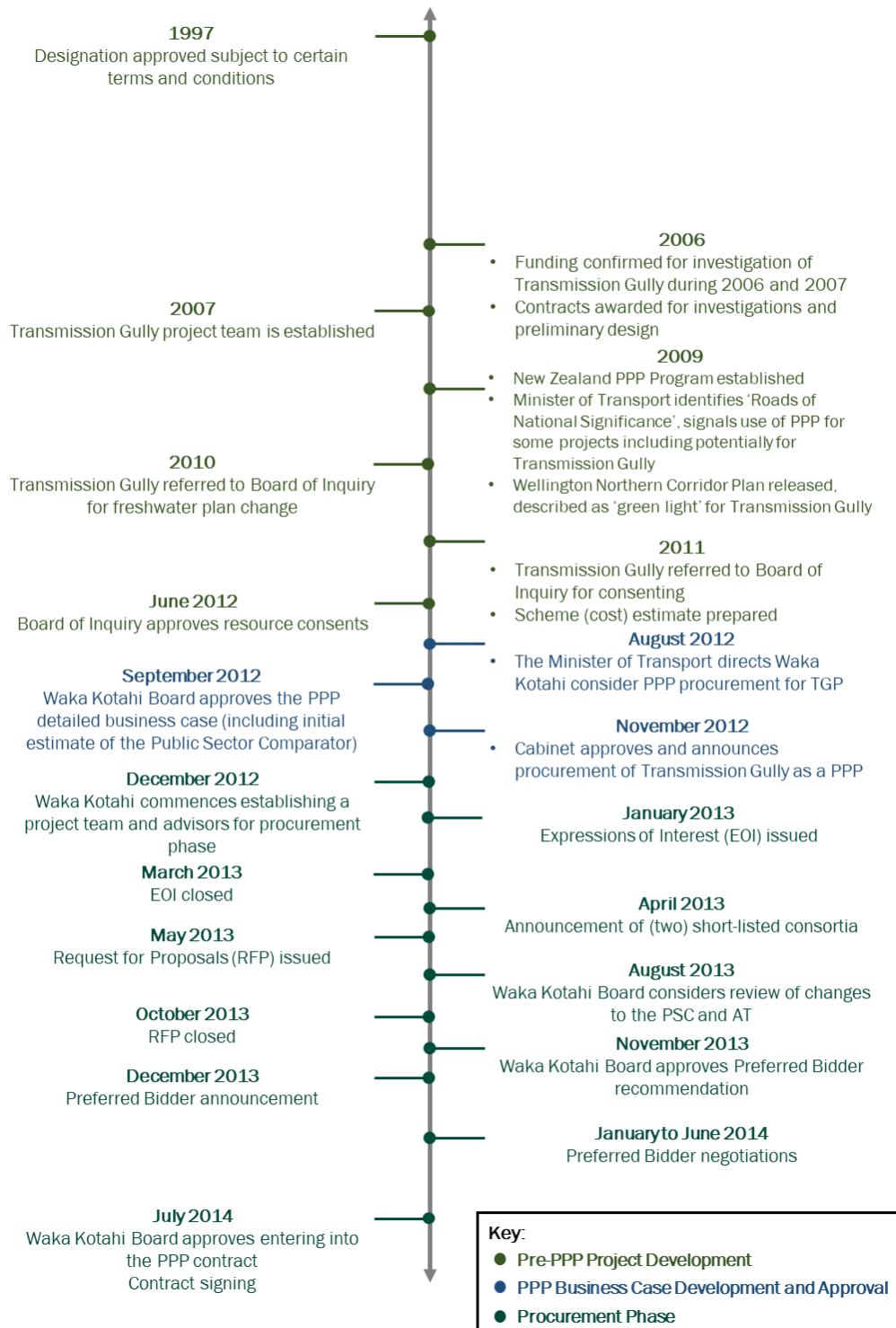


Figure 2: Key Milestones & Dates – Scope of Review ToR

3. Review Focus Area – Business Case

3.1 Introduction

For this Review focus area, we were asked to consider whether the budget presented in the DBC was based on a reasonable supporting analysis and assessments of costs, including appreciation of the inherent and contingent risks and their associated financial implications.

Specifically, we were asked to give particular consideration to:

- The development of the PSC; and
- The commercial case for selection of the preferred procurement model (i.e. PPP) and the rationale for doing so.

Our analysis and findings on the above two matters is provided below.

3.2 What relevant information did we identify from the review documents?

Review documents - Development of the PSC

In considering the development of the PSC in the DBC, we focussed on the two items specified in the IR scope as to whether the budget in the DBC:

- Was based on a reasonable supporting analysis and assessments of costs; and
- Had appreciation of inherent and contingent risks.

Budget in the business case supported by a reasonable analysis and assessments of costs

To assess the work done during the PPP DBC stage regarding PSC cost lines, we firstly had regard to the following definition of the PSC available at that time (i.e. sourced from the 2009 New Zealand PPP Guidelines).

“...The PSC is a measure of what the project would cost if delivered through conventional procurement.

The PSC is made up of:

- *the construction and operating costs of a project, plus*
- *provision for competitive neutrality adjustments to remove any advantages or disadvantages that accrue to a public sector procurer by virtue of its public ownership, plus*
- *provision for any additional costs and risks that would be transferred to the private sector partner under a PPP. These risks need to be added as a cost to the PSC because the public sector party would bear the cost of any risks that occur under conventional procurement...”*

Source: Guidance for Public Private Partnerships (PPPs) in New Zealand: NZ Treasury, October 2009 V1.1, page 14.

Note, the above 2009 definition of the PSC is essentially similar to the following slightly more expanded definition provided on page 2 of the 2015 version of the New Zealand PPP guidelines, i.e., “...*The PSC is an estimate of the risk adjusted whole of life cost of a project if it were to be delivered by the procuring entity using conventional procurement methods...*”. We note that the 2009 PPP Guidelines available to the Project Team during development of the PSC only provide a very high-level summary of the PSC and how it is developed. However, those 2009 PPP Guidelines explain to readers that the Australian National PPP Guidelines (i.e. Volume 4: Public Sector Comparator Guidance) is a useful guide for putting together the PSC.

For the purpose of this part of the IR, we use the whole-of-life costing components comprising TGP’s construction and operating cost estimates as the main definitional element of the PSC. We noted from the review documents that an assessment was prepared of the competitive neutrality adjustment, but we did not explore this cost line in any detail as it forms part of the value for money assessment (which is outside of the IR scope). For risks transferred to the private sector partner under a PPP, we have provided a response when we considered the appreciation of inherent and contingent risks.

In terms of the analysis and development of PSC costs, from the review documents we identified the following facts:

- The development of the PSC had three distinct stages where costs were reviewed and changed;

Changes to the PSC - Three Stages		
Development of the 2012 PPP DBC	Planned review in March/April 2013	A second review in August 2013 mid-way through the RFP phase

- The 2012 DBC was prepared in a relatively short period of time between August 2012 and September 2012, following a Ministerial direction in August 2012 to consider PPP delivery for TG;
- The 2012 DBC version of the PSC was based on a 2011 version of Waka Kotahi's "Scheme Estimate" costing of risk-adjusted construction costs – this 2011 Scheme Estimate was based on the consented scheme estimate developed for the BOI's consideration. These facts meant the 2012 PSC was based on a consented scheme design developed using a non-PPP approach;
- The TGP's commercial/financial adviser and cost adviser played key and substantive roles in developing a risk-adjusted PSC using the 2011 Scheme Estimate costs and developing initial estimates of the risk adjustments required for a PSC;
- A Service Need Specification was not done for the DBC. The 2009 New Zealand PPP Guidelines, at pages 4 and 5 respectively, note the service need is a precedent step to development of the business case and is, "...the first and most critical step in the lifecycle of any procurement project is the articulation of the service need in functional terms...";
- The PSC assumed construction works would be procured under Waka Kotahi's traditional design and construct model contract (which includes a competitive bidding process);
- Waka Kotahi advised the Board in December 2012 that the 2012 DBC's PSC would be subject to a parallel estimate (cost) review, and that there was strong possibility that the parallel estimate may be different to the scheme estimate. Also, the Board was advised that the parallel estimate review was to ensure that the PSC estimate was as robust as possible;
- The first review of the PSC in March/April 2013 was informed by an independent cost review. This independent cost estimate was based on the 2011 Scheme Design and schedule of quantities. In summary, the construction cost increased by \$77 million (or 12 percent) with the following major cost line changes:

March/April 2013 Review of the PSC – Major Cost Line Changes	
Environmental, earthworks and ground improvement	
Pavements	
Bridges	
Retaining Walls	
Services Relocations	
Weigh Stations and Weather Stations	
Interchanges and Link Roads	

- This upward change in the PSC's construction cost is summarised in Figure 3 (below):

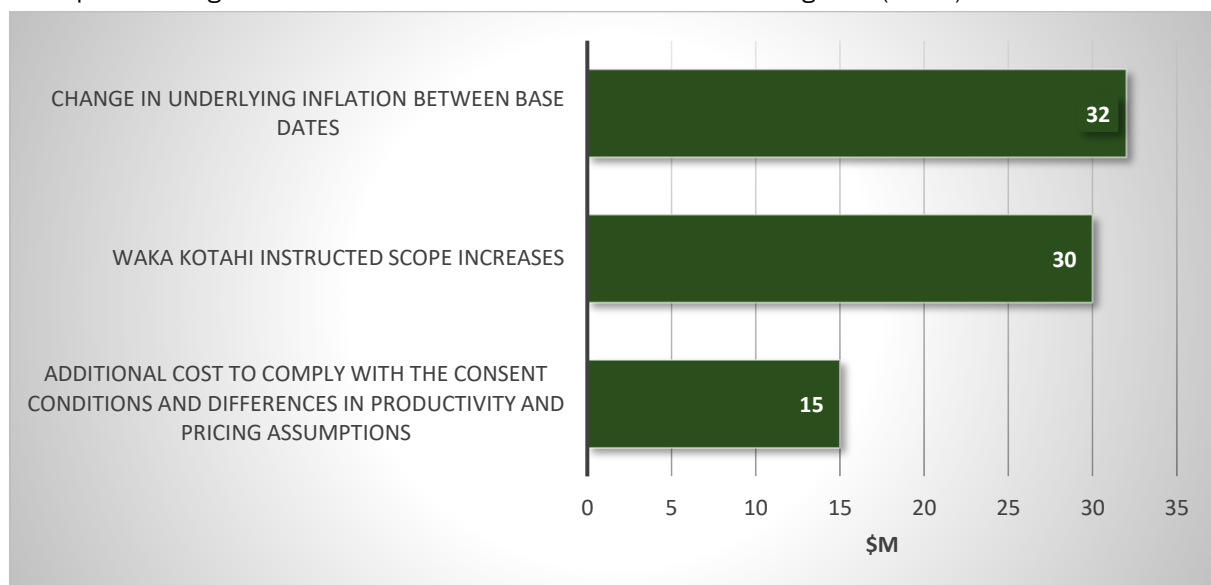


Figure 3: March/April 2013 Review of the PSC - Main Changes

- In this first PSC review, the separate risk allowance contingencies for site, design and construction risks and O&M risks were decreased by \$53 million and \$14 million respectively. Our understanding from the review documents is this change appears to mainly reflect more certainty reflected through the increase in construction and O&M cost estimates.
- The TGP's commercial/financial adviser incorporated the above capital cost changes into a revised PSC (and consequently a revised AT), summarising, "...the (PSC) update involved estimation of current prices and quantities based on the scheme design. Therefore, while the process is referred to as an update, it is more accurately a re-estimation...".

- O&M costs were also included in the scope of 2013 review of the PSC. These O&M costings assumed the TG network was costed as part of a wider state highway network, i.e. was costed on a marginal basis, rather than as a discrete stand-alone project. This was explained as being consistent with the way in which the Waka Kotahi would manage the O&M portion of the TGP;
- The second review of the PSC was considered by the Waka Kotahi Board in August 2013 (mid-way through the RFP phase) and took into account changes related to: (i) the results of geotechnical investigations; (ii) application of RONS standards and a 110 km/hr design speed; and (iii) release (by Waka Kotahi) of a revised Bridge Manual. Another independent cost review was done of the PSC at this time and reported the following:
 - "...Differences between the requirements prescribed in the PPP RFP and those of the Consented Design have been identified and highlighted during the IPP process and as a consequence, questions have been raised by the tenderers regarding the level of the AT; and
 - The (independent cost advisor) endorses the conclusion that there are significant differences between the basis of the 'consented design' and those of the PPP RFP, which in aggregate add significantly to the Base Estimate. These differences relate to increases in a variety of standards; geotechnical information showing worse than previously assumed assumptions; and some added work scope..."
- These major cost line changes (total of \$74.5 million) in the August 2013 review of the PSC are summarised below.

