

Construction of the Breakwater Road Cycleway Napier

"The Devil is in the Detail"



Presented by Tony Fong, Project Engineer Resolve Group Ltd





Presentation Outline

- Background
- Location of site
- Design phase
- Tendering

esolve

Construction phase



Background

Project initiated by Rotary Pathways Trust

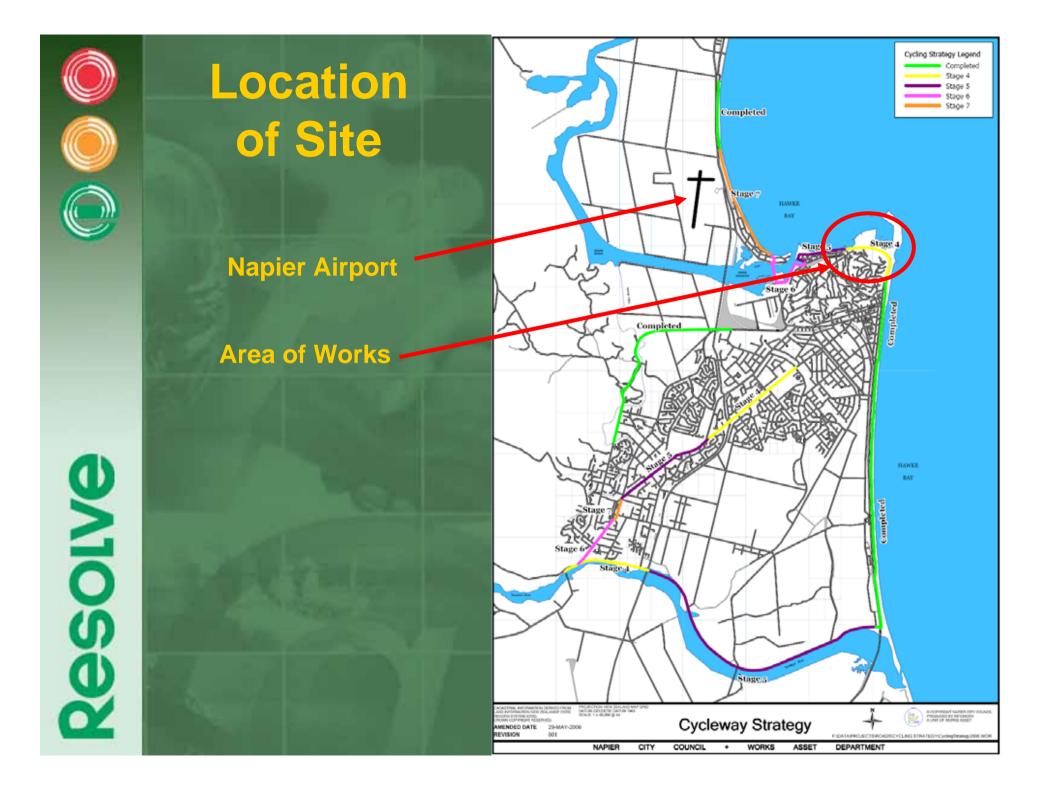
 Trust has 10 year plan to build cycle network in Hawkes Bay region started 2003



Currently at Stage 4 of 7 stages

Project funding

- 47% from Land Transport New Zealand subsidy
- Balance from Napier City Council



Location of Site cont'd



Sesolve



esolve

Design Phase

Design generally in accordance with Transit's Supplement to Austroads GTEP Part 14

Cycleway 1.6km long, typically 3.5m wide

Concrete cantilever specifically design by Maunsell as design subconsultant

Consulted with Transit, Napier City, Port of Napier and Ontrack



Design Phase cont'd

Combined pedestrian & cycleway

Included signage





Tendering

> Physical works let as a Transit contract

Four (4) week tender period

15 set of tender documents issued to potential tenderers

Potential tenderers located from Wellington to New Plymouth, Tauranga & Hawke Bay

 \succ Received four (4) tenders

Resolve



Tender cont'd

Tenders evaluated using LTNZ's Lowest Price Confirming method.

Winning tenderer was Tuck Contractors Ltd from Hastings.

Project budget was \$600,000 Excl GST.

Contract period was originally 8 weeks.











Resolve

Breakwater Rd

Location of cantilever & gabion wall overlooking Breakwater Beach

Marine Parade

© 2007 Europa Technologies

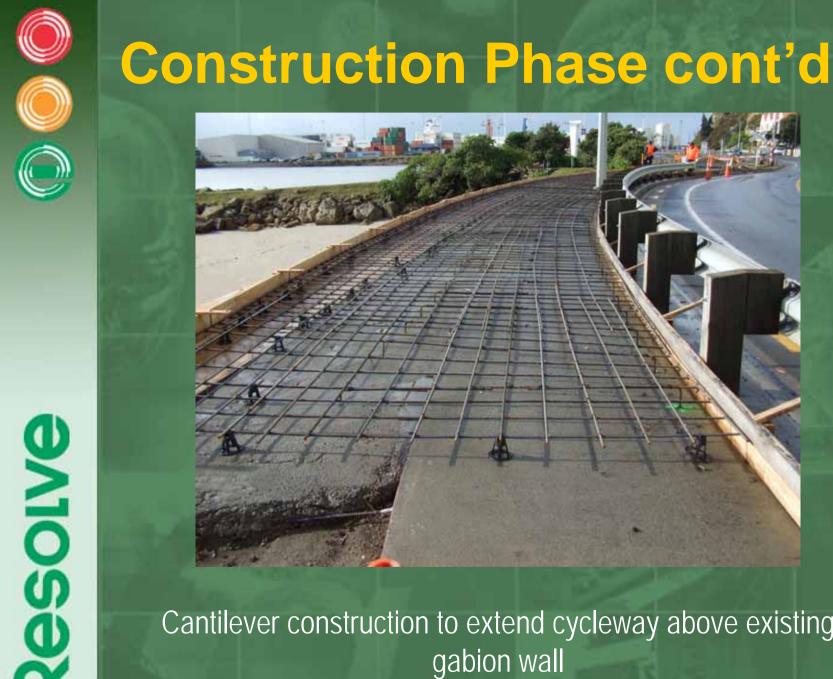
360 m Image © 2007 DigitalGlobe Pointer 39°28'47.89" S 176°54'52.37" E elev 77'm Streaming ||||||||| 100% Eye alt 1.29 km



