Waterview Shared path a risk based approach
Then Now and Tomorrow

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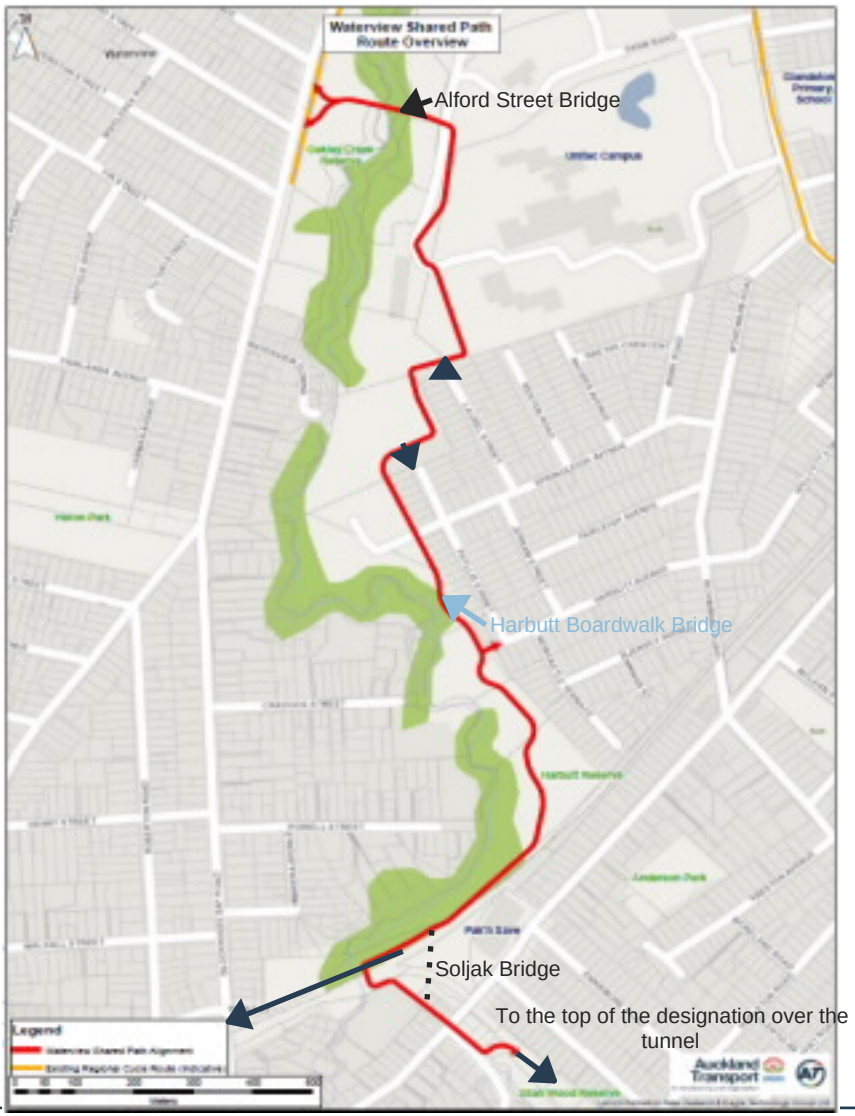
An Auckland Council Organisation

Introduction to Waterview Board of Inquiry Decision S014

Notes from the condition

The route called for a Bridge at Soljak Place a Bridge at Alford Street and a connection from Alan Wood Reserve to Unitec Campus both as mitigation during construction and for the operation of the Waterview Tunnel



Introduction

- The route connects from the top of the Waterview Tunnel in Alan Wood Reserve to Waterview Glade the roof of the Waterview Tunnel in Waterview and to Trent Street.
- The route is 3.4km long and is generally 3.5m wide until it passes Soljak Bridge when it becomes 3m
- Waterview Shared path was sited along the banks of Te Auanga - Oakley Creek.
- The land is complex array of basalt lava flows and land slips slips on the eastern side & clay landslips on the west side.
- The land along the route is held in 9 different forms of title.
- Stakeholders were vocal and organised in opposing the effects of the NZTA Waterview Project seeking mitigation.
- There are archaeological sites dotted along the banks of Te Auanga and surrounding areas.
- There is outstanding natural areas remnant Mahoe forests and habitats for protected fauna, flora and hepetofauna.
- There is complex closed landfills along the route with landslips.
- The project was budget constrained
- A risk based approach was the only option to manage the outcome.

