

Penlink

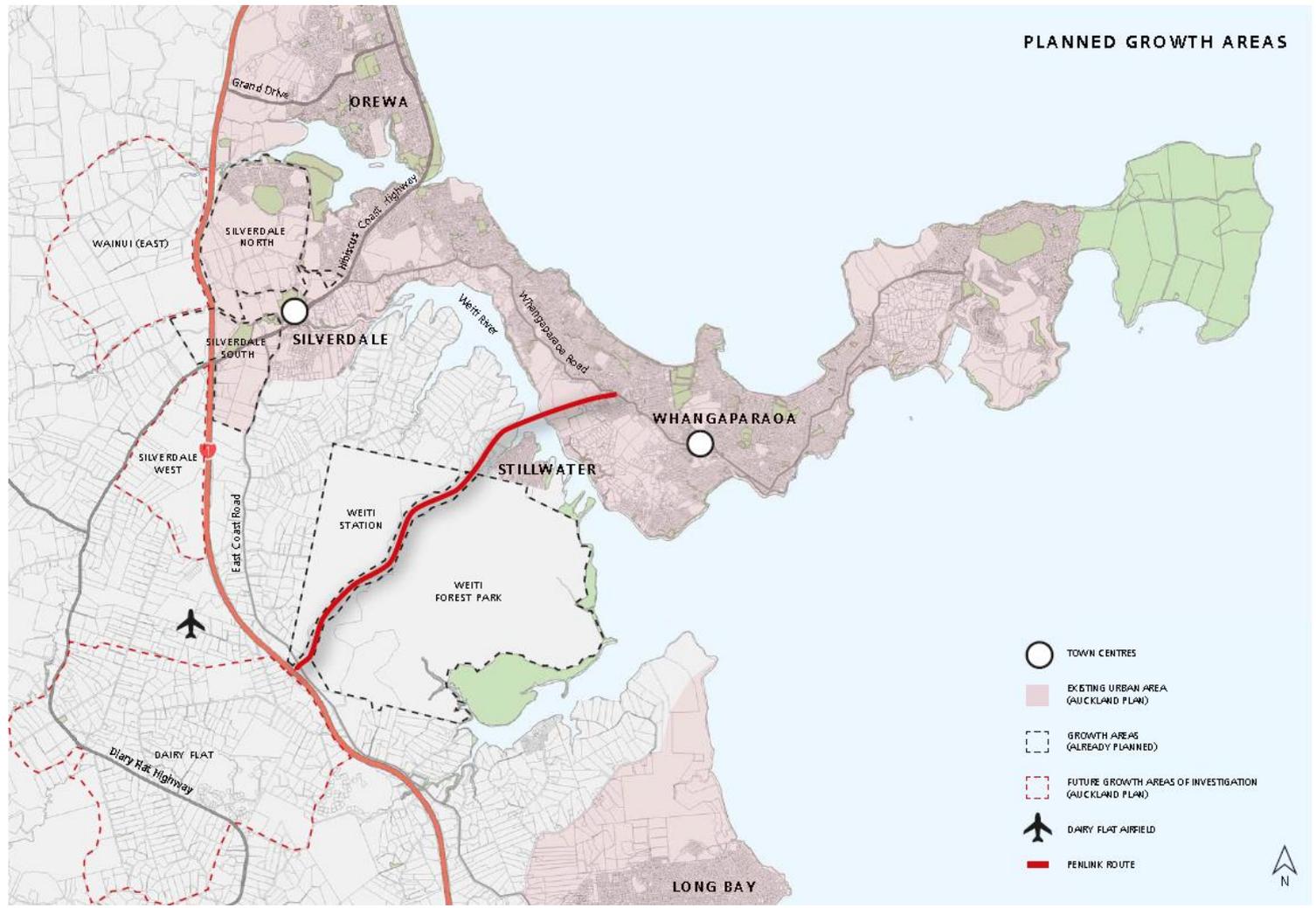
Summary slides

14 July 2014



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The Project



Strategic context

Auckland Plan - Map 13.2 – Auckland's Priority Transport Projects (2012 – 2042)



Network Improvements

- Rapid transit
- Quality transit
- Strategic road
- Regional arterial road
- Sea port
- International airport

Priority Transport Projects

1. City Rail Link
2. Auckland Manukau Eastern Transport Initiative (AMETI) and East-West Link
3. Additional Waitemata Harbour Crossing
4. Public transport infrastructure and services improvements
5. Improvements to the regional arterial road network and selected state highway improvements
6. Route protection of major projects
7. City centre transport improvements
8. Cycle and walk improvements (Refer Map 13.3 for the regional cycle network)
9. Rail freight third track

Hibiscus and Bays – Area Plan

OUTCOME 1:

Business opportunities are unlocked by improving transport connections and public transport services.