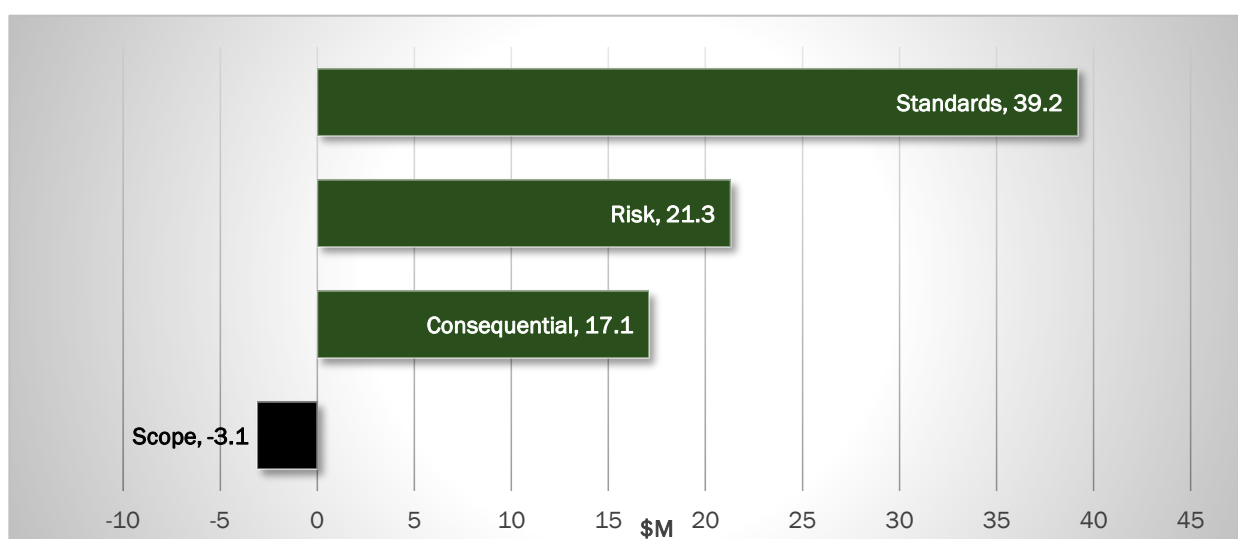


Figure 4: Second Review of the PSC (Aug 2013) - Main Changes

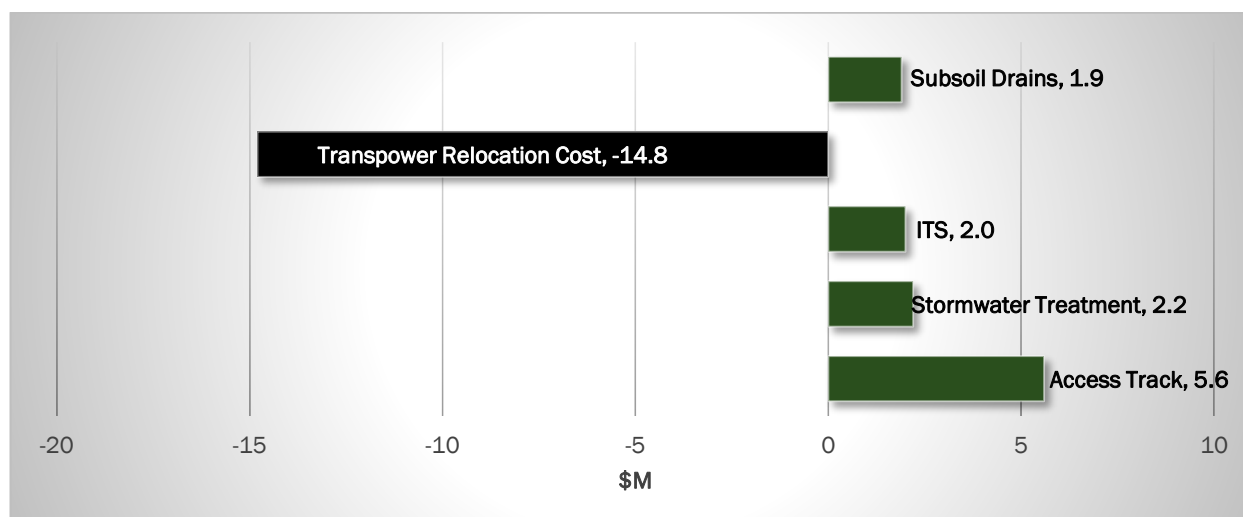


Figure 5: Breakdown of scope changes from Second Review of the PSC (Aug 2013)

August 2013 Review of the PSC – Major Cost Line Changes	
Standards	• Changes related to design speed of 110kph compared to 100kph in the consented design • RFP prescribed median and shoulder widths significantly greater than for the consented design • Side protection barriers over clear zones

August 2013 Review of the PSC – Major Cost Line Changes	
	- Revised Waka Kotahi Bridge Manual and Road Safety Audit requirements - Increased mitigation resulting from the increase in length of stream diversions - Required changes to the configuration/layout of interchanges - Additional earthworks for slopes greater than 30 metres
Scope	Net impact of cost changes related to: - Access track included in RFP but not in ‘consented design’ schedule - Allowance for extra stormwater treatment - Increased provision for VMS; traffic monitoring and CCTV - Reduction in Transpower relocation cost plus associated costs - Allowance for subsoil drains full length under pavement
Risk	- Changes in risk contingency related to changes in Road Safety Audit requirements - Changes in risk contingency related to changes in Geotechnical requirements, comprising: - investigation results identified conditions worse than previously thought, particularly at Wainui Saddle and some bridge sites, in particular Cannons Creek - liquefiable materials identified at SH58 and Mackays Crossing - investigation results indicated cut to fill materials wetter than previously assumed - revised Bridge Manual required additional seismic performance related design for bridges, particularly at abutments.
Consequential	Changes in design fee estimate to reflect additional geotechnical design and monitoring input required

- In the August 2013 briefing paper to the Board, Waka Kotahi also provided the following advice:
 - When approving the use of the PPP model in Oct 2012, the Board was advised that the estimate for the TGP was based on the Consented Scheme Design. Normal practice for Waka Kotahi is to finalise the funding envelope for a project at the Design Estimate phase, which in general is at a significantly more developed stage than the Consented Scheme phase.
 - This difference in accuracy is because with the additional design completed at the Design Estimate phase, a better understanding of scope and risk allows a more accurate reflection of the project cost and less reliance on risk assessments.
 - As such for the TGP, Waka Kotahi has been carrying the risk of the estimate being less accurate than would normally be the case when a funding decision is made. While this would be an issue under either a traditional or PPP procurement, for a PPP the reliance on an accurate estimate is also of critical importance in the demonstration of value for money.
 - The timing of the PSC review was established to provide: (i) Waka Kotahi with increased confidence in the PSC, similar to what would be achieved at the Design Estimate phase; (ii) the most accurate estimate to effectively implement the value for money test for the PPP; and (iii) provide the PPP Respondents sufficient time to reflect in their proposals thus providing the best opportunity for them to provide a value for money solution.

Appreciation of Inherent and Contingent Risks

For appreciation of inherent and contingent risks, we firstly would like to clarify these risk definitions and how they compare/contrast with Waka Kotahi’s usual contingency costing approach (as set out in Waka Kotahi’s SM014 Cost Estimation Manual for developing project cost estimates) and transferred/retained risks used in a risk-adjusted PSC:

- SM014 has two main cost lines: (i) a Base Estimate of construction costs; (ii) and two “below-the-line” contingency adjustments. The first contingency adjustment is for uncertainty in pricing and quantity estimates (e.g. inherent risk), and the second contingency adjustment is a “funding contingency” to calculate a total cost with a P95 level of certainty (in essence, to reflect other project-specific or contingent risks).
As an explanation, a “P-level” of confidence is a mathematical/statistical calculation of the likelihood of actual project costs meeting or coming under a cost estimate. Put simply, a P95 cost estimate assumes a project’s actual costs will have a 95 percent chance of meeting or coming under the expected cost estimate (or conversely, have a 5 percent chance of exceeding the expected cost estimate).
- In contrast, the PSC takes a different approach – that is, the PSC’s equivalent of a Base Estimate of construction cost includes a contingency for uncertainty in pricing and quantity estimates. Contingent risks in the PSC for project-specific risks are categorised separately as either Transferred Risks (to the PPP consortium) or Retained Risks (by the Crown).

Given the public release of the detailed project costings can potentially compromise the Government’s current and future negotiating positions on major infrastructure procurement, the publicly available version of the 2012 Detailed Business Case does not contain detailed information on the risk adjustments contained in the 2011 Scheme Estimate (i.e. Appendix C) and the 2012 estimate of the PSC (i.e. Appendix N).

However, for our review we were provided with an unredacted version of the DBC that provided us with full costing details and assumptions. We also were provided with project-related documents consisting of advisers' reviews of the PSC (as already mentioned above). From the review documents, we confirmed the following facts:

- Equivalent provisions for inherent and contingent risks were reflected in the cost estimates used in the DBC, for both the 2011 Scheme Estimate and the PSC;
- Risk workshops were conducted during the development of the business case to discuss potential project risks, with this workshop information used to quantify the proposed risk contingency adjustments;
- These risk workshops used the project risk information used to develop the 2011 Scheme Estimate, and added/removed risks to develop a revised risk profile;
- Statistical calculations were done of possible P-values of the cost estimates, with specific risk distributions assigned to individual project risk lines. P85 values of the risk adjustments were calculated and used in the PSC;
- Reconciliations were done between the 2011 Scheme Estimate and the 2012 PSC; and
- No specific mention is made in the reviewed project documents that the Transferred Risk allocations used in the PSC were benchmarked against comparable, international availability PPP road projects.

Review documents - Commercial case for selection of the PPP model

To assess this aspect of the IR, we took into consideration that the New Zealand “commercial case” approach to determining if a project is potentially suitable for PPP delivery has two components:

- 1) A *qualitative* “suitability” assessment is done comparing a project’s key features against several PPP filters/criteria; and
- 2) A *quantitative* assessment is done (i.e. using a “Proxy Bid Model”) to identify, hypothetically, the private sector’s cost to deliver the Crown’s risk adjusted reference project with the addition of private sector financing, tax and PPP specific costs. The Proxy Bid Model (PBM) is then used to establish a benchmark of likely efficiency savings/benefits that may accrue using PPP delivery.

We note that the above approach is currently used by several international jurisdictions (e.g. Australia and Canada) and was used by the United Kingdom prior to 2018.

Several project-related documents that we reviewed clearly show that the commercial case for the PPP decision was justified using both the qualitative and quantitative screening criteria. Examples of these review documents include:

- The DBC has a summary (including Appendix J) of a comparative, qualitative analysis of PPP against likely other procurement methods (e.g. D&C and Competitive Alliance). This analysis was undertaken by an experienced adviser at the request of Waka Kotahi. Ten qualitative “filters” were used in this assessment including project scale, complexity and scope for innovation, and tangible demonstration of value for money, amongst others. This Appendix J summary uses accepted PPP/procurement filters that are fair and reasonable.
- Also, the DBC provides a quantitative determination of likely PPP “efficiencies” based on the PBM calculations. The identified efficiency factors included a notional point estimate and also, appropriately, presented a range of possible efficiency outcomes.
- Waka Kotahi Board Papers explaining that TGP-specific characteristics match the following six value themes (otherwise known internationally as accepted PPP suitability criteria):
 - Innovation in design, enhanced by adopting an outcomes approach to the project;
 - Synergies between design and operation, a whole of life approach;
 - Improved risk management;
 - Outcome focused approach to delivery;
 - Improved quality and scope control in design, construction and operation; and
 - Additional competitive tension in the RFP process driven by the Special Purpose Vehicle (SPV) and lenders.

We also noted that several other Crown documents explained broader policy/funding considerations that also played a factor in the decision to consider the PPP model to deliver the TGP. These documents explained that at the time of the DBC, the Government was discussing how to maintain delivery momentum for the RONS programme in the context of then identified funding constraints with the National Land Transport Fund (NLTF). These funding constraints were as a result of the impact of the catastrophic Canterbury earthquakes, including the need to divert resources to the reinstatement of local roads in Canterbury.

3.3 What relevant information did we identify from the interviews?

Interviews - Development of the PSC

During the interviews we collected the following responses regarding the development of the PSC, specifically with relation to the supporting analysis and assessments of costs:

- One interviewee commented that it was known at the time that the PSC estimate was based on the consented scheme design that would be subject to change;
- Some interviewees noted that Waka Kotahi was able to draw upon historical capital construction cost data from their extensive history and experience in delivering roads using traditional procurement methods (e.g. D&C and Alliance contracts). As such, there was greater confidence in the capital cost estimates used in the PSC for TG;
- Several interviewees confirmed a Service Need specification had not been completed as part of the development of the Business Case;
- One interviewee noted that the consented scheme design was not developed with a “PPP lens” and was considered suboptimal as it did not reflect the new standards (e.g. Austroads and RONS) that had to be met and did not consider a whole-of-life view;
- An interviewee commented that the consents for TG were granted by the BOI in 2012 and therefore it was self-evident that it was not for a PPP consented scheme design. They noted that PPP compliant/planned consenting packages do not exist in the New Zealand context. This is because the time it takes to receive consents in New Zealand means that the procurement decision tends to come later down the track.
- No interviewees were able to confirm exactly if O&M costs used in the PSC were benchmarked when developing the 2012 PPP Business Case. Certain interviewees noted that as Waka Kotahi had delivered projects using traditional D&C's and Alliances, they did not typically consider (or collect data) on the whole-of-life costs associated with roading projects;
- Another interviewee noted that the reason for the revisions to the PSC and AT during the RFP process was that there were concerns raised by one of the shortlisted bidders on being able to meet the AT. That interviewee also noted that it was difficult to determine if this issue was genuine and material as the other shortlisted bidder's strategy involved not sharing information (presumably to avoid sharing of Intellectual Property);
- Some other interviewees commented that potential reasons for the changes in the PSC and AT during the RFP process were to reflect changes in design/scope such as adoption of the RONS standards (i.e. horizontal design speed of 110km/h) that were Waka Kotahi initiated policy changes post the DBC;
- Another interviewee commented that: (i) when developing the EOI and RFP, a lot of work had to be done to scope a whole of life understanding; and (ii) when both RFP bids came in, both priced the service element significantly differently to Waka Kotahi's own estimate; and
- The Base Estimate and O&M costing advice provided was used as input into the development of the PSC, but not all advisers may have been consulted/involved in the finalisation of the PSC as it was taken forward.

When we asked selected interviewees about provisions for inherent and contingent risks in the project cost estimates, we received the following responses:

- A provision for inherent contingency had been included in the project's cost estimates;
- The Base Estimate in the 2011 Scheme Estimate (which was used in the PSC for the PPP Detailed Business Case) excluded contingency allowances as per Waka Kotahi's SM014 costing guidelines;
- Contingency allowances (for contingent and funding risk) usually done for traditional road costings were taken into account by the financial/commercial adviser when deriving the estimates for Transferred and Retained Risks included in the PSC;
- Benchmarking of the Base Estimate construction cost was done on selected cost lines (e.g. earthworks) using experience from past projects; and
- No specific benchmarking of the Transferred Risk estimate (on comparable PPP projects) was done.

