

City Rail Link (CRL) Lessons Learnt Review

CRL Interim Review – Phase 1 Terms of Reference

Context

Te Waihangā, the New Zealand Infrastructure Commission has a focus on trying to create a deliberate “learning legacy” associated with our major infrastructure projects. Our view is that a major infrastructure project can only really be considered a success at the system level if there is the collation and dissemination of good practice, lessons learned and innovation from the project to future projects aimed at raising the bar in industry and showcasing the hard work and efforts of project teams.

We believe we can support enduring improvements in the way in which New Zealand delivers infrastructure by working with those within our largest projects to share knowledge and insight, through means such as case studies and technical papers providing lessons and recommendations to help others.

The New Zealand Government has recently announced an intention to invest over \$30 billion in mass rapid transport in New Zealand’s main cities over the coming decades. This is a scale of investment with few precedents in New Zealand’s history. By their nature they will also be some of the most complex – working in dense urban environments, needing to integrate with existing legacy assets and creating disruption to the communities and business which they are also trying to support.

There has never been a more important time to highlight and discuss the journey City Rail Link has been on over the last decade. City Rail Link offers tremendous insights into the possible risks and opportunities arising from the programme of mass rapid transport projects currently under consideration including Auckland Light Rail, Lets Get Wellington Moving and the Additional Waitemata Harbour Crossing.

To support the Government’s investment priorities, Te Waihangā is leading a Lessons Learnt review of CRL, currently New Zealand’s most expensive tunnelling project, to ensure the most important findings from this project are available to the project teams developing the next tranche of city shaping investment.

Terms of Reference

Te Waihangā has recommended that an interim review of the City Rail Link (CRL) project be undertaken to extract and share learnings from delivery-to-date of the project. This review has been endorsed by the Te Waihangā Board and has the support of the Minister for Infrastructure.

The review is to be carried out in collaboration with City Rail Link Limited and all findings will be presented and discussed with CRL prior to publication.

The review will be made publicly available to enable other large-scale infrastructure delivery entities and projects to inform best practice.

Background

City Rail Link offers tremendous insights into the possible risks and opportunities arising from Auckland Light Rail at almost every level.

A wide-ranging review into City Rail Link looking at the project scope, costs, benefits, procurement, delivery, governance, risks, and innovations & opportunities, would offer tremendous value to decision makers, those developing project team itself as they progress toward a final investment decision in 2023/24.

The review will help create a solid evidence base for Te Waihangā to support decision making on future projects.

Process

Te Waihangā intends to source a suitably qualified international advisor to lead the Review. That individual will have significant experience, at a leadership level, of the following:

- Development, procurement and delivery of complex mass rapid transit projects of significant scale; and
- Senior level management experience within an infrastructure delivery entity or project with experience with relevant capital delivery structures and processes.

The Expert Reviewer will be supported by a NZ-based, experienced industry professional who will provide peer review support.

Te Waihangā will oversee the review, participate in interviews and provide insight and advice on broader non-technical programme components as appropriate.

Scope

Phase 1 of this review seeks to understand the potential learnings from delivery-to-date of the CRL project which may be applicable for other tunnelled, rail, or large-scale infrastructure projects. The key focus of the review should be on practical learnings that will inform future decision making, policy development or project scoping, consenting and design to ensure that New Zealand realises greater value from its investment in major infrastructure projects.

Phase 2 will investigate specific areas identified in Phase 1 as worthy of additional investigation. Phase 2 may also look at how the City Rail experience compares with similar projects internationally and where we might look for further learning to inform future projects. Phase 2 may use the same reviewers, however depending on the topics it may be more appropriate to use a different reviewer with specific knowledge in the 'deep dive' area. The professional services contracts of the reviewers will be set up to allow this flexibility.

It is intended that the review consider lessons learnt at a system, project governance and technical level.

System considerations

This will include

1. Investment decision making – whether the decision making was informed and set the project up for success
2. Mechanisms for collaboration – successes and challenges in working across agencies and levels of government to deliver benefits

3. Benefit realisation – how the various aspects of the intended investment programme have progressed in order to deliver the intended value
4. Regulation – what regulatory barriers have there been to delivering value from the investment and how could these be addressed in future (considering underground rights, consenting etc)
5. Integration with existing assets’ operation and ownership of the constructed assets.