Refer to Map 5



What steps will support achieving this outcome?

- Complete Penlink to cater for the planned growth in Silverdale and to alleviate traffic limitations between Silverdale and Ōrewa.
- Progressively extend the busway to Albany and then to Silverdale, and increase local feeder services so that areas can grow but have reduced travel times to the greater Hibiscus Coast area.
- Investigate opportunities for (and if appropriate construct) new park-and-ride stations north of Albany or near the future Penlink interchange with either State Highway 1 or Whangaparāoa Road.
- Improve public transport services (including along Penlink) to the tertiary education and employment centres in Silverdale, the North Shore, Albany and Northern Strategic Growth Areas.
- Encourage the prompt completion of the Wainui southbound ramps by developers.
- Advocate for the delivery of State Highway 18/State Highway 1 improvements with the New Zealand Transport Agency.
- Advocate for improved east-west access points over the length of State Highway 1.



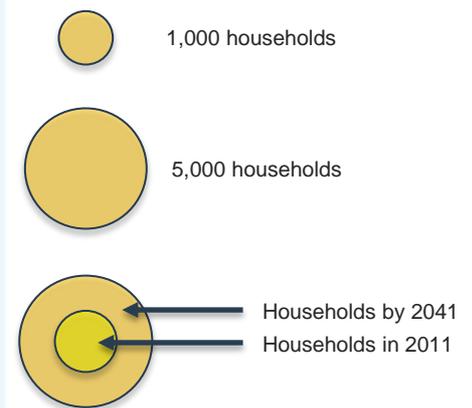
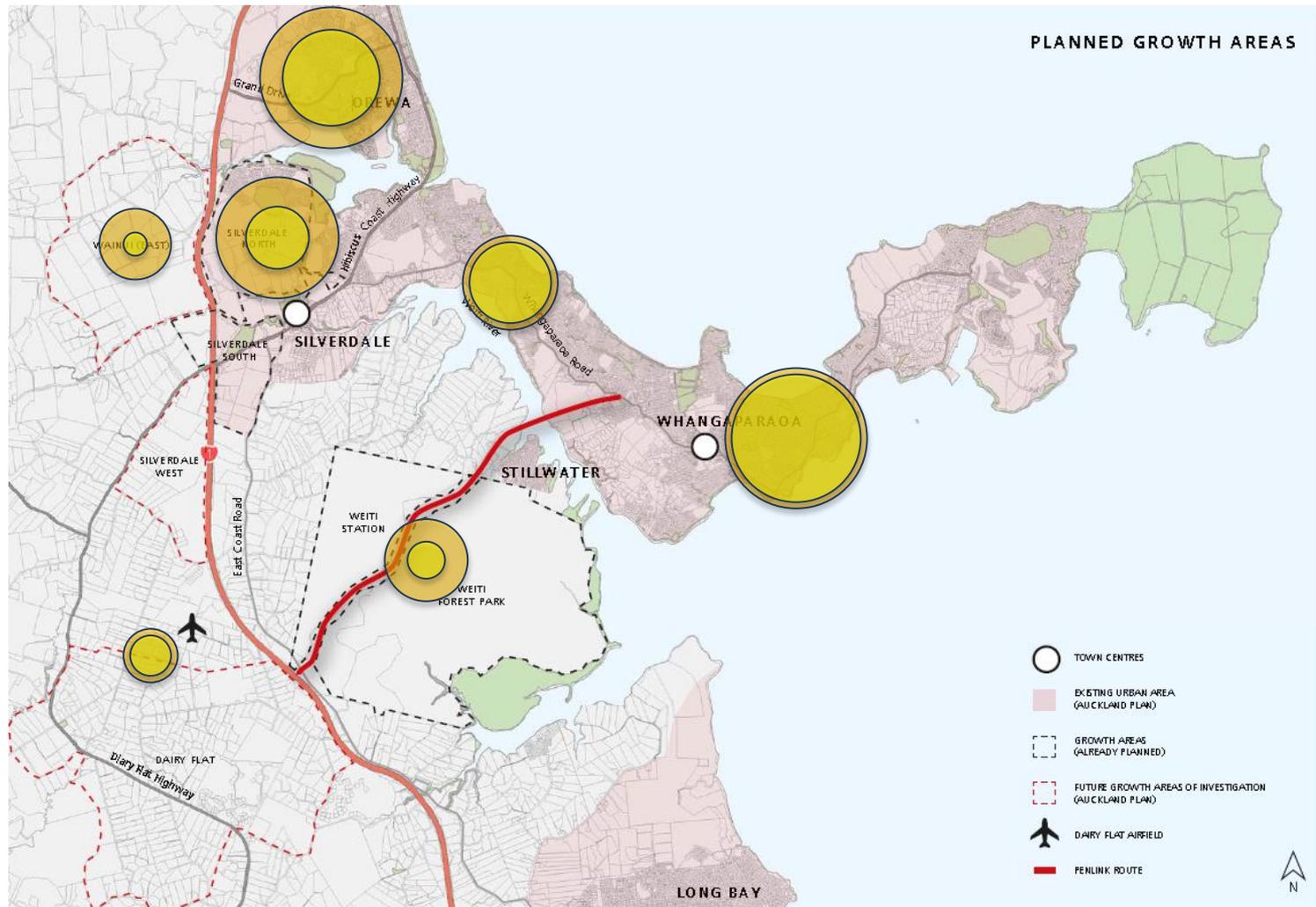
Improvements to multi-modal transport infrastructure will enable better north-south and east-west connections and better travel options.