Interviews - Commercial case for selection of the PPP model

From the interviews we noted the following comments from several interviewees based on their recollection of work done during August and September 2012 when preparing the commercial case used in the DBC:

- A number of qualitative criteria (e.g. outcomes-based performance, taking a whole-of-life perspective, size of the project, opportunities for innovation) were used to assess the suitability of TG as a PPP; and
- Given the scale of the (potential) contract and the scope for innovation, TG would be the most suitable candidate for a PPP (in comparison to the Huntly Bypass and the P2W projects, which were also considered at that time as

potential options for PPP but not considered the best PPP candidates and, also because of their immediate priority, at that time, to the deliver the RONS programme).

3.4 Based on the review information, what are our conclusions/findings?

Conclusions/Findings - Development of the PSC

- ***Was the budget in the business case supported by a reasonable analysis and assessments of costs***

Our view is that the (PSC) budget presented in the DBC was based on a reasonable supporting analysis and assessments of costs, given the circumstances that the Project Team were facing at that time.

That is, Waka Kotahi were asked during a very short period of time (i.e. between August and September 2012) to convert what effectively was a non-PPP project, with an existing consented scheme design, into an initial PSC estimate that could be used to inform the 2012 PPP Business Case. This situation meant Waka Kotahi had to use a design that was less developed than what they would normally include in a DBC.

Further, Waka Kotahi was also using project information that was not framed around a “PPP-lens” – for example, it is usual to see an outline of a Service Need Specification in a PPP detailed business case. Not having an outline Service Need Specification means that cost changes inevitably occur during the later procurement phase as a Service Need Specification is prepared to inform the tender documents that bidders will be asked to respond to. We believe if more time had been available to prepare an outline Service Need Specification, then this potentially would have helped to inform the costings used in the DBC. Accordingly, our recommendation is that future road PPP projects include an outline Service Need Specification in the DBC.

We note that Waka Kotahi has extensive capital works/delivery experience that would have helped inform the capital costings used in the business case (notwithstanding that only a 2011 Scheme Estimate was used) – that approach would have been very similar to the costing methodology approach used by construction members of a PPP consortium.

The one area of difference in the business case’s costing methodology that we identified related to O&M costs. The review documents explain that Waka Kotahi assumed a network/marginal costing approach to recurrent O&M costs – this is fundamentally different to the approach taken by a PPP consortium, who would focus on specific recurrent costs needed to maintain the TG road section as a stand-alone project from the rest of the road network. Typically, as a first principle, the PPP consortium would have been using a full-cost approach when assessing the possible O&M costs. The PPP consortium would also be assessing their O&M risk exposure given the TGP contract has defined performance standards linked to the annual service payment made by Waka Kotahi.

We could not identify from the review documents and interviews if any PPP-benchmarking of O&M costs and estimates of Transferred Risk had been done for the DBC. We believe that Waka Kotahi should consider developing a cost and risk benchmarking database to assist managing their portfolio of road availability PPP projects. Note, we have also commented further under Other Matters about benchmarking once TG commences the services phase after September 2021 (i.e. the revised date for construction completion).

As is normally the case with any major infrastructure project, project costs and risks are reviewed during the procurement phase as more detailed information becomes available. For TG this means the PSC costs would very likely change post approval of the business case. We confirmed from the review documents that the Board was advised (in December 2012) that the PSC would be subject to a planned review in March/April 2013 – such planned reviews reflect best practice in that a PSC can change post-business case as more project details become available. In this regard, we found the first (i.e. planned) review of the PSC in March/April 2013 to be perfectly reasonable in terms of timing and outcomes (i.e. changes to the 2012 PSC estimate).

However, we think there could have been better communication to the wider community that a business case recommending a tender be conducted using PPP delivery does not ensure “cost certainty”. The PPP business case’s main decision is to test if there is a reasonable commercial case that justifies approaching the market with a PPP delivery option. In this regard, we recommend Te Waihangā to consider publishing additional information for stakeholders on the use of the PPP model which should address this issue.

The key issue in our mind, however, is why the first planned review of the PSC in March/April 2013 did not pick up the second round of cost changes that occurred mid-way (i.e. in August 2013) during the RFP phase. This second round of cost changes occurred when both RFP Respondents advised Waka Kotahi that they were finding it difficult to meet the AT. The main reasons for these second-round changes appear to centre on:

- Waka Kotahi-initiated changes to design requirements that were not in the consented scheme costing, mainly around an increase in the design speed to 110 km/hr (from the 100 km/hr design speed in the consented scheme estimate), road safety requirements, and revised structural requirements for bridges; and

- More detailed information coming to light as both RFP Respondents conducted their own due diligence on the seismic and geotechnical conditions to inform their technical solutions, as well as their view on how they would need to manage their consent obligations.

We note that the changes due to design speed were being flagged by the Project Team in the weeks leading up to the release for the RFP in May 2013 (e.g. as recorded in the Governance Group minutes of April and May 2013). From those minutes, it appears the Project Team were needing to confirm the revised design changes so they could be included in the RFP documents, or potentially delay the issue of the RFP documents. With this context in mind, the May 2013 minutes to the Governance Group record, “...Decision to include requirement for 110 km/hr design speed taken by Project team - PSC risk adjustment sufficient to cover this requirement...”. Our reading of this fact is that the Project Team considered sufficient risk was factored into the PSC to deal with the changes in the design speed to allow the RFP to be issued – as subsequent facts showed, however, this was clearly not the case and the PSC’s costs had to be increased to meet the additional design speed requirements.

Our key observation with the above information is that the record of the decision made by the Project Team could have been supported by more detailed information that showed the quantum of risk allocation that was felt to be sufficient. Further, such an important PPP decision should also have been endorsed by a higher-level governance group above the Project Team. There is a possibility that such information was prepared at the time, but we were unable to confirm that from the review documents provided or from interviews. We have commented further on the need for more transparent governance documentation in Section 5. Review Focus Area – Governance & Timeframes.

With regard to seismic and geotechnical risks, our main observation is that for a complex project like TG, potentially more preparatory work/information for bidders could have been done by Waka Kotahi prior to release of the RFP documents in May 2013 (which would have coincided with the time of the first PSC review in March/April 2013). We note that the P2W Detailed Business Case (at page 116) effectively makes the same comment when advising on the lessons-learned from TGP, i.e. “...Allow sufficient time prior to shortlisting and RFP release for the geotechnical investigations and additional design work to be carried out to support the review of the PSC, report back to the Board, and request for approval to borrow from Cabinet...”.

• **Appreciation of inherent and contingent risks**

Our assessment is that inherent risks (i.e. uncertainties with pricing and schedule/quantities) and contingent risks (allowances for unknown, project specific risks) were taken into account during the development of the business case to derive the allocations for Transferred and Retained Risks used in the PSC. However, as noted already in this Report, the PSC was based on a Scheme Estimate and not a Detailed Estimate – this means a comprehensive assessment of some risks (such as seismic and geotechnical) would have come later as more detailed investigations were done.

The approach to calculating a project contingency for risk appears to have been done in a structured way, having regard to how Waka Kotahi would normally have prepared a contingency estimate (using SM014) and the different method used in a PPP assessment to construct the PSC. This is an important fact to consider when trying to make comparisons between these two cost estimates where contingencies are concerned.

Using the review information available for design and construction costs, which are the main cost line in any major road infrastructure project, we concluded the overall risk contingency used in both the 2011 Scheme Estimate and the 2012 PSC for both inherent and contingent risks was approximately 26 percent. Our view is this contingency range developed in 2012 is within usual benchmarks for contingencies used in a business case. As evidence, we note the following P50 and P90 contingency analysis in Australian research for contingencies used in publicly funded road and rail projects³.

Phase	Type of estimate	P50	P90
Project scoping	Concept (full business case)	10% to 15%	25% to 40%

Our main observation, therefore, is not about the contingency percentage per se in the 2012 PSC but more so that the contingency estimates at that time were based on a consented, non-PPP project and a Scheme Estimate design.

As a result, as the PPP project became more defined after the 2012 PPP Business Case was approved then, inevitably, the TGP’s cost estimate began to increase. As the 2012 risk provisions were based on a non-PPP Scheme Estimate, then any revised costs were not able to be absorbed within those risk allocations and instead would need to be reflected in changes to the overall cost. We note that if Waka Kotahi had used a (more developed) Detailed Estimate in the DBC, then the risk adjustments would also have been more developed and could possibly have been used to manage some of the cost increase.

³ See Tan, F. and Makwasha, T., “Best Practice Cost Estimation in Land Transport Infrastructure Projects”, Australian Transport Research Forum 2010 Proceedings, page 8.

In summary, given the nature of the cost estimate used in the DBC, we have no material recommendations relating to the adequacy (at that time) of the risk contingency provisions. Our only recommendation in regard to inherent and contingent risks is that Waka Kotahi consider developing benchmarks, both from local and international experience, on ranges of estimated project risks for comparable motorway projects.

Conclusions/Findings - Commercial case for selection of the PPP model

Our overall opinion is that the commercial case used to justify the PPP model to deliver the TGP was based on internationally accepted approaches and was informed through a structured decision-making process, using valid qualitative and quantitative PPP assessment criteria.

Our only observations regarding the PPP commercial case relate to what we think could be clearer explanations for stakeholder groups on the following aspects of using the PPP model:

- Deciding to deliver a project using the PPP model at the business case stage does not guarantee “cost certainty” Rather, the focus of the PPP decision at the business case stage is to confirm there is sufficient merit to approach the market with a PPP procurement;
- The strategic policy/funding considerations about how to accelerate delivery of nationally significant infrastructure (such as TG) sometimes involves governments considering more borrowings, and that the PPP model represented a structured way of linking increased borrowing to better quality infrastructure and performance standards; and
- Using the PPP delivery model does not mean the financing impact for the commercial case is based on 100 percent private financing.

Regarding our first observation, notwithstanding technical limitations with the utility of the PBM information, we think Waka Kotahi and the New Zealand Government was prudent to continue using the PBM information through the procurement phase as a reference point to compare/confirm the value-for-money proposition as the PSC costs were revised upwards. We note that New Zealand is one of the few international jurisdictions that uses the PBM information as part of the PPP decision making process – other international jurisdictions include New South Wales (in Australia) and two provinces in Canada (i.e. Ontario and British Columbia).

Our advice on the second observation is that governments are often faced with the decision to use increased borrowings to bring forward the delivery of nationally significant infrastructure that, in the longer term, is expected to have positive economic benefits. This commonplace challenge typically means the PPP model is introduced as an option to help meet near to medium term funding constraints, as the PPP model offers cashflow benefits in that upfront capital funding is not required (i.e. a “cash window”). This can create funding flexibility in say a 10-year infrastructure program if overall budget/fiscal estimates are met.

However, this does not mean PPP is being used primarily as just a funding/financing mechanism. To the contrary, PPPs are a form of structured borrowings that links infrastructure financing to defined services outcomes and performance standards. Such an approach can be, for PPP-suitable projects, a disciplined way to use government borrowings to fund infrastructure projects. In this regard, we believe the New Zealand Government made the right decision when considering the use of the PPP model to deliver the TGP.

In terms of our third observation (above), if the alternative delivery model to PPP used by the Government would have been financed from general borrowings, then technically the “cost” of private sector finance using PPP delivery is the *difference* between the private and public sector financing rates. Further, and more importantly, is that any form of borrowing requires an assessment of the likely long-term impact on the Crown’s debt position. When considering PPP delivery, a key management metric should be to identify the long-term borrowing impact on the government’s balance sheet - we were pleased to see New Zealand using this metric when informing the decision to use PPP.

Recommendations – Business Case

- *Waka Kotahi include an outline of a Service Need Specification in future road PPP business cases.*
- *Waka Kotahi consider developing benchmarks (both from local and international PPP experience) on ranges of estimated O&M costs and project risks for comparable motorway projects.*
- *Te Waihangā considers publishing additional information for internal and external stakeholders related to the use of the PPP model.*

4. Review Focus Area – Risk Transfer

4.1 Introduction

For this IR focus area, we were asked to consider whether key risks were appropriately allocated and communicated, with specific consideration to be given to:

- Whether the AT was sufficient given the nature of the risks transferred to the Contractor, including how was it set, the decision making pertaining to that process and the authorising environment, and what can be learned from the influence the AT had on the procurement; and
- Whether the consenting strategy was appropriate, including the allocation of consenting risk and the impact Consenting Authorities may have had on project outcomes.

Our analysis and findings on the above two matters is provided below.

