





2008

2010 WHC FORM STUDY

2010

2016

2018

2020

2021

2022

2023

2008 WHC CROSSING STUDY 2016 NORTH SHORE RAPID TRANSIT STRATEGIC CASE 2018 NORTH SHORE RAPID TRANSIT PBC 2020 WHC PBC

2021 NORTHERN BUSWAY ENHANCEMEN TS DETAILED BUSINESS CASE (DBC) 2022 NORTHERN PATHWAY BUSINESS CASE

2022/23 INDICATIVE BUSINESS CASE















WAKA KOTAHI Z NZ TRANSPORT



## **Building On Previous Work**







## **All Tunnels - Option D**



LRT Bridge & Road Tunnel - Option N2



LRT Tunnel & Road

Bridge - Option P



All Bridge - Option J



















OPUS

## **Meola Reef Options**



### 1997

A Meola Reef option (option 9, Meola Bridge to Highbury) had been considered in the 1997 Auckland Regional Council/Opus study and briefly in 2008.

This was a highway bridge option which would connect Glenfield Road to SH20, and would require extending from Richardson Road. This would also involve a four lane motorway route from Pupuke Road at Highbury, descending over Duck Creek to a cable stayed bridge. A new motorway route would be required over Meola Creek and through Point Chevalier to the Waterview interchange (see attached map ES17 and illustration ES18).

The main reasons for this option being discounted in 1997 were:

- Severe environmental impact (particularly Meola Reef and surrounds, including Herne Bay),
- Severe disruption at the tie-in at Waterview
- Significant engineering and construction difficulties given the crossing would be almost twice as long as the AHB and steep terrain either side. It also requires an additional crossing at Duck Creek.
- Significant disruption to traffic in Pt Chev/Highbury and to property.

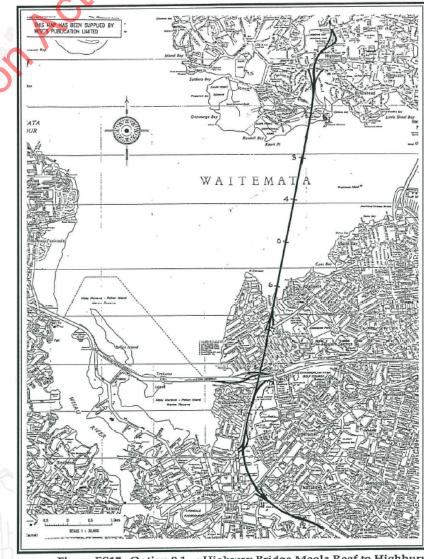
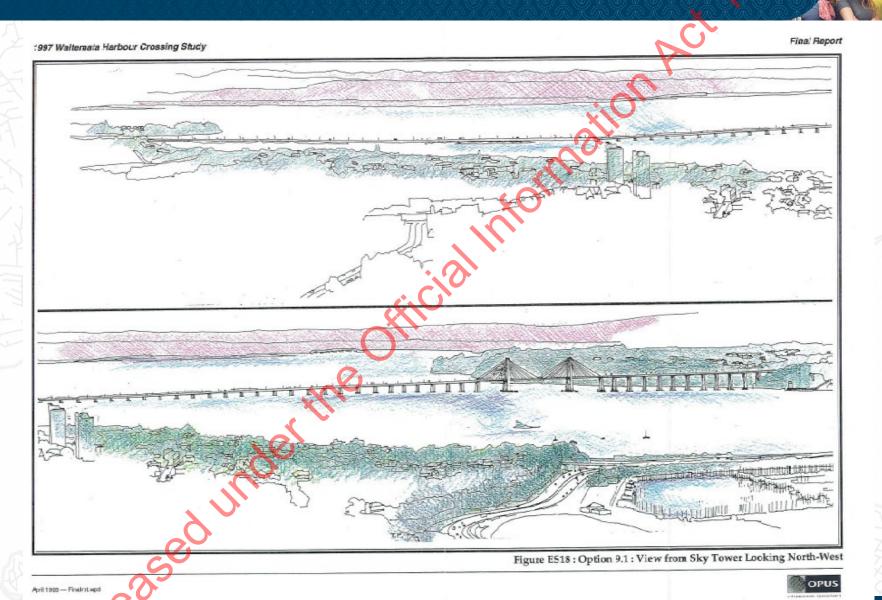


Figure ES17: Option 9.1 : Highway Bridge Meola Reef to Highbury



## **Sketch showing scale of the Meola Reef Option - 1997 Study**











## 2008 Study Options – Phase 1 Evaluation and Long list Summary

- A long list of 159 feasible options were identified in 2008, which also factored in the 40 options examined in the 1997 study.
- This long list summary (as shown in Table 2) included a series of public transport (PT)
  and roading options on either side of the harbour, and with intermediate connection
  points where possible including Glenfield Waterview via Meola Reef.
- For option evaluation, an LTMA themed framework was developed, and functional principles provided guidance on the desired outcomes.