Overview of Timeline

- Decision S014 — 27 Jun 2011
- Project awarded to AT — Oct 2011
- Feasibility + Decision to fast track project — Aug 2012
- *Decision taken to build via the NZTA/ Well-connected Alliance* — *Apr 2014*
- *TOC preparation commences* — *Oct 2014*
- Investigation Complete — Dec 2014
- *TOC agreed in principle* — *Aug 2015*
- Designation — Oct 2015
- Property purchase/ Build — May 2016
- *Design* — *Sept 2016*
- *Redesign Trent Street link part of Soljak Bridge* — *Mar 2017*
- *Opening* — *Oct 2017*

Italics are the Alliance Steps

Key lessons

- The decision S014 and feasibility had adhoc risk assessments and under estimated the project risk cost.
- The investigation and property purchase had medium level risk assessment and was focus on cost reduction.
- Stakeholder engagement took an IAP2, risk and cost based approach.
- Mana whenua engagement we took an IAP2, risk/costs & relationship based approach using Te Aranga Design Principles
- The TOC and Alliance model had a high degree of risk assessment, oversight and robust decision making but came at high costs.
- High performance teams within the project produced great insight and collaboration in driving down costs.

Mana whenua

- Mana Rangatiratanga - Authority
- Whakapapa - Names and Naming.
- Te Taiao - The Natural Environment
- Mauri Tu Environmental Health
- Mahi Toi - Creative Expression
- Ngā Tohu - The Wider Cultural Landscape
- Ahi Kā The Living Presence

Also

- Needed time to build trust
- Needed time to offer opportunity to mana whenua

Require a team

Forming, Norming and Storming

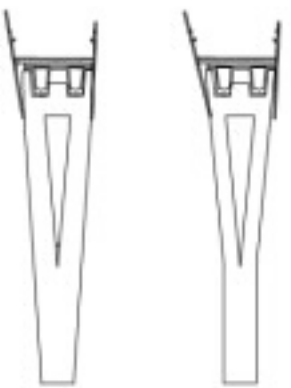
- Needed time to consider roles responsibility and jell
- Needed time to form the team
- Needed time to get a group together
- Needed time to engage.
- Needed time to build trust
- Needed time to challenge
- Needed time to resolve differences

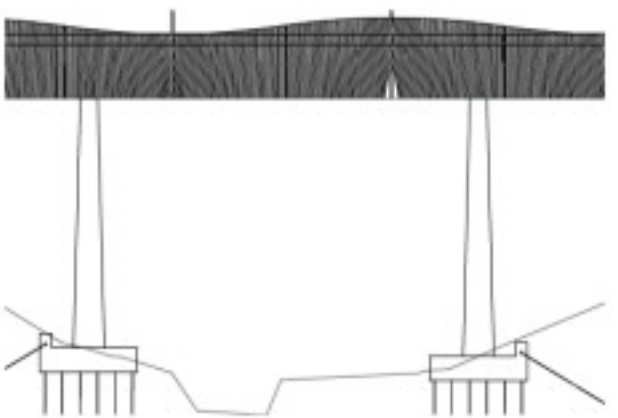
Several members with WCA, Local Board, Industry Expert and Peer Review stood out for their contribution to the project.

The Alliance Model Design and Build Team

PAB:	AMT:	OTHER:
Graham Darlow	John Burden	Glen Kirk (WCA)
Roger McRae	Iain Simmons	Lawrence Blackmore (WCA)
Richard Aitken	Stuart Oakey	Andrew Scoggins (AT)
Sindy Williamson	Pip Hair	Marcus Pillay (AT)
Michiya Sadamatsu	Kerryn Rosell	Mieszko Iwaskow (NZTA)
Brett Gliddon	Alan Hughes	Tarun Ahuja (AT)
Peter Spies	Paul Stone	Shelley Keery
Peter Millar	Sumi Eratne	SRP
	Akio Tamai	Insurers

Nature & Te Aranga Design principle provided the inspiration for the Alford Street bridge form in keeping with Te Auanga & remnant native forests.