4.2 What relevant information did we identify from the review documents?

Review documents - Whether the AT was sufficient, and how it was set and approved

From the review documents we identified the following facts regarding how the AT was set and approved:

- The 2009 New Zealand Treasury PPP Guidelines (available to the Project Team during the TGP procurement phase) does not define the AT;
- In contrast, the 2015 New Zealand Treasury PPP Guidelines (at paragraph 4.18) issued after the TGP procurement phase define the AT as, “...*The affordability threshold is the maximum price that the procuring entity is prepared to pay for the project. It is equal to the PSC less any PPP-specific costs the procuring entity will incur over the life of the project. The net present cost of respondents’ proposals must not be greater than the affordability threshold or the proposal will be considered non-compliant...*”.
- The March 2013 Board meeting papers include a PowerPoint presentation for a Board workshop that mentions how the AT is to be set, with the following specific statement, “...*currently anticipate the AT will be set at the same level as the PSC*”.
- In contrast, an internal Waka Kotahi memo in February 2013 to the Project Advisory Group (PAG) states, “...*setting the AT with reference to the PSC does not necessarily mean it must equate to the PSC. The NZTA [New Zealand Transport Agency] could decide to set the AT at a level different to the PSC...*”.
- In February and March 2013, both the PAG and the Decision Making Team (DMT) considered papers canvassing approaches to how the AT could be set. These papers discuss several matters to be considered when setting the AT (e.g. such as what was done in the two previous PPP projects, and how an AT could work best for economic infrastructure such as a road) but do not include a specific recommendation or conclusion on how it should be set. Also included in these papers were views about how previous experience with project costs could inform how the AT was set (i.e. using a P-value) and the possible risk of “gold plating” by the market.
- The August 2013 Board Papers related to the mid-RFP update of the PSC and include a P75 value of the PSC that corresponds with the revised/updated AT target given to the two RFP respondents. However, no specific recommendation is made in this Board Paper as to setting the AT based on using a P-value of the PSC, with the Board meeting minutes only noting the revised P95 estimate of the PSC (as the approved funding limit for the TGP).
- The November 2013 Board briefing paper dealing with the RFP evaluation results has the following specific reference to how the AT was set, “...*As identified in previous Board papers the Affordability Threshold was set at a level lower than the Public Sector Comparator (PSC) to drive the Respondents behaviour in the achievement of innovation and efficient whole of life solutions...*”.
- The TGP delegation matrix shows responsibility for the AT sits with the PAG and DMT.
- The PAG meeting minutes provided show the PAG considered the setting of the AT In March and April 2013:
 - March 2013: “...*The PAG resolved to:*
 1. *Receive a recommendation on Affordability Threshold at its 18th April meeting reflecting:*
 - a. *NZTA ordinary estimates process*
 - b. *Size of Project (i.e. tender box and contract estimates comparison projects are generally much smaller)*
 - c. *Extraordinary items as part of risk quantification – not baseline costs...*”.
 - April 2013: “...*The PAG resolved to agree that the Project Team make the final decision on where the AT is set...*”.

- The DMT meeting papers of April 2013 include an internal Waka Kotahi memo to the PAG on setting the AT value. Supporting PwC advice is also provided. These papers discuss a range of P values of the PSC that could be used to set the AT. Three key points mentioned in this Waka Kotahi paper are:
 - *“...Further, we have the opportunity to use the Affordability Threshold to drive best value. We consider that this level lies somewhere in the desired value range of P65 and P85. This range will be determined once all the variables affecting the PSC are understood by the project team.*
 - *Should the private sector feedback on their inability to meet the Affordability Threshold then we would reserve the right to increase the Affordability Threshold within the value range.*
 - *With increased understanding on how risks have transpired it would still be possible to lift the Affordability Threshold to the P95 without referral to the Board and the value proposition would still be confirmed...”.*
- An independent assurance report in May 2014 made several observations about the setting of the AT (that it was too low) and potential adverse consequences, and that there did not appear to be a common understanding of why it was being used and the behaviours it was expected to drive.
- A Lessons Learnt Report commissioned by Waka Kotahi in September 2014 has several references to the challenging nature of the AT, essentially around whether the AT was correct and required changes. We note this theme is identical to views expressed to us in several interviews conducted for this Review (see Section 4.3 starting on page 26).
- A second Lessons Learnt Report prepared by KPMG in December 2014 (and publicly available) also has specific feedback references to the AT:
 - *“...some respondents from the public sector expressed a view that the value for money methodology is heavily reliant on quality technical advice and a reasonably high level of road design at business case stage. They felt that roads were different to social infrastructure in that generally the design and price are developed over a period of time and need to respond to issues that arise e.g. geotechnical information and consenting requirements, over the course of the detailed design. This makes it difficult to set an AT that is challenging for bidders but still realistic...”*
 - *“...(the AT) was tight and this had a direct impact on commercial and technical aspects of bids. There was a strong indication that bidders struggled in determining the optimum trade-off between achieving the AT (quantitative criteria) and delivering a solution which met the NZTA’s service specifications...”*
 - *“...bidders decided early on that they would not be able to deliver to the consented design within the AT and would need to sacrifice parts of the requirements to be affordable. Bidders felt this was a difficult decision because NZTA staff were firm during the interactive tender process (ITP) that bids must comply with the specifications...”.*
- At its December 2014 Board meeting, a Waka Kotahi paper provides a summary/briefing on the December 2014 Lessons Learnt Report, with the following statement, *“...Some interviewees felt that the tight affordability threshold had a direct impact on both commercial and technical aspects of bids. In our view a tight affordability threshold is part of driving a good value solution, and these impacts are part of the process...”.*

Review documents - Whether the consenting strategy was appropriate

By way of explanation, the term “consenting risk” relates to the designation and resource consents required under New Zealand legislation and regulations (including the Resource Management Act [RMA] 1991) required to deliver a major infrastructure project. In other jurisdictions, this process is often called, in simple terms, the planning and approvals pathway.

To design, construct, operate and maintain the state highway network, Waka Kotahi often requires permissions (designations, consents, concessions and authorities) from those with regulatory responsibilities for the natural and built environments such as local authorities, Environmental Protection Authority (EPA), Environment Court, culture and heritage (Historic Places Trust) and the conservation estate (Department of Conservation)⁴.

From the review documents we identified the following facts regarding TGP’s consenting strategy:

- In June 2012, regulatory consent applications for the TGP were heard and approved by the BOI;
- The TG risk allocation matrix seen in several review documents (e.g. the DBC, EOI and RFP documents) transfers all consenting risk to the PPP proponent;
- The PSC used in the DBC was based on the consented scheme design, which was for a non-PPP developed project. As the project progressed into the ROI and RFP development phases, changes were then made to the PSC in mid-August 2013 to reflect the impact of consent conditions;
- The review documents provided show that the only “Consenting Strategy” document is the one-page Appendix N to the DBC. A more structured and detailed consenting strategy document was not able to be located for this Review, with only various drafts available (some from WGP and some from Waka Kotahi);

⁴ Excerpt from Waka Kotahi Guidelines (July 2013), “Consenting Strategy Approvals and Pathways Guide”.

- In March 2013, the review documents show that the DMT received a draft discussion paper with information on the Consent Conditions Matrix developed for inclusion within the RFP schedule to the project agreement. Key information relevant to this Review and discussed in this paper include:
 - There were a total of 355 designation and resource consent conditions for the TGP, covering: (i) the Waka Kotahi consented scheme design designations and resource consents for the Main Alignment (Motorway) and Kenepuru Link Road (State Highway); (ii) the Porirua City Council designation and resource consents for the Whitby and Waitangirua Link Roads; and (iii) the Transpower resource consents for the required electricity transmission line relocations;
 - Wherever possible the matrix assigned responsibility for the TGP conditions to the PPP Special Purpose Vehicle (SPV);
 - Some of the designation conditions were appropriate to remain the responsibility of Waka Kotahi such as securing enduring legal protection on covenants on land required for retirement and revegetation planting. Due to timeframes, some of the condition requirements (such as baseline environmental monitoring) had been started by Waka Kotahi and became the responsibility of the PPP SPV at the time of financial close;
 - Some conditions were necessarily allocated to the joint responsibility of Waka Kotahi and the PPP SPV, such as the requirement to shrink the designation area following the completion of construction. Also, there are conditions that are necessarily assigned to the Preferred PPP Bidder for them to commence before financial close, such as fish passage and land stabilisation trials, which informed the development of management plans and the construction methodology; and
 - All outline and management plans required to be in place to commence construction were the responsibility of the PPP SPV and although not specifically identified within the matrix these needed to be progressed by the Preferred Bidder (PB) prior to financial close to provide for a construction start in July 2014.
- An April 2014 letter to Waka Kotahi from the five councils discussed the matter of whether the WGP scheme is in general accordance with the BOI's decision. The covering page of this letter contains the following views by councils about the BOI approval and how it could be implemented:
 - "...General accordance has been an important matter to assess and form a view on, as conditions NZTA.1 and G.1 of the Board's decision require the following:
NZTA.1 Except as modified by the conditions below, and subject to final design, the Project shall be undertaken in general accordance with the information provided by the Requiring Authority in the Notice of Requirement dated August 2011 and supporting documents [these include all the outline plan documents]
G.1 The Project shall be undertaken in general accordance with the plans and information submitted with the application as documented as consent numbers RC 1-14 subject to such amendments as may be required by the following conditions of consent.
 These conditions require that the WGP scheme must be generally within the parameters approved by the Board of Inquiry. An important corollary is the phrase "subject to final design".
 Councils understand that "in general accordance" does not mean 'exactly the same' and that they must have regard to "final design", the Board's expectation that detailed design may raise consenting issues to be resolved at a later date, and that design uncertainty was inherent in the scheme put before the Board. In this context, the Board recognised that an adaptive response to design was appropriate, and that the conditions and management plans set suitable parameters within which that adaptation could take place....".
- Guidance on the consented scheme design was provided in the May 2013 RFP documents issued to the two RFP Respondents. Specifically, paragraph 1.4.5 of Volume One of the RFP documents provides the following instructions/guidance:
 - "...Respondents must note that the consented scheme design is not considered to be the optimised design for the TG Project and each Respondent is required to propose an optimised design that meets all of the NZTA's requirements as set out in this RFP within the Affordability Threshold..."
- The review documents covering the PB phase show progress reporting to the relevant project governance fora and to the Board raising the project team's increasing concerns regarding the performance of the PB in preparing for, and managing their, consent and RMA-designation obligations under the PPP contract. These concerns were occurring close to Financial Close; for example, in July 2014 the Board was advised that WGP was unable to accept consenting risk associated with Bridges 25 and 27.
- The review documents also showed that the Project Team's response (for example, as reflected in the minutes to the June 2014 Governance Group meeting) was to maintain adherence to the risk allocation position that all consenting risk was to be transferred to the PPP consortium.
- A key finding from KPMG's 2014 Lessons Learnt Report was that the consenting process between PB selection and Financial Close was particularly challenging and a key factor behind the protracted PB phase. In particular, there was concern that there was insufficient engagement with councils prior to the bid stage by both sides, which may be due to concerns about loss of intellectual property to the other bidder.
- The 2014 KPMG report also highlighted the importance of getting the consenting strategy right in order to expediate the PB phase and enable Financial Close/project commencement. That review noted that "...NZTA should engage early with the relevant councils to explain the PPP process and manage expectations around the

level of detail that will be provided at the various stages. It should be made clear to bidders that there is an expectation to have a clear plan and advance the consenting process prior to submission...”.

- The April 2015 P2W Detailed Business Case provides a dedicated summary of the lesson learnt from the TGP regarding managing consenting risk. Specifically, Section 12.5.2.1 advises:
 - “...Consenting risk, in its various forms is a major issue for roading projects under any procurement method. However, the TGP process has identified that, although consenting risk may be allocated to the private sector, where the private sector does not come well prepared to manage this risk it creates a significant issue for the Transport Agency. Three mitigation approaches would be applied for P2W:
 - Firstly, the intent, with the benefit of the TGP experience, would be to remove as much consenting uncertainty prior to issuing the RFP to bidders.
 - Secondly, the designation for the P-Wk. (Puhoi to Warkworth) route is relatively wide. This provides bidders with the flexibility to achieve an optimal design without the need to encroach on land that is outside the designation.
 - Thirdly, following from the first issue, the RFP would be very explicit and clear about what will be required from bidders when completing the design component of their bids and the process they have to undertake to ensure that consenting...”.
- Section 10.2 of the P2W Detailed Business Case also explains the difference in consenting strategy and management approach compared to TGP:
 - “...The Transport Agency began the consenting process for P-Wk in April 2012. The Agency created a Planning Alliance, known as the Further North Alliance (FNA), made up of three professional services firms and the Agency, to manage the process. The Alliance’s objectives were to achieve consents that could support best outcomes for the project and to provide value for money for the Agency in the consenting process. Consents were successfully achieved in September 2014 following a Board of Inquiry process.
 - The consenting strategy aimed to achieve consent conditions that would enable the highest level of flexibility for design and construction of the motorway so as to support innovation and value for money in delivery. Furthermore, the strategy identified that detailed geotechnical analysis and specimen design was not a requirement for achieving consents.
 - The Alliance successfully attained a set of consent conditions that enable a degree of flexibility not seen on a New Zealand roading project in recent times. This flexibility both enables and encourages innovation in the delivery of the project outcomes, including by allowing broad scope for alignment optimisation, freedom of structural solutions, and reduced constraints to earthworks activities. Furthermore, the consents are written with an outcomes focus rather than specifying inputs or outputs. This was a deliberate aim of the Agency’s consenting team to align the consents with an outcomes-focussed procurement and to prepare in case the road was procured as a PPP.
 - The designation and consenting situation for P2W is significantly different to that on the Transmission Gully PPP project. TGP faced a narrow designation and challenging consent conditions, particularly in relation to erosion and sediment control and open-area restrictions during earth works. TGP was not consented with PPP in mind. However, TGP also had a well-developed specimen design...”.

4.3 What relevant information did we identify from the interviews?

Interviews - Whether the AT was sufficient, and how it was set and approved

During interviews we noted the following comments about the AT for procurement of the TGP:

- Several interviewees noted that the PSC and AT may not have been an accurate reflection of the whole-of-life costs associated with delivering the Service Need Specification. As a result, bidders were struggling to meet the AT;
- One interviewee noted that changes were made to the PSC during the procurement phase because one of the two shortlisted bidders advised Waka Kotahi that they could not meet the AT;
- One interviewee recalled there was a governance decision to set the AT less than the PSC on the basis that efficiency of cost could be achieved through that additional scrutiny;
- One interviewee recalled that the Project Team made the decision to set the AT. However, several other interviewees commented that the AT decision was set with guidance from New Zealand Treasury;
- No Crown-related interviewees could recall/identify which specific project governance forum was responsible for the decision to set the AT based on a P75 value of the risk-adjusted PSC;
- An interviewee representing the PPP market noted that the AT was quite low and the only way it could be achieved by the consortium was to set up an early completion bonus of six months for the builder. Similarly, another interviewee commented that there were a number of financial modelling techniques that were used to get under the AT and whether this achieved value for money for the Crown was dubious;
- An interviewee remarked that they felt that the price agreed for TG at Financial Close was ‘demonstrably unrealistic’ for such a substantial and complex project;

- Another interviewee commented on the impact of a low AT on their bidding strategy. They noted that a number of designs were developed but, in reality, none of them would be able to achieve the AT. Ultimately, they tried to show how they could demonstrate additional value for money to Waka Kotahi above the AT; and
- One interviewee commented that the AT started on the wrong foot with Waka Kotahi driving the AT with an optimistic view of a low price. It made the procurement process quite difficult and required bidders to find scope and technical/design savings. For some of these changes this risk/cost would come back around in some form or another.