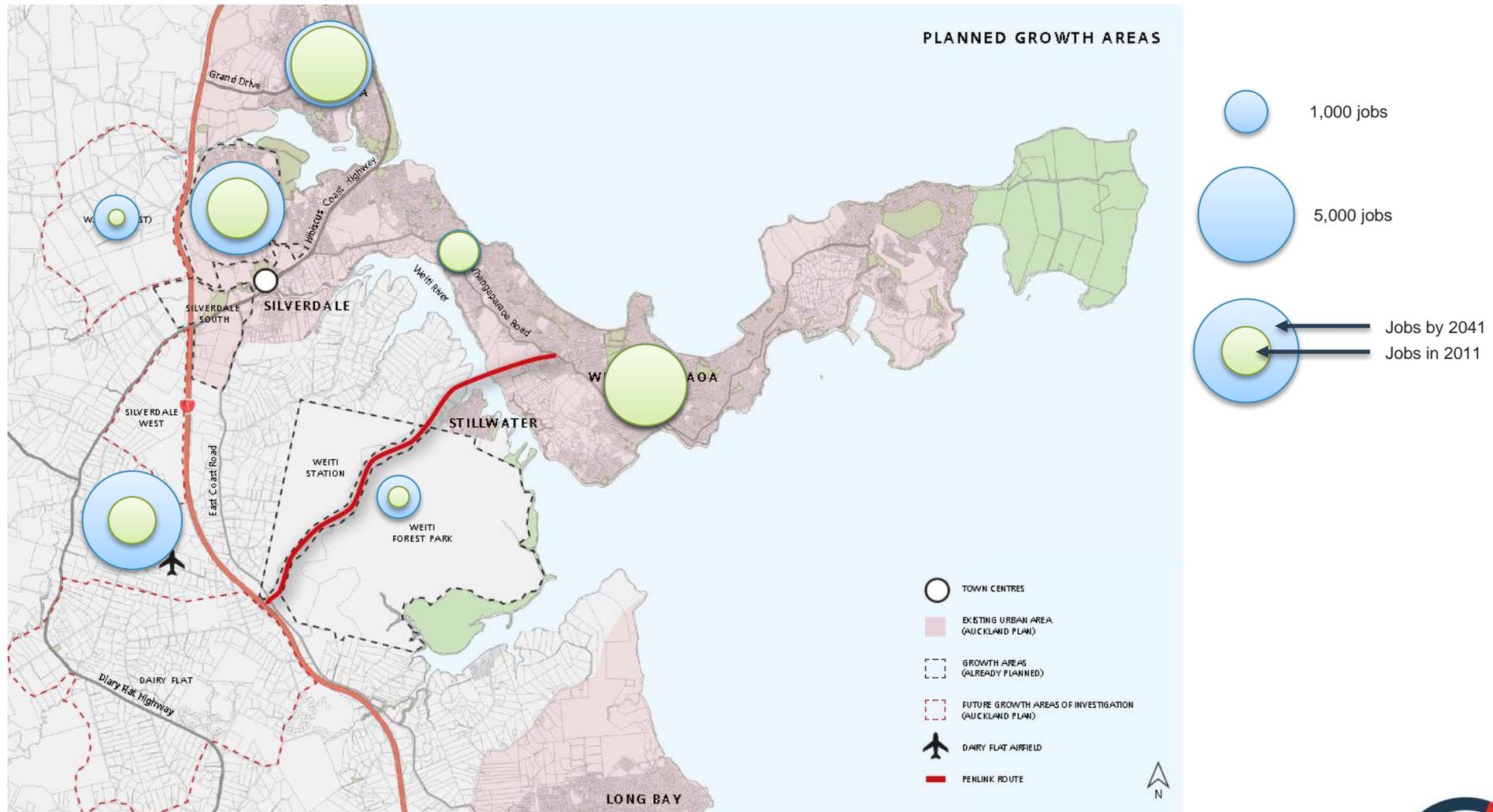
The construction of Penlink is programmed to start in 2018.