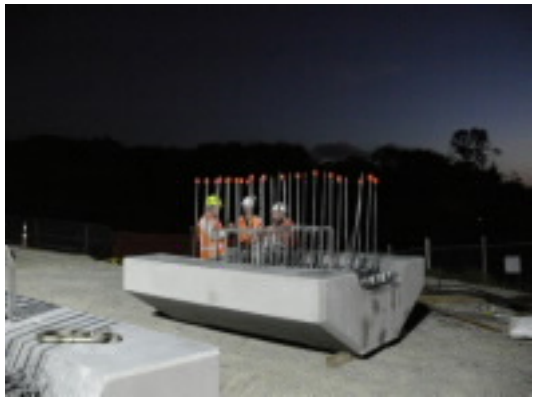
Pros for an Alliance

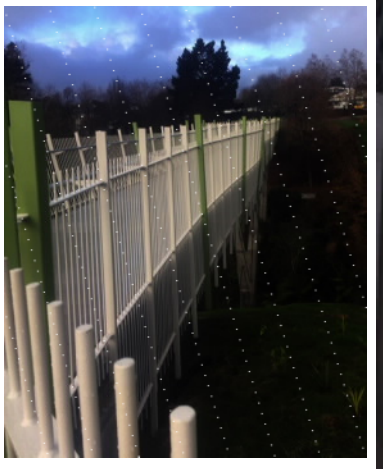
- The risk based approach favoured saving one year of time in program
- Used $20m of geotech data to assist with design
- Access to standard bridge and ground engineering technology developed from Waterview Tunnel project
- Risk driven decision making for the project construction
- Major trust built with WCA extended to WSP delivery
- Gave more options on delivery supply chain.
- Contract had advantages for concrete & material supply
- Access to vast good leadership time and skills sets
- Access to NZTA & Key stakeholders
- An Alliance is then, now and tomorrow they pick up an old issue, they resolve it in the present and build it for tomorrow

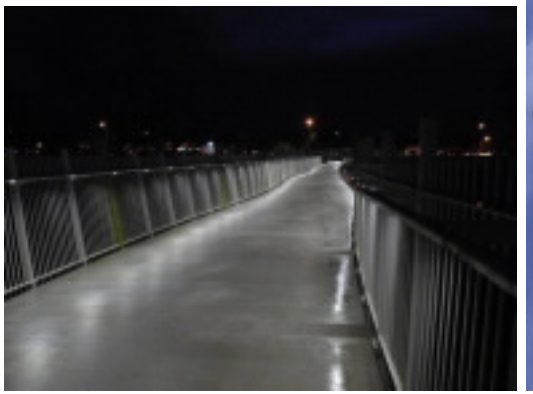
Cons of an Alliance

- Higher cost overhead
- Limited funding from NZTA
- Managing staff turnover was a challenge
- Teams had split responsibilities with other major projects
- Lost major rigs and key staff to 3rd project
- Exposed to sub contract pricing as a cost plus contract
- Exposed to material price increases
- Heavy work methodologies applied as they have lower risk tolerances.
- Management of Health and Safety disciplinary procedures is left to the home companies