Interviews - Whether the consenting strategy was appropriate

From interviews we collected the following information about the consenting strategy used for the TGP:

- Several interviews confirmed that the consenting strategy and designation for TG was developed with a traditional non-PPP procurement in mind (e.g. D&C or Alliance);
- One interviewee confirmed that the only consenting strategy is in the appendices to the business case – which was done after securing the consents. Waka Kotahi's expectation was a matter of then developing the detailed management plans to deliver the scope of work within the consent conditions rather than seeking new consents;
- Several interviewees mentioned the complexity of managing consents for TGP given the need to coordinate and liaise with five council organisations, at the same time also managing the delivery of a complex infrastructure project;
- Another view provided was that the changes in consenting could be attributed to different approaches in design philosophy between the preparation of the scheme estimate used in the DBC compared to what bidders were asked to bid back on re the RFP requirements;
- Multiple interviewees felt that the PB (WGP) did not understand the risks associated with consenting. An interviewee noted that Waka Kotahi tried to communicate this to WGP on a number of occasions and that this needed to be reflected in their consenting strategy;
- Several interviews also commented on the suitability, management style and local experience of WGP's key lead for managing consents;
- Some interviewees commented that the losing bidder was considered to have a much superior and detailed consenting strategy compared to the PB. Several interviewees commented that they felt the weakest part of the PB's tender was their consenting strategy;
- Multiple interviewees also noted that the handover from Waka Kotahi to WGP could have been better managed following Financial Close;
- One interviewee also queried the value of transferring all of the consenting risk where the Crown was better positioned to manage particular risks; and
- An interviewee provided several perspectives on the development and management of the TGP consenting approach:
 - Waka Kotahi chose to seek regional consents (and Notice of Requirement) for TGP via the EPA/BOI consenting pathway. Under the EPA/BOI consenting process, there were limited opportunities to shape the decision and consent conditions (compared to a local/regional government consenting process);
 - While local/regional government was not the decision maker and did not prescribe the conditions for TGP, responsibility for administering and monitoring compliance with regional consents issued by the EPA/BOI fell to local/regional government;
 - Had the compressed construction timeframe under the PPP contract and the increase in earthworks and streamworks required to deliver the project been anticipated at the time of the BOI approval, information presented to the BOI and subsequent approved conditions may have been different;
 - While there was acknowledgement and anticipation by the BOI that changes to the approved design would likely occur to some extent, and that additional consenting may even be required to accommodate those changes, there was no expectation at the time that the design would change as much as it did. As a general observation during the procurement period, it became obvious that there were interpretational differences between the PPP partners and the local/regional governments on the scope of consents granted and condition requirements. These differences became an ongoing issue and frustration post contract signing, and in some cases the differences were never properly resolved;
 - In the early stages of the TGP post award, when it became obvious that the project parties were struggling to meet consent requirements, local/regional government provided significant effort and resource in an attempt to work alongside the project partners to address ongoing compliance and approvals performance issues. The 'Transmission Gully Improvement Project' was an example of this. Ultimately these initiatives did not achieve the desired outcomes and local/regional government was forced to resort to more traditional enforcement tools in an effort to encourage improved compliance performance;

- The project partners could have put greater effort in at an early stage to developing and implementing a comprehensive consenting strategy which resolved condition interpretation differences and addressed conditions which could not be complied given design and construction realities. Had this occurred in a timely, well-managed and considered manner this would have provided certainty and reduced frustrations for all parties throughout construction; and
- The understanding that P2W uses a different consenting approach to TGP in that a particular road design was not being consented, but rather an “envelope of environmental effects”.

4.4 Based on the review information, what are our conclusions/findings?

Conclusions/Findings - Whether the AT was sufficient, and how it was set and approved

From the review documents and interviews, our conclusion is that the setting of the AT was done using a lower (P75) value of the PSC to drive the RFP Respondents’ behaviour to achieve innovation and efficient whole of life solutions.

This “innovation and efficiency” principle may be double counting insofar as a definition of the PSC should represent the “efficient” method of government delivering the PPP project to the same specification and performance expected from the private sector. Consequently, the TG Project Team may not have fully appreciated that using the risk-adjusted PSC would have served their intended purpose of setting an “innovation and efficiency” target. As a result, the Project Team effectively set two “efficiency” targets (i.e. a risk-adjusted AT and a risk adjusted PSC) when only one was needed (i.e. a risk adjusted PSC).

The definition of the PSC available at the time (i.e. in the New Zealand Treasury 2009 PPP Guidelines) does not state the PSC is the “most efficient likely method of providing the defined output currently available to the public sector”. This definition is in the Australian PPP guidelines definition of the PSC (which was included, however, as a reference in the 2009 version of the New Zealand PPP Guidelines).

Note, our reading of the 2015 New Zealand Treasury PSC/PPP Guidelines is that the current definition of the PSC also could be clearer so that Crown representatives and the market understand that the PSC is the “most efficient likely” method that government would use to deliver the PPP project/specification.

Our view from the review facts regarding the setting of the AT is that perhaps the Project Team were placed in a position where they had to establish a definition of the AT. Given this situation, the Project Team relied on previous PPP Projects where the AT had been set at a level below the funding-approval PSC, as well as placing an agency-specific definition of the AT as a means of driving value in the tender phase. All of this could have been potentially avoided if a definition of the AT were available at the time.

However, we also note that some of the review documents and interviewees indicate a view that some parties in Waka Kotahi were concerned about the risk of “gold plating” – that is, PPP bids potentially may be too high/expensive. This thought process (possibly based on traditional delivery experience) seems to have led the Project Team to set a low AT as a strategy to manage any gold-plating risk.

Our recommendation regarding the setting of the AT is for Te Waihangā to consider reviewing the current New Zealand definition of the PSC to provide clearer guidance that it represents the most efficient likely method of providing the defined output currently available to the public sector. This would be a very straightforward amendment to the current PPP Guidelines, and would also then ensure the revised PSC definition works better with the current definition of the AT.

In terms of how the AT was approved, the review documents record that the Project Team made the final decision on where the AT was set. However, we saw no review documents confirming which member of the Project Team made this decision. There were also no review documents confirming that the setting of the AT using a P75 value of the PSC was recommended to/endorsed by the PAG, DMT, or the Governance Group as key governance bodies that sit above the Project Team – this means the final decision on where the AT was set was not consistent with the TGP delegation matrix that was also provided in the review documents. The Board appears only to have been advised that the AT was set using a (lower) P-value of the PSC to drive additional value.

There was market feedback in the two lessons learnt reports that the AT was not set at the correct level, and this would have an adverse impact on how the RFP respondents structured and priced their RFP response. We agree with this view and our opinion is that in the RFP Respondents appeared to have either:

- Priced their bid aggressively to reach the AT target by “value-managing” aspects of their bid (e.g. design, performance and delivery timelines, as some examples); or
- Priced their bid based on all the RFP information based on scope, design, and performance requirements knowing full well this might result in an RFP price offer that was above the AT.

We believe these two scenarios are what transpired with TG. For the first scenario, the result has been reflected in the cost and design changes since the contract was signed in July 2014, Note, the review documents record that the Board were advised of the lesson learnt feedback that the tight AT had a direct impact on both commercial and

technical aspects of bids, but that a tight AT was viewed as required in driving a good value solution and these impacts are part of the process.

One of our key concerns regarding the setting and approval of the AT is that we could find no specific review documents confirming which member of the Project Team made the decision to set the AT. We also saw no review documents confirming which TGP governance group (above the Project Team) endorsed the Project Team's decision. These are fundamental governance issues concerning recording of key decisions and separation of decision-making roles and responsibilities.

Accordingly, our recommendation regarding AT decision making is that whole-of-government PPP project governance and delegations should clearly define responsibility for the setting and the approval of the AT. Specifically, this should be a decision made above the Project Team level to ensure governance checks and balances are in place, but also so that transparency of decision making can be demonstrated. It is clear to us that if rigour and transparency around the decision making of the AT for the TGP had been improved, then the Board and Government would have been more clearly informed as to the financial implications of setting the AT too low.

Note, under Identified Areas of Best Practice & Other Matters, we have raised an issue outside of the scope of this Review regarding how the AT was used in the RFP and value-for-money evaluation.

Conclusions/Findings - Whether the consenting strategy was appropriate

With regard to the specific questions in the IR scope regarding the consenting strategy, our specific observations from the review documents and interviews are:

- The DBC only contains a one-page statement outlining the TGP's "consenting strategy". We did not see a formal project artefact that we would class as a *management* strategy for consenting risk, which also could have been used to provide more information to the RFP Respondents on what they needed to take into consideration when developing their RFP responses regarding managing consents;
- The TGP Agreement risk allocation matrix reflected a *contractual* strategy that all consenting risk is transferred to the PPP Consortium. This contractual strategy appears fine in-principle, but it is an approach structured on a risk allocation of Board of Inquiry (BOI) approved consents rather than the different requirements that were set as part of the RFP documentation and which came to light during the Preferred Bidder phase (and eventually into the construction phase);
- In effect, we believe the RFP issued could be said to be an "unconsented RFP", given the number of changes that were required to be made. The review documents we saw listed 355 designation and resource consent conditions requiring attention and these conditions would all have need to be factored into the detailed design for TG and preparation of outline (management) plans for implementing consents. Added to these 355 conditions were the subsequent consents, and changes to conditions from the local/regional government required to implement the BOI approvals. Working through all these issues would have time and cost implications for TG;
- Waka Kotahi was aware during the procurement phase of the need for the PB to put more effort and resources into managing their consent obligations and took active steps to work with the PB to work on this aspect of their performance. However, this effort was being focussed after a PB had been selected when all parties would have been focussed on achieving Financial Close – obviously and in hindsight, providing more consenting-risk information and assistance to RFP Respondents earlier in the procurement process would have been a better approach; and
- The impact of consenting authorities is perhaps better explained as the responsibility left to the five local/regional authorities to manage the implementation of the BOI-approved consents. The review documents and interviews suggest these parties were genuinely trying to implement the intent of the BOI conditions, but there may not have been a common understanding amongst all project participants about how this was to be done in a coordinated and collaborative manner. Added to this the obviously challenging situation is that the local/regional authorities were also themselves coming up to speed with the availability PPP model and a major road infrastructure project.

Our overall observation from the review documents and interviews is that the TGP's consenting strategy clearly could have been better managed by all parties involved. For example, this includes both improving information to the market about their consenting obligations, using a new management approach (i.e. a planning "alliance") to better manage the consenting process, and using a "flexible" consenting strategy that aligns the consents with an outcomes-focussed procurement rather than being directly linked a particular road design. These and other consenting management issues was reflected in lessons learnt information provided in the Puhoi to Warkworth (P2W) Detailed Business Case about how consenting would be done differently for P2W compared to the TGP. We specifically note Waka Kotahi has actively worked to implement many of these lessons learnt to ensure consenting risk is better managed for future PPP projects.

We also identified several "contributing factors" that together made the consenting strategy a high-risk area for the TGP, as shown in in the diagram below.

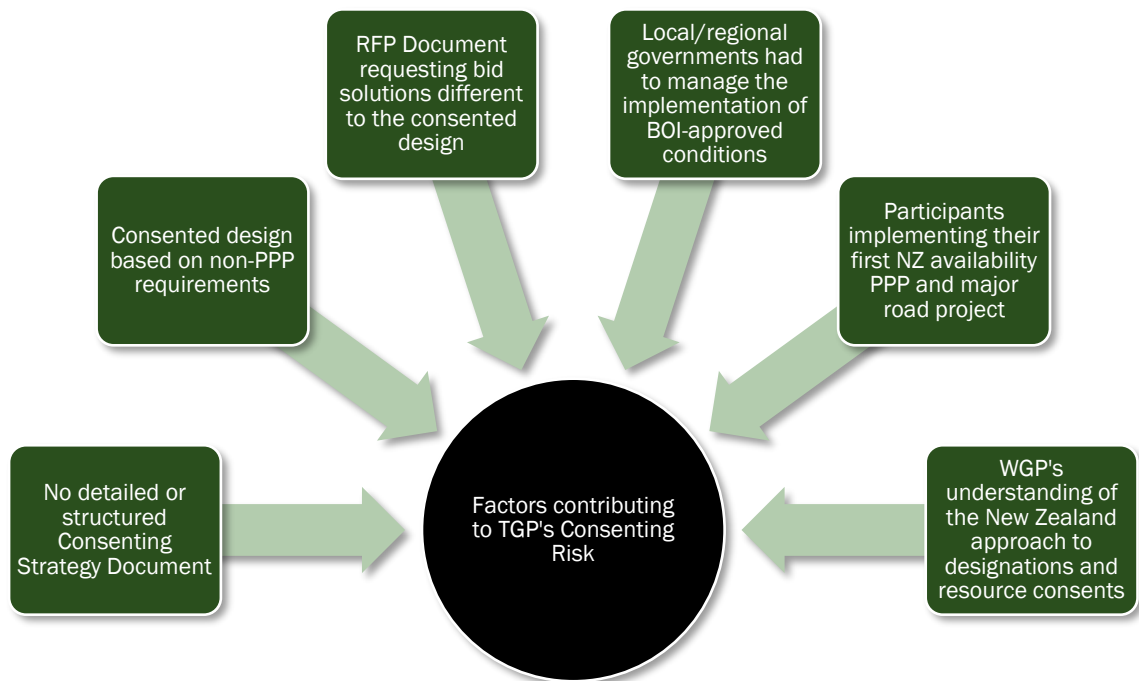


Figure 6: Contributing Factors Impacting on Consenting Strategy Risk

Our view is that no one single contributing factor can be identified as the primary cause of the consenting risk issues encountered by the TGP. It appears to us that all these factors were in play, in varying degrees, effectively from when the decision was made to procure TGP using the PPP delivery model using a non-PPP consented design.