Project considerations

This will include:

1. Budget – What scope, technical, process, governance or other items contributed to budget changes and the project’s ability to effectively manage budget including appreciation of the inherent and contingent risks and how risks were managed and how these could be mitigated, overcome, or managed more effectively in future. Challenges associated with communicating uncertainty for long run infrastructure projects and how this could have been managed differently.
2. Governance - Whether the governance structures applied during the project lifecycle to date have been appropriate. Challenges associated with creation of a new SPV entity and whether more enduring structures are appropriate.
3. Innovation & Opportunities - Identify opportunities and innovations adopted, including sustainability and social outcomes
4. Identify design review and approval challenges (including managing a large number of Project Sponsors) and any learnings to streamline future design review and approval processes and reduce disputes in detailed design phase
5. Identify opportunities and learnings with respect to supporting urban development including land zoning and use.
6. Identify opportunities and learnings with respect to stakeholder engagement including with Mana Whenua and business and community groups.

Technical considerations

This will include

1. Procurement - Whether the selected procurement model has achieved value for money to date, taking into account project outcomes and key risks that have emerged including any lessons learned from working with international contractors
2. Delivery - Identify key events and risks that have adversely impacted on project costs and programme. Identify scope changes during delivery, how these impacted delivery and any learnings. Identify any challenges associated with interfacing with scope which sat outside of the project (e.g level crossing projects)
3. Identify contract interface challenges between project packages and lessons learnt to minimise these and identify any identify interface challenges with scope which sat outside of the project (e.g level crossing projects)
4. Identify scope elements which could have benefitted from greater flexibility in the detailed design and which could have benefitted from greater specificity
5. Identify any scope elements which ALR should consider specifically adopting for consistency in operation
6. Identifying innovations and learnings from large-scale tunnelling in a New Zealand context
7. Whether key risks were appropriately identified, allocated, and communicated
8. Whether risk management systems are achieving the desire level of mitigation
9. What were the top 20 project risks identified in the business case and did they eventuate during delivery
10. What additional survey, testing, or data could the project team have obtained prior to contract award which could have minimised the impact of risks or helped better define risks and what prevented CRL from obtaining this data?

11. BIM and digital data – what information could be provided to other Auckland projects to create a common language, share data, and/or create a combined Auckland BIM model that all upcoming projects could use

Indicative Timeline

The Review is to be carried out in two phases.

The first phase is an exploratory phase which will help refine the scope with key agencies to ensure we are capturing learnings and best practice that will provide enduring value to future projects. The purpose of this phase is not to document findings but to ensure there is agreement and alignment on key areas for further exploration. The Terms of Reference for Phase 2 will be developed following the completion of Phase 1.

It is anticipated that Phase 1 will take at approximately 4 months (including Christmas) from the appointment of the reviewers, with the following indicative timeline (subject to agreement with the selected reviewers):

1. w/c 14 Nov and 21 Nov – document review to inform scope of Phase 1 review;
2. w/c 21 Nov – Te Waihangā Board endorsement of proposed approach;
3. w/c 28 Nov – Ministerial engagement on proposed approach;
4. w/c 28 Nov – interviews with key agencies to ensure we are capturing learnings and best practice that will provide enduring value to future projects, gather and review evidence;
5. w/c 19 Dec – present findings and outline report;
6. w/c 6 Feb – undertake second round interviews;
7. w/c 13 Feb – present draft report for consultation;
8. w/c 27 Feb – review comments and finalise report including draft Terms of Reference for Phase 2.

The final report will then be released to other projects, government agencies and may be issued publicly. The final report will be used to identify areas for further investigation and comparison against international best practice. The Phase 2 reviews are estimated to take an additional 4-6 months depending on the depth of the topic and the amount of research required.

Governance

Te Waihangā management will oversee the review and provide direction to the Expert Reviewers. Te Waihangā will also monitor the progress of the review and provide regular progress updates to its Board. Resources from the Infrastructure Delivery Team will be used to support the Expert Reviewers.

Procurement

Te Waihangā will directly appoint the Expert Reviewers. Te Waihangā has prepared a Procurement Plan, including exemption from open advertising and the All of Government panel. The Procurement Plan addresses the process for selection and contract award.