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Economic Development and Regional Growth - covering consistency with the Regional Growth Strategy and economic growth.

Connectivity - addressing connections between transport networks, functional principles and flexibility.

Environmental - sustainability issues and the key environmental criteria such as effects on natural and built environments.

Social and Community - measures of social severance and displacement of communities.

Affordability - relating to cost only at this stage.

#### Functional principles

**Priority 1:** Future improvements to connectivity between the North Shore and the CBD will be provided predominantly by public transport and cross harbour passenger transport improvements.

**Priority 2:** Future cross harbour connectivity will include sufficient general traffic lanes linking the North Shore and greater Auckland region to best meet wider regional connectivity needs.

**Priority 3:** Additional connectivity between the North Shore and the CBD by way of general traffic lanes would be advantageous.

Other priorities: Importance of Transport network robustness & Operational flexibility

Options	Option Code
Glenfield – Te Atatu	a1 – a2
Glenfield – Waterview	b1 - b6
Glenfield – Western Springs	c1-c2
Glenfield - Newton	d1 – d4
Esmonde - Waterview	e1 – e15
Esmonde – Western Springs	f1 – f5
Esmonde - SH16 @ Newton	g1 – g25
Esmonde – SH16 @CMJ	h1- h10
Esmonde – Grafton	i1 – i8
Esmonde – AMETI	j1 – j24
Esmonde - Resolution Point	k1- k5
Lake – Grafton	J1 – I2
Lake – AMETI	m1 – m6
Lake - Resolution Point	n1 – n2
Operational Options	01 – 07
PT only	p1 - p20
Others	q1 – q16

Table 2: Option Long List Summary









## 2008 Study Options - Phase 1 Initial Options Analysis



Initial analysis on retaining options was based on their positive contribution for the following two aspects:

- Economic Development and Regional Growth, and
- Connectivity.

The key differentiator between options included: **PT Access to the CBD and Rail Compatibility**. Of the new PT crossings, those that accessed the CBD from the west were considered better than those that accessed from the east, because:

- Wynyard Quarter is an important consideration for PT as it is the significant growth area on the Auckland side of the harbour and requires a high PT service to realise its potential,
- Options that bring PT to the east of Queen Street require buses to back track to the west of the CBD, to serve the higher level of demand on this side of the City (including the planned Wynyard Quarter development) OR services would be required on both the new crossing and the existing bridge.

Therefore, initial options analysis effectively removed from further consideration options that:

connected on the south side of the harbour west of the existing bridge, that is, to Te Atatu,
 Rosebank, Waterview, Pt Chevalier, Meola, Western Springs, SH16 at Newton (and not the CBD).







## 2008 Study - Phase 1 Conclusion / Phase 2 (Short list)

# Evaluation summary:

On the basis of further findings of Phase 1 of 2008 study, all options west of the AHB were ruled out, and 3 options were recommended for the short list to be further evaluated during Phase 2.

Option 1: Esmonde to Britomart

Option 2: Esmonde to Britomart & SH16

Option 3: Esmonde to Britomart & Grafton









## **Meola Reef Options – current view**



## 2023

Our current work has focussed on the SH1 corridor which is consistent with the findings of all previous studies.

Our work in 2023 did not do a full assessment of previous Meola Reef options. In comparison to options identified in 2023, our Alliance did note that a Meola Crossing would be:

- less effective in taking traffic load off the AHB with it being a different corridor entirely, and
- that Waterview would become the new constraint as it was not designed to accommodate additional local traffic with a direct state highway connection.

A Meola option would also require entirely new major transport corridors through Birkenhead/Glenfield to the north and Westmere/Pt Chevalier to the south to be effective. Estimates for these new corridors have not been costed but challenging terrain and the highly developed urban environment would present major challenges.

Under a Meola option significant investment would still be required along the SH1 AHB corridor to address environmental and structural resilience issues. This would include corridor protection for sea level rise, Northern Busway Priority works, likely restrictions to freight on the Auckland Harbour Bridge with no significant reduction in traffic loads.