Arguably, some of these contributing factors may also have crystallised if a non-PPP delivery model had been used – it just appears to us that the PPP model brought to the surface a raft of consenting-related issues, and that under a PPP contract there is a need to deal with matters as they arise given several parties are involved.

Also, we note that if a “PPP-version” of TGP in around 2009 was progressed, when the use of PPP was first signalled by the then Minister for Transport, then the development of the TGP and accompanying consents would have likely been more influenced by PPP requirements, potentially avoiding some/all the consent issues that the TGP has encountered.

Recommendations – Risk Transfer

- *Te Waihangā considers reviewing the definition of the PSC to provide clearer guidance that it represents the most efficient likely method of providing the defined output currently available to the public sector.*
- *Te Waihangā considers developing whole-of-government PPP guidance on improved governance and delegations for the setting and approval of the AT.*
- *Waka Kotahi consider developing for future PPP projects a structured consenting strategy document as a key project control document/artefact, including for use in procurement/tender documents.*

5. Review Focus Area – Governance & Timeframes

5.1 Introduction

For this IR focus area, we were asked to consider the following two matters:

- Whether sufficient time was allowed for approvals, commencement, and completion of the tender process so as to allow the tendering parties to fully understand and appraise the project risks, and Waka Kotahi to understand the nature of the proposals; and
- Whether the project governance structure had the knowledge and experience of delivering PPP construction projects (including the nature of risks transferred to the private sector), to effectively oversee the project and address issues in a timely fashion.

Our analysis and findings on the above matters is provided below.

5.2 What relevant information did we identify from the review documents?

Review documents - Whether sufficient time was allowed for approvals, commencement, and completion of the tender process

From the review documents (e.g. the Procurement Plan/Strategy), we defined the tender process as comprising the following key procurement steps:

- Release of the EOI document;
- EOI Evaluation to identify shortlisted bidders;
- Issue of the RFP to shortlisted bidders;
- RFP Evaluation;
- PB announced;
- PB Negotiations; and
- Contract Signed.

We noted the above key steps are consistent with usual approaches taken during a PPP procurement process, reflecting the market's expectations.

In terms of key tender timelines, we focussed on the following procurement milestones to compare TG's tender process with international benchmarks:

- Time given to the market to prepare EOI and RFP responses;
- Time allocated for PB negotiations; and
- Overall procurement timelines from the date the EOI was issued to the date the Contract was signed with the PB.

Our summary of the key TGP timelines along with comparative international benchmarks is set out in Figure 7 (below). For international benchmarks, we have used Australia and Canada as they have comparable PPP frameworks and approaches but noting these international jurisdictions have very established PPP markets and projects when compared to New Zealand.

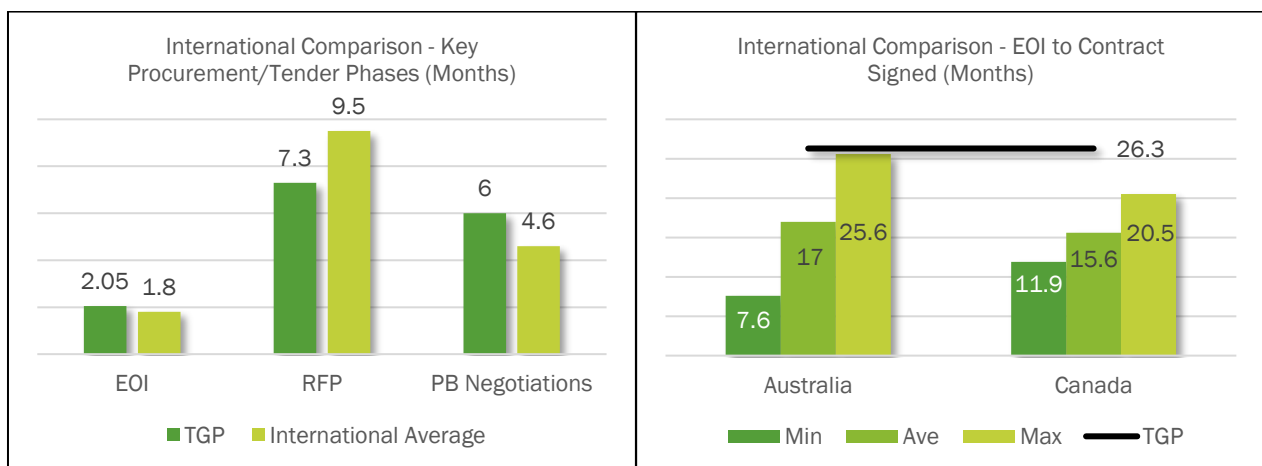


Figure 7: Key TGP Procurement/Tender Milestones vs International Comparisons

With Figure 7 in mind, our observation from the review documents is:

- The TGP's overall procurement timeline of 26.3 months was at the upper end of the comparative international benchmark, but recognition should be given to the scale and complexity of TG and this was New Zealand's first road availability PPP project;
- EOI preparation time given to the market for the TGP was just over the international average;
- RFP preparation time was under the comparative international benchmark;
- PB negotiation time was over the comparative international benchmark; and
- The TGP's combined time of 15.35 months for EOI, RFP preparation and PB Negotiations was slightly less than the equivalent international average of 15.6 months.

Review documents - Whether the project governance structure had the knowledge and experience of delivering PPP construction projects

To assess this IR question, we focussed on the overall governance structure established and used by Waka Kotahi to manage project delivery of the TGP and make key decisions.

In terms of the overall governance structure, from our reading of the project documents we identified several versions of the TGP's governance structure as it evolved from the business case stage to the procurement phase. Our summary of the changes made to the project governance structure is:

- Immediately post the approval of the DBC, a Project Steering Group (PSG) was established by Waka Kotahi and this forum operated from December 2012 to February 2013 as the main PPP decision making body for TG;
- In December 2012, the Board was briefed on the proposed PSG and proposed project governance structure, which also included a "Regional Steering Group" (RSG). Our summary of the defined roles mentioned in this Board briefing for the PSG and RSG is:
 - The PSG was convened by a senior Waka Kotahi executive, with membership comprising other agency executives, New Zealand Treasury, and a legal and independent PPP adviser. The PPP Project Director reported to the PSG monthly to ensure that appropriate strategic direction was provided to the Project, performance was managed, and risks were being effectively considered and mitigated.
 - The RSG was convened by a senior Waka Kotahi executive with membership comprising other agency representatives and other parties. The PPP Project Director was able to seek direction from the RSG to ensure that regional requirements were being effectively met by the TGP.
- From December 2012, Waka Kotahi commenced procurement of external advisers (e.g. commercial/financial, legal, technical, probity, etc) to assist them with the delivery of the TGP. Several of these advisers had previous experience in precedent New Zealand projects and access to international offices with extensive experience in PPPs;
- From March 2013, the PSG was replaced by the PAG, and a new governance body (i.e. the DMT) was introduced. This change appears to reflect project management structures that Waka Kotahi would normally use to deliver major infrastructure projects;
- With the above summary in mind and using information identified in the review documents, our understanding of the TGP's operational governance structure (dated early 2013 in the project review documents) is set out in Figure 8 (below).

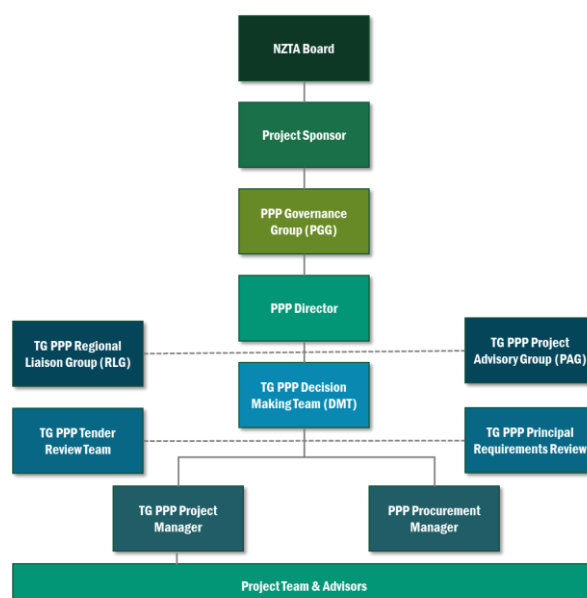


Figure 8: TGP Project Governance Structure

- We identified in the review documents a TG PPP Decision Matrix (see Table 3, below) that sets out the following key roles for each of the above governance groups, and indicative key papers they would be responsible for. We understand this matrix was developed around February 2013 to help provide more structure to the PPP-related activities and decisions;

Table 3: TG PPP (Governance) Decision Matrix

TG PPP Governance Body	Key Role	Key Papers (Indicative)
Board	Provides final approval for Preferred Bidder appointment and approval to execute contract Receives updates on Project progress from time to time Considers specific topic areas on request	Performance Regime Tolling Business Case Project updates papers Final Approvals papers
Governance Group	Key CEO decisions in accordance with standard delegations for PPPs (Treasury guidance): Reviews key papers prior to Board Oversight and peer review	Approval of EOI Short-listing Approval of EOI Content Approval of RFP Evaluation Plan Approval of Preferred Bidder Approval of Negotiation Strategy Agreement of all key contractual terms and conditions Monthly Project Director's Report
Project Advisory Group (formerly the PSG)	Providing strategic direction and guidance regarding desired outcomes and objectives for the TG PPP Considers and provides guidance on specific topic areas on request	Tolling Policy and TG Tolling Business Case PPP Policy PSC Update and AT TG PPP Outcomes & Performance Regime Evaluation of Best Quality for the Affordability Threshold Regular Project Director Highlight Report for noting

TG PPP Governance Body	Key Role	Key Papers (Indicative)
Decision Making Team	Provides overall steerage of the TG PPP Project and ultimately responsible for ensuring that the Project remains on course to deliver the required outcomes Ensures the successful delivery of the Project within agreed scope, timetable, resources, quality and budget Makes decisions regarding the Project Supports timely resolution of issues that may affect the successful delivery of the Project Responsible for risk management. Recommends decisions and documents for consideration or approval by Value Added Committee, Project Advisory Group, Governance Group and/or Board	EOI Evaluation Plan RFP Evaluation Plan EOI Short-listing recommendation RFP Procurement Approach RFP Constraints RFP Content PSC and Affordability Threshold Designation/consents risk allocation Performance Regime/Payment Mechanism Specific TG PPP contract terms Link Roads Agreement Property Acquisition Programme Tolling Business Case Project Controls – Plan, Resources, Budget, Programme, Risk Register, Issues Log

- We could not identify in any of the review documents if the TGP governance structure had been benchmarked to PPP project structures used in other PPP projects, both in New Zealand and for comparable projects internationally. We note that the New Zealand 2009 PPP Guidelines, that were in use at the time the TGP team was established, does not provide specific guidance on typical project management structures for PPPs, but page 16 of those 2009 guidelines directs readers to the Australian PPP Guidelines (i.e. Section 8 of Volume 2: Practitioners' Guide) for guidance regarding PPP project structures;
- From the review documents we also identified several themes from the independent observations/comments made in the two 2014 Lessons Learnt reports about TGP's governance structure. These included:
 - This was the Waka Kotahi's first PPP, and governance and decision-making processes were over complicated and should be simplified for future projects;
 - A clear governance and decision-making structure must be established at the start of the project. Roles, responsibilities and delegated authorities must be clearly defined and may need to be different from Waka Kotahi's standards; and
 - The governance structure was complicated with multiple groups established and the respective roles/distinction between them were not clear.
- The P2W Detailed Business Case (at page 103) also has references to the TGP's procurement governance and PPP capability by way of explaining Waka Kotahi's capacity and understanding of PPPs, which has been developed through TGP, and there are three key elements to developing this further:
 - Having a team of Waka Kotahi and advisory staff with the right capacity, knowledge and experience to deliver further improvements in PPP delivery.;
 - Having in place an appropriate internal governance structure to guide decision making through a PPP procurement process and to ensure the necessary level of transparency and assurance is received; and
 - Incorporating lessons learnt from the TGP process and further thinking developed during and since TGP.

5.3 What relevant information did we identify from the interviews?

Interviews - Whether sufficient time was allowed for approvals, commencement, and completion of the tender process

We specifically asked several interviewees (covering Crown representatives, bidders, and advisers) for their views on the overall TG tender/procurement timelines. Our summary of their responses is:

- Overall, interviewees indicated that they were broadly comfortable with the procurement timelines for the TGP;
- One interviewee commented that the TG procurement could have done with a bit longer. They noted that for the P2W project, additional time was added to the RFP phase to reflect some of the learnings from TG and to allow for the Christmas/New Year period. The market was consulted prior to adding additional time on the procurement phase;
- An interviewee representing the PPP market considered the procurement timeframes to be typical for a PPP transaction and if the timeframes were to be longer, it would increase the cost to the private sector. The interviewee noted that the PB phase was longer than expected, which reflected, in their view, the concessions that had to be made in order to meet the AT;
- Some interviewees noted that the PB negotiations may possibly have been done in a shorter time frame, but the actual time taken reflected the number of issues requiring confirmation before Financial Close (for example, resolving consenting risk issues); and

- An interviewee believed that the RFP phase should have been longer to provide more clarity on the geotechnical information and to enable bidders to further develop their designs.