Alford Street Bridge

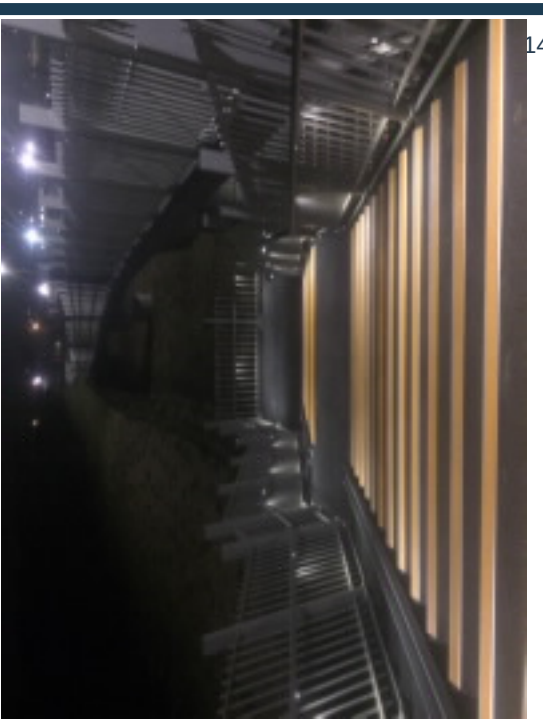


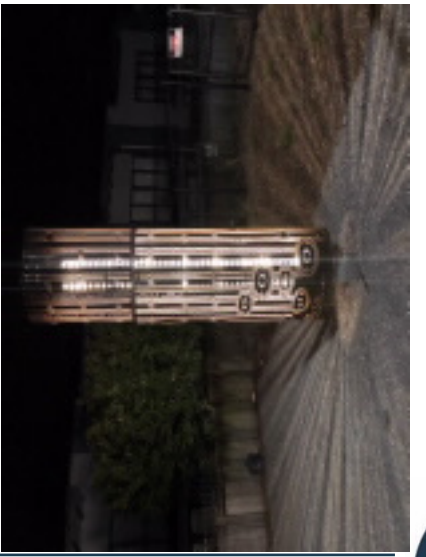




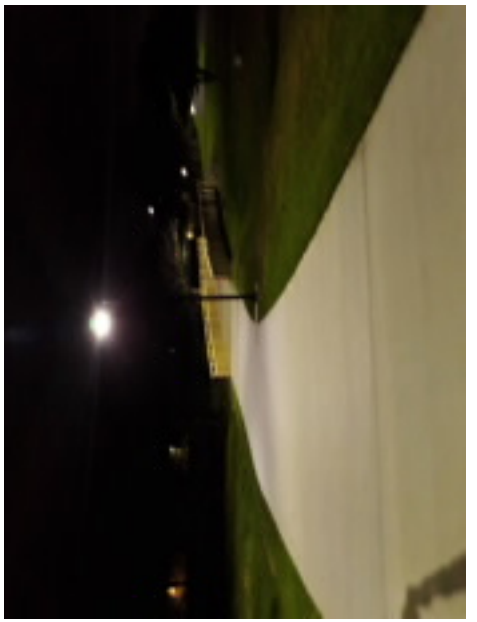
Harbutt Bridge

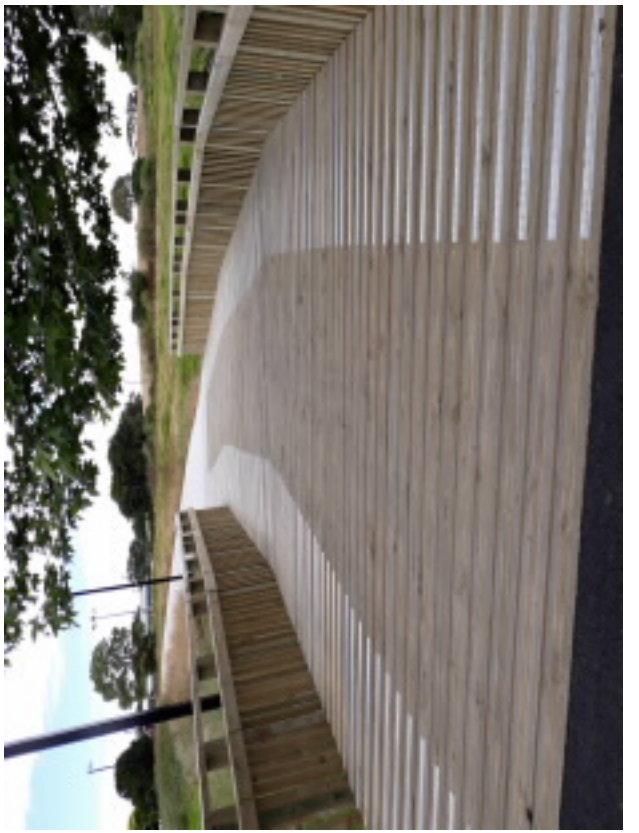
Soljak Bridge





Trent Street & 2 Boardwalks





The future