Growth

The Project – household growth

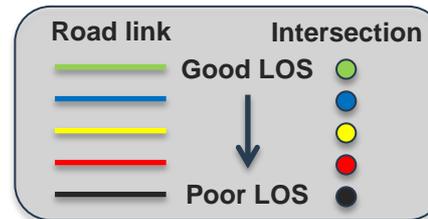


The Project – employment growth



Traffic Implications

Modelling outputs

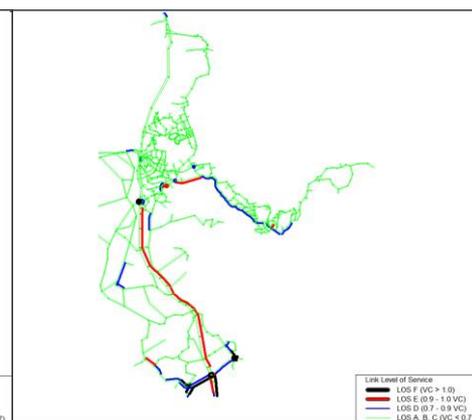
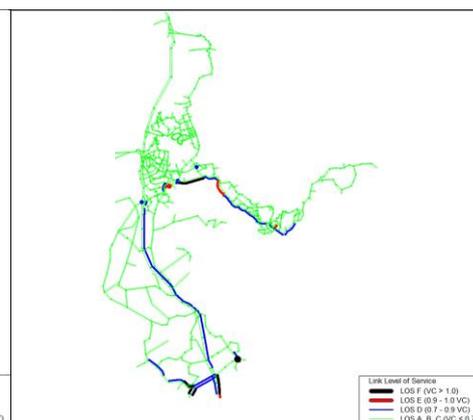
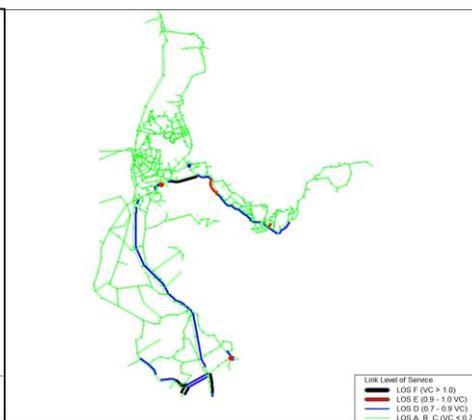
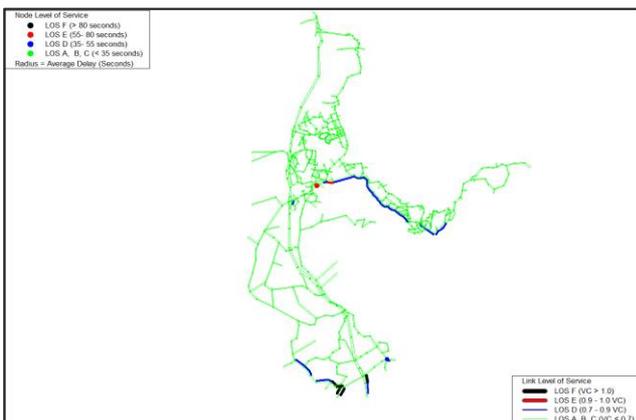