Interviews - Whether the project governance structure had the knowledge and experience of delivering PPP construction projects

During our interviews we noted the following comments about the TGP's governance structure during the procurement/tender phase:

- Multiple interviewees commented that there was a good level of collaboration between Waka Kotahi, the external advisers and the proponents;
- Some interviews highlighted that the role of the PAG was effectively an "advisory body" that the PPP Project Director and other key Project Team members could use as a sounding-board for PPP advice;
- Several interviewees commented that project governance and reporting were not best practice and could have been improved;
- Several interviewees commented that there were a number skilled technical, financial and commercial advisers across the various governance fora, but they may not have been utilised to their full potential by the Waka Kotahi project team and the proponents, in particular with respect to the provision of advice to assist in making key decisions; and
- Some interviewees also expressed the following views:
 - Changes were made to the project governance and reporting arrangements during the TGP;
 - Key board papers that did not go through key decision-making fora (e.g. the DMT) for discussion (i.e. went straight to the Board for decision); and
 - Ancillary governance groups were formed that did not create additional value.

5.4 Based on the review information, what are our conclusions/findings?

Conclusions/Findings - Whether sufficient time was allowed for approvals, commencement, and completion of the tender process

Our opinion is that generally the procurement timelines for TG were in line with international examples of similar road and availability PPPs. Our view is this outcome was a major achievement given TG was the first road availability PPP undertaken by the New Zealand Government and for the Waka Kotahi as an organisation, and TG is a highly complex infrastructure project and transaction.

Our only observations regarding the tender timeline are:

- The RFP phase could possibly have been extended slightly to give RFP Respondents more time to deal with the geotechnical requirements; and
- The PB negotiations may possibly have been shorter had the AT been set at a more realistic level. If this was done, it may have reduced the number of concessions submitted by the PB that later had to be negotiated before reaching Financial Close.

We have no material recommendations regarding the tender timelines.

Conclusions/Findings - Whether the project governance structure had the knowledge and experience of delivering PPP construction projects

The review documents and interviews all acknowledge that Waka Kotahi was implementing New Zealand's first road availability PPP project. The Waka Kotahi Project Team mobilised quickly after the November 2012 decision to proceed with a PPP to procure experienced resources, leverage existing Waka Kotahi capability and experience in PPPs, and set up an initial project governance structure. Waka Kotahi's ability to mobilise quickly and set up a project team management structure reflected its extensive capital works and project delivery experience.

We believe that the governance structure used for the TGP was an amalgam of how Waka Kotahi would traditionally deliver a major infrastructure project supplemented by PPP-specific advice. While we can appreciate that Waka Kotahi would want to put in place a governance model that could have the best interfaces/alignment with the rest of the Waka Kotahi business, we think for a first availability PPP project that Waka Kotahi should have relied more on a benchmark PPP governance structure.

The key issue, in our mind, about Waka Kotahi's PPP capability and experience is that it appears the project governance structure may have inadvertently led to some expert advice not being heard at some of the right forums, at the right time. This result can happen if (as reported in one of the Lessons Learnt reports) a governance structure is perceived as complex with multiple groups involved. Our best example is the role of the PAG, which we read in the

formal project governance structure as having a significant PPP input role, but its actual role in the overall governance structure was effectively limited to being an “advisory group” to both the DMT and PPP Project Director.

While all members of the DMT and the PPP Director were experienced project delivery managers, most of these roles would not have had demonstrated availability PPP experience at that time of TGP’s procurement. For a first time PPP project, this means the role of experienced PPP practitioners would have been critical resources for the Waka Kotahi Project Team. However, having a “hybrid” project governance structure (i.e. that combined a Waka Kotahi traditional project management structure supported by a PPP advisory group) may not have allowed the full potential of all advisers to be used by the Project Team, particularly to assist them make key decisions.

From considering both the review documents and interviews, we agree with the governance themes identified in the 2014 Lessons Learnt reports that the TGP governance structure was complicated with multiple groups established and the respective roles/distinction between them was not clear. To us, this suggests a governance structure that could have been tighter particularly around who was making and approving key PPP recommendations. As raised already, one example of this was the responsibility given to the Project Team to set the AT when the TGP decision matrix assigned that responsibility, in the first instance, to a governance body above the Project Team. Even if the setting of the AT was “assigned” to the Project Team, this was not, in our view, clearly reported to the Board – this means a basic governance control of separating the setting of recommendations and approval/endorsement was not followed.

Another example raised earlier in this Report is the level of detail recording the decision made by the Project Team to include a revised design speed of 110 km/hr in the RFP documents and that the PSC risk allocation was sufficient to cover this requirement. We would have expected to see more specific detail explaining the quantum of risk allocation, and independent assurance confirming this approach. Further, we would have also expected this was a decision that should have been endorsed by either the DMT or the Governance Group rather than just being made by the Project Team.

Our other key observations with the governance structure used for the procurement phase of TGP are:

- We could not confirm if the Board had formally considered and endorsed a recommended PPP project governance structure, specifically when the project governance structure changed in March 2013;
- The governance structure used appears to have multiple groups involved in key decisions (e.g. the DMT and PAG) but used a higher-level Governance Group that appears to have had little or no involvement in key decisions during the procurement phase during 2013 (we only saw project documents showing the Governance Group receiving formal policy papers from February 2014);
- We did not see any review documents that the Governance Group had reviewed and endorsed key decision papers during 2013 prior to the Board’s consideration;
- The Board did not appear to have its own independent PPP adviser but instead relied on briefings from Waka Kotahi’s management, senior project team representatives, and experienced project team advisers (when invited to Board meetings for key decision papers). By appointing their own specialist and experienced PPP adviser, the Board would have had access to an independent view on PPP project matters presented by the project team. Importantly also, the role of an independent adviser would be to flag to the Board any PPP matters that it should be interested in; and
- We also note that during the TGP procurement the Board would have been considering important PPP issues at the same time as normal Board matters. In our view, the Board may want to consider if a board sub-committee should be given the charter to deal with detailed PPP matters and report to the Board when key decisions are required.

Our other observation is the Lessons Learnt section in the P2W Detailed Business Case provides a good synopsis of what lessons from TGP informed the P2W project arrangements. While these Lessons Learnt actions are a positive sign of continuous improvements for which Waka Kotahi should be commended, what this information also does show is how much effort was involved by many parties to implement New Zealand’s first road availability PPP project.

Our overarching recommendation is that we believe governance and decision structures should be improved for future PPP projects. Our specific recommendations are listed below.

Recommendations – Governance & Timeframes

- *For future PPP projects, the Waka Kotahi Board should receive advice on a proposed PPP project governance approach and endorse a recommended governance structure.*
- *To ensure separation of decision making and clarity of roles and responsibilities, an approved PPP decision matrix and RACI document should be ratified by the Waka Kotahi Board, with management and currency maintained by a lower-level governance group.*
- *The Waka Kotahi Board consider appointing their own specialist and experienced PPP adviser (reporting directly to the Board) that can provide independent and open advice on PPP project matters when presented to the Board.*
- *The Waka Kotahi Board should consider forming a board sub-committee with the charter to focus specifically on PPP project matters, so that important project decisions can be discussed independently of standing agenda items and other board matters.*
- *Te Waihangā considers developing model guidelines on PPP project management structures to assist line agencies when developing PPP governance structures.*
- *Te Waihangā should consider a whole-of-government PPP policy requiring all departments, agencies and authorities delivering projects using the PPP delivery model to ensure their proposed PPP governance structures are based on benchmark/model PPP governance structures, with departures clearly explained with supporting reasons/justification.*

6. Identified Areas of Best Practice & Other Matters

6.1 Introduction

The purpose of this section is to highlight areas of PPP best practice that we saw during the IR, and also flag other matters that the NZ government may wish to be considered or explored further in either: (i) future TGP reviews; or (ii) as part of PPP policy and project management development.

6.2 Identified Areas of Best Practice

We observed several areas of best practice during the IR. In our view, New Zealand has taken the best aspects and learnings from other PPP jurisdictions and also implemented their own PPP management practices. The main examples we saw on both aspects were:

- Using a risk allocation matrix built on tested availability PPP road and social infrastructure projects delivered locally and internationally;
- Using the PBM information to help inform the value-for-money proposition;
- Ensuring the borrowing impacts from using a PPP contract are measured based on their impacts on the Crown's balance sheet;
- Implementing several contemporary PPP contract clauses (e.g. Crown support and interest rate hedging) to reflect post-GFC impacts on the pricing of risk in availability PPPs; and
- Te Waihangā's "PPP Dashboard" that provides a comprehensive coordinating agency view on key PPP metrics and risks so that trends and issues can be proactively monitored and managed.

6.3 Other Matters

During the IR we identified the following matters that we believe Te Waihangā should consider as part of either future TGP reviews or as PPP policy matters.

Benchmarking of services during the operational phase of TGP

We note that availability PPP contracts usually contain a five-year benchmarking provision so that the procuring agency has the flexibility and opportunity to test the value for money for services at regular defined intervals during the services period.

We note such benchmarking clauses were in version 3.0 of the New Zealand Standard Form PPP Agreement (i.e. Clause 50) that was adapted by the TG Project Team in early 2013. We were advised that these benchmarking provisions were removed from the model contract at the pre-TG review. We were also advised that benchmarking of O&M costs is now just covered by indexation within the payment mechanism, with a couple of specific areas for review (e.g., there is an uplift for pavement costs if heavy vehicles exceed a modelled amount, which is set out in clause 7 of Schedule 14 of the TG contract documentation).

From the review documents, we identified a presentation from the TGP legal adviser to the DMT in March 2013 that discussed how reviewable services could be treated in the TGP contract. This paper provides the following advice:

- Approach on (New Zealand PPP) projects to date has been to minimise the use of this structure;
- Indexation should provide an appropriate proxy if the packages were correctly priced at the outset; and
- International experience is that prices only go up on reviews.

The following recommendations are then provided to the March 2013 DMT meeting:

- specify in the RFP which services Respondents can treat as reviewable;
- retain the New Zealand market approach of minimising works packages to which this applies; and
- Give further consideration to what packages should be included (e.g. utilities - electricity supply and any other non-core services).

On the advice above, we are not sure we agree with the logic in the latter two points. Indexation movements are only one part of changes in reviewable services. An indexation measure is only comprehensive if it covers specific labour, price and volume changes. Also, we note our review findings regarding the pricing impact on the RFP bids from setting the AT too low. On the point of international experience, the experience of this review team is different – at the very least, we would have expected to see such a statement supported by concrete examples.

Importantly, including a five-year benchmarking provision is about building in the option for government to test the market value of services, particularly given the 25-year term of a PPP. Having that option available is about providing government with the flexibility to choose – this is similar to the request for refinancing provisions that are now a standard feature in availability PPP contracts.

Our other observation is from a governance perspective – this major change seems to have been approved by the DMT. We believe removing the five-year benchmarking provisions from a PPP contract is a major policy change, particularly given the very nature of an availability PPP is about the quality and level of services.

Our recommendation is that the Waka Kotahi Board should seek a briefing on benchmarking of TGP-contract services in the lead-up to the delivery of the project in September 2021 – this advice should include how the benchmarking provisions in the current TGP contract will provide assurance to the Board that value-for money is being demonstrated during the services phase of the TGP. We also recommend Te Waihanga consider if PPP benchmarking provisions should be included in PPP guidance material available for government agencies, and that agencies developing PPP contracts clearly explain the reasons for not using model clauses relating to five-year benchmarking clauses.

Preparation for the contract management phase and benefits realisation

With a revised construction delivery date of September 2021, we note that, in less than 12 months' time, Waka Kotahi will be moving into one of the most important phases when using an availability PPP contract – long-term contract management focussed on benefits realisation.

All jurisdictions that are using availability PPPs have found a need to work through change management processes to get PPP contract management working effectively. With a PPP services phase of 25 years (and sometimes longer), having the right focus on PPP contract management ensures that the procuring agency, Government, and the community can all be confident that expected benefits have a good chance of being realised.

We believe the importance of effective PPP contract management and benefits realisation cannot be underestimated – this is a view also echoed by the Global Infrastructure Hub (GIH).



Structuring, procurement and negotiation of quality PPPs are important to the success of those projects, but without effective management of a contract after financial close, there is significant risk that even the best projects can end badly."

Chris Heathcote, Chief Executive Officer, Global Infrastructure Hub

For Waka Kotahi there is the opportunity to leverage off the experience of others, and also access existing tools and frameworks. Such experience is not only from local PPP projects but also from regional resources such as recently commissioned road availability projects (e.g. the Queensland Government's Toowoomba Bypass PPP); and (ii) the GIH's recently released PPP contract management framework.

If not already commenced, our recommendation is that Waka Kotahi prepare for the Board's consideration an implementation plan for establishing a PPP contract management framework and function to manage and monitor the services-phase of TGP. Further, the scope of this implementation plan should include both the TGP-specific contract obligations but also integration/dependencies with network operations and management.

Use of the AT as a "hard-price" compliance test in the PPP value-for-money evaluation

While value-for-money matters are outside of the scope of our Review, we noted during our analysis of the setting of the AT for the TGP that the current New Zealand PPP policy states any proposal with a net present cost in excess of the AT will be considered non-compliant. Our reading of this policy is that for any PPP bid to be capable of detailed evaluation, it must first meet a "hard-price" threshold which is the AT. Only after meeting that hard-price threshold will a bid be accepted for detailed evaluation.

We also noted that the AT represents the maximum 'price' that the procuring entity is prepared to pay a contractor for delivery of the project. However, we also saw a risk-adjusted PSC being set as the funding limit for a project which, in our mind, we thought was effectively the same thing (less some adjustments, such as agency procurement costs).

We noted from the review documents that for the TGP, the RFP evaluation approach appeared to essentially involve: (i) determine if a submitted RFP bid meets the AT test; and (ii) evaluate AT-compliant bids by risk-adjusting them to reflect bid-specific responses against the RFP, to be eventually compared against a higher benchmark by way of the risk-adjusted PSC. We note this explanation appears to accord with the Evaluation Methodology set out Volume 2 of the RFP document (i.e. specifically clause 11.2.1) issued to the two RFP respondents. These RFP conditions formed the basis for the two RFP Respondents agreeing to submit proposals.

We also noted the RFP conditions allowed Waka Kotahi to take into consideration significant price differences between RFP Proposals, and possible value-for-money outcomes proposed over and above those specified in the RFP.