Existing gabion wall

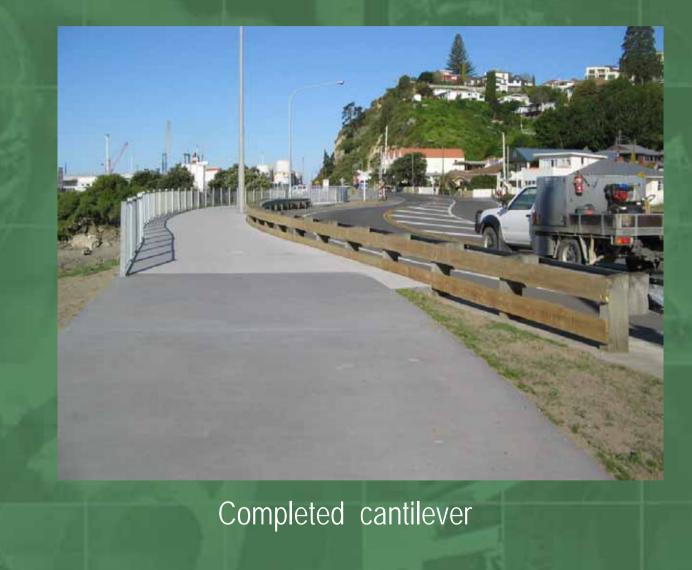
Footpath over gabion wall before cantilever construction, overlooking Breakwater Beach





Cantilever construction to extend cycleway above existing gabion wall











Breakwater Rd

Location of western rail level crossing

360 m

Marine Parade

© 2007 Europa Technologies

 Image © 2007 DigitalGlobe

 Pointer 39°28'47.89" S 176°54'52.37" E elev 77 m Streaming |||||||||| 100%

Eye alt 1.29 km

Resolve







Rail level crossing at western end during construction









Breakwater Rd

Location of Gate 3 port of Napier heavy truck crossing

360 m

Marine Parade

© 2007 Europa Technologies

 Image © 2007 DigitalGlobe

 Pointer 39°28'47.89" S 176°54'52.37" E elev 77 m Streaming ||||||||| 100%

Eye alt 1.29 km

'Google"

Resolve





Gate 3 heavy truck entry into Port of Napier before works started



Sesolve

Construction Phase cont'd



Gate 3 heavy truck entry into Port of Napier pedestrian & cyclist crossing





Completed pedestrian & cyclist crossing Gate 3 heavy truck entry at Port of Napier



Resolve

Construction Phase cont'd





Breakwater Rd

Concrete cycleway construction

360 m

Marine Parade

© 2007 Europa Technologies

Pointer 39°28'47.89" S 176°54'52.37" E elev 77 m Streaming ||||||||| 100%

Eye alt 1.29 km

'Google"





Resolve

Construction Phase cont'd





Breakwater Rd

Location of kerb & channel level adjustments to match adjacent pavement

Marine Parade

© 2007 Europa Technologies

 Image © 2007 DigitalGlobe

 Pointer 39°28'47.89" S 176°54'52.37" E elev 77 m Streaming ||||||||| 100%

360 m

Eye alt 1.29 km

Google"





Checking to match kerb & channel levels to existing pavement

Sesolve







Rail level opposite Coolstore







Completed rail level opposite Coolstore







Approx location of guardrail

360 m

Marine Parade

© 2007 Europa Technologies

Pointer 39°28'47.89" S 176°54'52.37" E elev 77 m Streaming ||||||||| 100%

Eye alt 1.29 km

'Google"





Guardrail installation at chainage 600m



Completed guardrail end terminal



Resolve

Construction Phase cont'd





Breakwater Rd

Location of Port of Napier Gate 1

360 m

Marine Parade

© 2007 Europa Technologies

 Image © 2007 DigitalGlobe

 Pointer 39°28'47.89" S 176°54'52.37" E elev 77 m Streaming ||||||||| 100%

Eye alt 1.29 km

'Google"





Cycleway at eastern end by Port's Gate 1 entry



Sesolve

Construction Phase cont'd



Completed cycleway at eastern end by Port's Gate 1 entry



Sesolve

Construction Phase cont'd



Completed cycleway at eastern end by Port's Gate 1 entry



Summary

• Project is Pathways Trust initiative

- Stage 4 of 7 stages
- Project funding from LTNZ and NCC
- Constructed by Tuck Contractors Ltd
- Project budget \$600,000.00



Summary cont'd

- Key design features
 - » Two rail level crossings
 - » Two heavy truck crossings into Port
 - » Concrete cantilever over Breakwater Beach





Acknowledgements

• Mike Wong, Transit New Zealand

• Peter Scott, Napier City Council