2013 - AM

2021 - AM

2031 - AM

2041 - AM

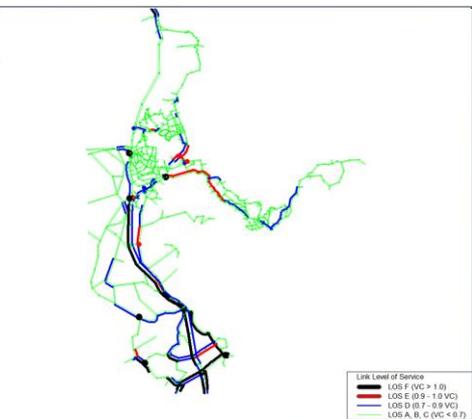
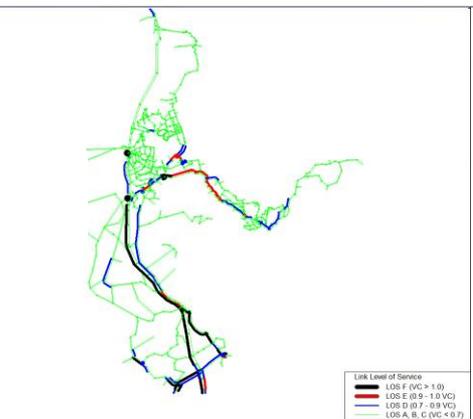
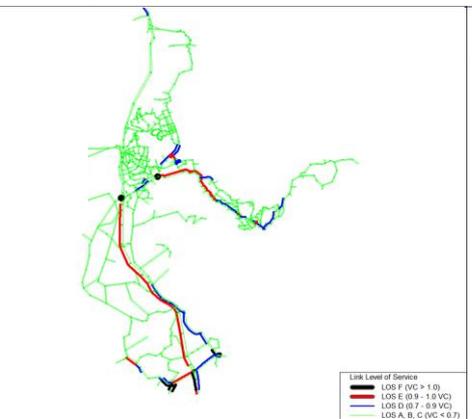
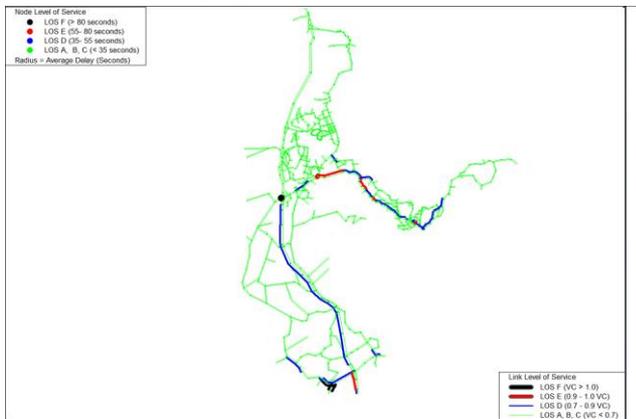