We appreciate the AT policy is a New Zealand-specific requirement for PPPs. Based on international experience, two questions in our mind are:

- Usually in a PPP evaluation, all RFP bids are accepted for evaluation if they meet minimum information, capability, and the Service Need Specification requirements. A process of risk-adjustments (both upwards and downward, as applicable) is then made to the face-value of submitted price offers to reflect the specific aspects of each bid, including contract departures and delivery risks. Risk-adjusted bids are then compared against the procuring agency's risk-adjusted PSC to determine if value-for money is possible; and
- If the actual bid evaluation process sees a bid risk-adjusted and eventually being compared to the risk-adjusted PSC, then what exactly is the AT being used for in the PPP bidding process and is using the AT adding value to the PPP procurement process?

We have raised the above points in the context that we believe it is a matter that should be considered in more detail if future reviews of the TGP include lessons learnt in the value-for-money area.

Recommendations – Other Matters

- *That Waka Kotahi Board seeks a briefing on benchmarking of TGP-contract services in the lead-up to the delivery of the project in September 2021, including how the benchmarking provisions in the current TGP contract will provide assurance to the Waka Kotahi Board that value-for money is being demonstrated during the services phase of TGP.*
- *Te Waihangā consider if PPP five-year benchmarking provisions should be included in PPP guidance material available for government agencies, including a “departures” policy in circumstances where these benchmarking provisions are not being considered.*
- *Waka Kotahi prepare for the Board’s consideration an implementation plan for establishing a PPP contract management framework and function to manage and monitor the services-phase of TGP. The scope of this implementation plan should include both the TGP-specific contract obligations but also integration dependencies with network operations and management.*
- *Te Waihangā consider if future TGP reviews should also include lessons learnt from the use of the AT in the value-for-money evaluation.*

A. Appendix: Review Interviewees

The Reviewers are grateful to the following people that gave generously of their time at the interviews. Each individual's contribution assisted the Reviewers in coming to an understanding of the Project and in the development of this Report.

Interviewee	TGP Role
Karen Mitchell	Project Manager -Procurement & Negotiation Phases
Shane Avers	Commercial & Finance Manager
Dan Marshall	Former Head of New Zealand Treasury PPP Unit Commercial Adviser - Treasury
Colin Crampton	Senior Responsible Officer Convenor – TGP Governance Group
Bruce Wattie	Financial and Commercial Adviser
Sir Brian Roche	Former Chairperson – WGP Consortium
Tom Hunt & Bevan Peachey	Representatives of Finance Industry Involvement in New Zealand PPP Projects
Laura Harris	Debt Provider – WGP Consortium
Peter Spies	Technical Support
Peter Ward	Team member – Business Case development
Craig Nicholson	Lead – Consenting Phase Member – RFP Evaluation Project Manager & Waka Kotahi representative – Contract Negotiation Phase Project Manager & Transport Agency Representative – post Financial Close
Kevin Reid	Lead – Business Case development
Neil Walker	Technical Support - Network Performance
Rod James	Technical Support - Highways Manager
Ian Purdy	Equity and long-term debt provider - Positive Connection Consortium (unsuccessful RFP Respondent)
Richard Percy	GWRC: Implementation and compliance – consent and resource conditions (written interview response)
Robert Jones	Fulton Hogan/Fletchers joint venture – Positive Connection Consortium (unsuccessful RFP Respondent)

Interviewee	TGP Role
Kevin Doherty	PPP Project Director Chair – TGP Decision Making Team
Ian Bond	Project Adviser – Costs
Geoff Dangerfield	Chief Executive Officer
Richard Quinn	TG Project Team – PPP Procurement Manager
John Park	New Zealand Treasury – Member of TGP Governance Group
Stephen Town	Senior Management Team – Waka Kotahi Member - TGP Governance Group
Hugh Kettle	Project Adviser - Legal
Andrew Stevens	Leightons Construction – WGP Consortium

B. Appendix: Documents Reviewed

The following key documents have been used as the basis for the commentary in this report.

Document Name	Date	Context/Purpose
Cabinet & Ministerial related papers	July 2012 Oct 2012 Nov 2012 July 2014	• Delivery of RONS programme and NLTF funding constraints • Briefing on proposal to use PPP approach to deliver TGP • Cabinet submission/approval to consider PPP procurement for TGP and borrowing limit for Waka Kotahi • Cabinet submission/approval on the outcomes of the PPP procurement process • Financial Close Approvals Briefing Pack to Ministers on outcomes of the PPP procurement process
Waka Kotahi Board – Papers & Minutes	Dec 2008 Sep 2012 Dec 2012 Mar 2013 Apr 2013 Aug 2013 Nov 2013 Dec 2013 Feb 2014 Apr 2014 May 2014 July 2014 Dec 2014 June 2016 Apr 2019 June 2019 July 2019 Dec 2019 Mar 2020 May 2020	• TGP project history/development • Approval of PPP Detailed Business Case • Establishment of PPP Project Team & Resourcing • Board workshop on PPP project matters, including PSC and AT development • Advice on EOI evaluation and approval to shortlist two Respondents to receive the RFP • Review of the PSC and AT • Briefing on innovation ideas raised by RFP Respondents during the Interactive Procurement Phase of the RFP • Results of RFP Evaluation • Proposed negotiation strategy with the Preferred Bidder • Updates on negotiations with the Preferred Bidder • Approval to enter into contract with the Preferred Bidder • Summary of Lessons Learnt review • Delivery report updates • Report on consenting and contractual matters • Contract claims matters • COVID impact matters
TGP Governance Group – Papers & Minutes* *Minutes not available for all listed months	Feb 2013 Mar 2013 Apr 2013* May 2013 June 2013* Aug 2013* Sep 2013* Nov 2013* Feb 2014 Mar 2014 May 2014* June 2014 July 2014*	• Governance arrangements • General updates on revisions to the PSC and setting of the AT, change in design speed to 110 km/hr, consenting risk • Decision papers on evaluation discount rate, Crown Credit Support and Interest Rate Hedging • Consenting update/risk allocation issues • Update on Gateway Review • Negotiation report for approval by Board

Document Name	Date	Context/Purpose
TGP Decision Making Team – Papers & Minutes	Mar 2013 Apr 2013 June 2013 Aug 2013 Oct 2013 Nov 2013 Jan 2014 Mar 2014 Apr 2014 June 2014 July 2014	- Revised governance arrangements - Discussion paper/memo on the update of the PSC cost lines and (setting of) the AT (with accompanying papers from advisers) - Information on Consent Conditions Matrix for the RFP - Discussion paper/memo on revised design speed to 110 km/hr - Consideration of a draft of the Procurement Strategy - Updated governance structure/chart - Results of RFP Evaluation - Reconciliation of changes in costs - Updates on negotiations with the Preferred Bidder - Updates on consenting matters - Update on Gateway Review - Negotiation report on outcomes of negotiation with the Preferred Bidder and post-contract governance arrangements
TGP Project Advisory Group – Papers & Minutes	Feb 2013 Mar 2013 Apr 2013 May 2013	- Discussion papers on setting of the AT - Approach to PPP evaluation - Recommendations relating to setting of the AT
TGP Project Steering Group – Papers & Minutes	Dec 2012 Jan 2013 Feb 2013	Papers covering project governance (including proposed new structure), Registration of Interest document, update of the PSC, and definition of AT
Lessons Learnt Reports	Sep 2014 Dec 2014	Waka Kotahi commissioned Lessons Learnt reports (final versions)
Gateway Review Reports	July 2012 May 2014 Oct 2019	- Gate 2 Review of the Detailed Business Case - Gate 3 Investment Decision Report - Targeted Investment Review Report
Detailed Business Case	Sep 2012 Apr 2015	- Transmission Gully Project - Puhoi to Warkworth Project
Waka Kotahi Guidelines	July 2013 Oct 2015	- Consenting Strategy Approvals and Pathways Guide - SMO14: Cost Estimation Manual
New Zealand PPP Policies	Oct 2009 Oct 2013 Sep 2015	- Guidance for Public Private Partnerships (PPPs) in New Zealand – V1.1 - Standard Form PPP Agreement (V3.0) - The Public Sector Comparator and Quantitative Assessment - A Guide for Public Sector Entities
Letter - Councils to Waka Kotahi	April 2014	Interpretation and implementation of BOI decision

C. Appendix: Glossary

The following table summarises and explains key terms used in this Report.

Term	Definition
Affordability Threshold (AT)	In the New Zealand PPP policy/approach, the AT is disclosed to parties participating in a procurement process for a PPP project (the respondents) as the maximum 'price' that the procuring entity is prepared to pay a contractor for delivery of the project. Derived from the PSC, any proposal with a net present cost in excess of the affordability threshold will be considered non-compliant.
Board of Inquiry (BOI)	When a relevant Minister decides a proposal is nationally significant, under Part 6AA of the <i>Resource Management Act 1991</i> a proposal may be directed to an independent BOI for a decision.
Consented Scheme Design	A project's scheme design that has been considered and approved by a BOI (subject to any conditions).
Design Estimate	Project costing prepared during the pre-implementation phase once the design has been completed. A Design Estimate costing is more developed than a Scheme Estimate prepared for the Detailed Business Case phase.
Design and Construct (D&C)	Generally for a design and construct contract, government prepares a design brief which outlines the functional and key user requirements (in performance terms) for works. The government then seeks tenders for completion of the detailed design, consistent with the design brief and construction of the works described in the design brief.
Detailed Business Case (DBC)	Under New Zealand's Better Business Case Framework, a business case is the vehicle to demonstrate that a proposed investment is strategically aligned, represents value for money, and is achievable. It is also a reference point during the implementation phase to support delivery and used in the review phase to determine whether the benefits in the business case were realised.
Expression of Interest (EOI)	The EOI phase is the first step in the formal bidding process. The main purposes of the invitation for EOI are to formally advise the market of the project and the services that government seeks to have delivered and advise government's timeframes and evaluation approach. The key outcomes sought are EOI responses from the market which allow government to short-list bidders to proceed to the RFP phase who are most capable of meeting project objectives over the project term.
Financial Close	Financial Close is the point at the end of the procurement phase where after the PPP contract has been signed, any conditions precedent are met and financing can then be drawn down so that the PPP Project Company can commence construction. In the New Zealand PPP approach, prior to Financial Close the government is briefed on the value-for-money proposition from the signed the PPP contract.
National Land Transport Fund (NLTF)	The National Land Transport Fund is a dedicated fund for maintaining and developing local and national transport services. It is a partnership between Waka Kotahi, which uses the National Land Transport Fund to invest on behalf of the Crown, and approved organisations, which invest local funding on behalf of ratepayers.
Operations and Maintenance (O&M)	All recurrent costs required to deliver the PPP services and maintain the constructed asset in fit-for-purpose condition over the life of the PPP contract.
Preferred Bidder (PB)	After the outcome of the RFP evaluation process, a Preferred Bidder is identified as the party that government intends to enter into a PPP contract subject to the completion of negotiations and legal arrangements.
Proxy Bid Model (PBM)	The Proxy Bid Model (PBM) calculates the estimated periodic service charge that a contractor would require to finance and deliver the project to the level of performance specified in the PPP contract. Known also as the "Shadow Bid Model" in other PPP jurisdictions, the PBM is used in the New Zealand PPP approach as one of the sources of information to confirm the PPP decision.

Term	Definition
Public Private Partnership (PPP)	In the New Zealand context, a PPP is a long-term contract for the delivery of a service, where provision of the service requires the construction of a new asset, or enhancement of an existing asset, that is financed from external (private) sources on a non-recourse basis, and full legal ownership of the asset is retained by the Crown. Under the availability PPP model, whole-of-life services are purchased under a single long-term contract with payments to the contractor based on availability and performance of the asset. Payments do not commence until after construction and when the asset is certified as ready for use.
Public Sector Comparator (PSC)	The PSC is an estimate of the risk adjusted whole of life cost of a project if it were to be delivered by the procuring entity using conventional procurement methods. It is primarily used as a benchmark against which to assess the net present cost of procuring the project as a PPP.
Request for Proposal (RFP)	Following the short-listing of bidders during the EOI phase, the RFP phase involves the release of the RFP documents to seek formal bid proposals, and evaluation of proposals by government to select a Preferred Bidder.
Retained Risk	The value of those risks or parts of a risk that government bears under a PPP project.
Risk Allocation	The allocation of responsibility for dealing with the consequences of each risk to one of the parties to the contract; or alternatively, agreeing to deal with a particular risk through a specified mechanism which may involve sharing that risk.
Roads of National Significance (RONS)	The New Zealand National government in 20xx identified essential road routes as requiring significant investment that require work to reduce congestion, improve safety, and support economic growth. Seven roads of national significance were identified – TGP comprises part of the Wellington Northern Corridor of the Road of National Significance programme.
Service Need Specification	The service need (or output) specification underpins the entire PPP procurement process. The purpose of a Service Need Specification is to comprehensively and accurately state the outcomes and services required (rather than the assets wanted) and the service standards expected by the government (regardless of who will deliver the services).
Scheme Estimate	A project cost estimate prepared as part of the Investigation Reporting (I&R) project development phase, which is equivalent to Waka Kotahi's Detailed Business Case phase.
Special Purpose Vehicle (SPV)	In establishing a PPP project consortium, the PPP Consortium establishes a special purpose vehicle (SPV) which contracts with government. The SPV is simply created to act as the legal entity of a project consortium.
Standard Form PPP Contract	Set of model PPP commercial terms to inform the development of project specific PPP contractual documents
Transferred Risk	The value of those risks (from government's perspective) that are likely to be allocated to the private party under a PPP project.
Value for Money	Value for money is a key principle of PPP projects and includes both a quantitative and qualitative assessment of the benefits of the private sector proposals. The quantitative assessment is assisted by comparing the net present value of a private sector bid against the PSC. The qualitative assessment looks at all other factors including certainty of delivery, quality, efficiency of design etc.
Whole-of-life	The integration of up-front design and construction with ongoing maintenance and refurbishment elements over the life of the asset under the PPP arrangement.