2013 - PM

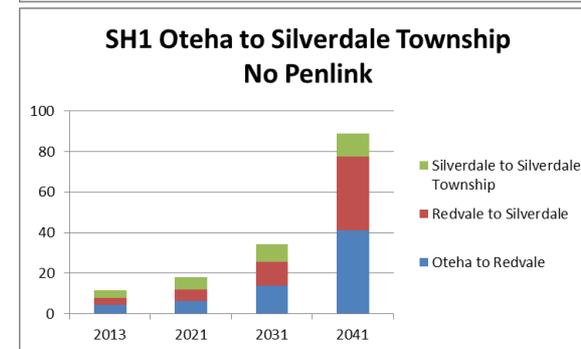
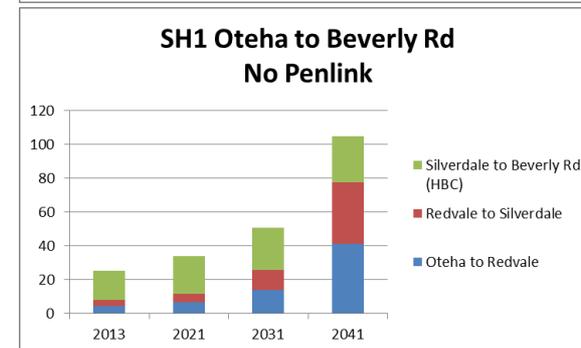
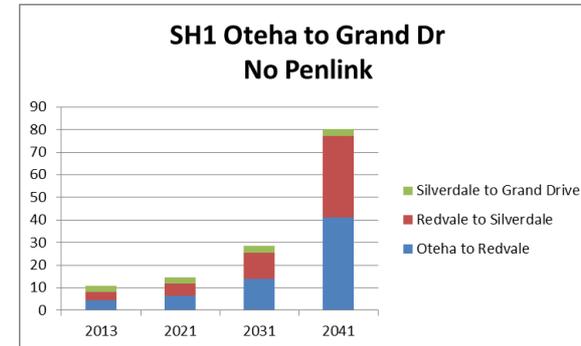
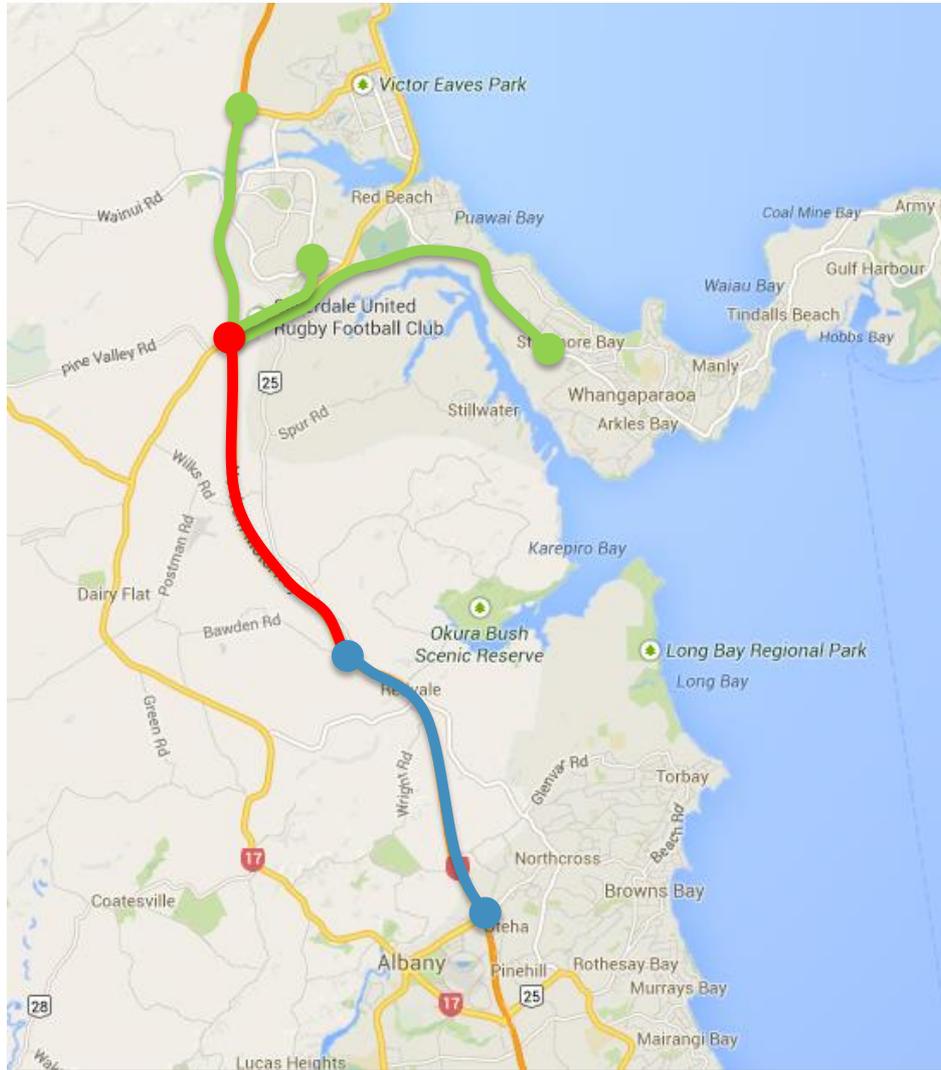
2021 - PM

2031 - PM

2041 - PM

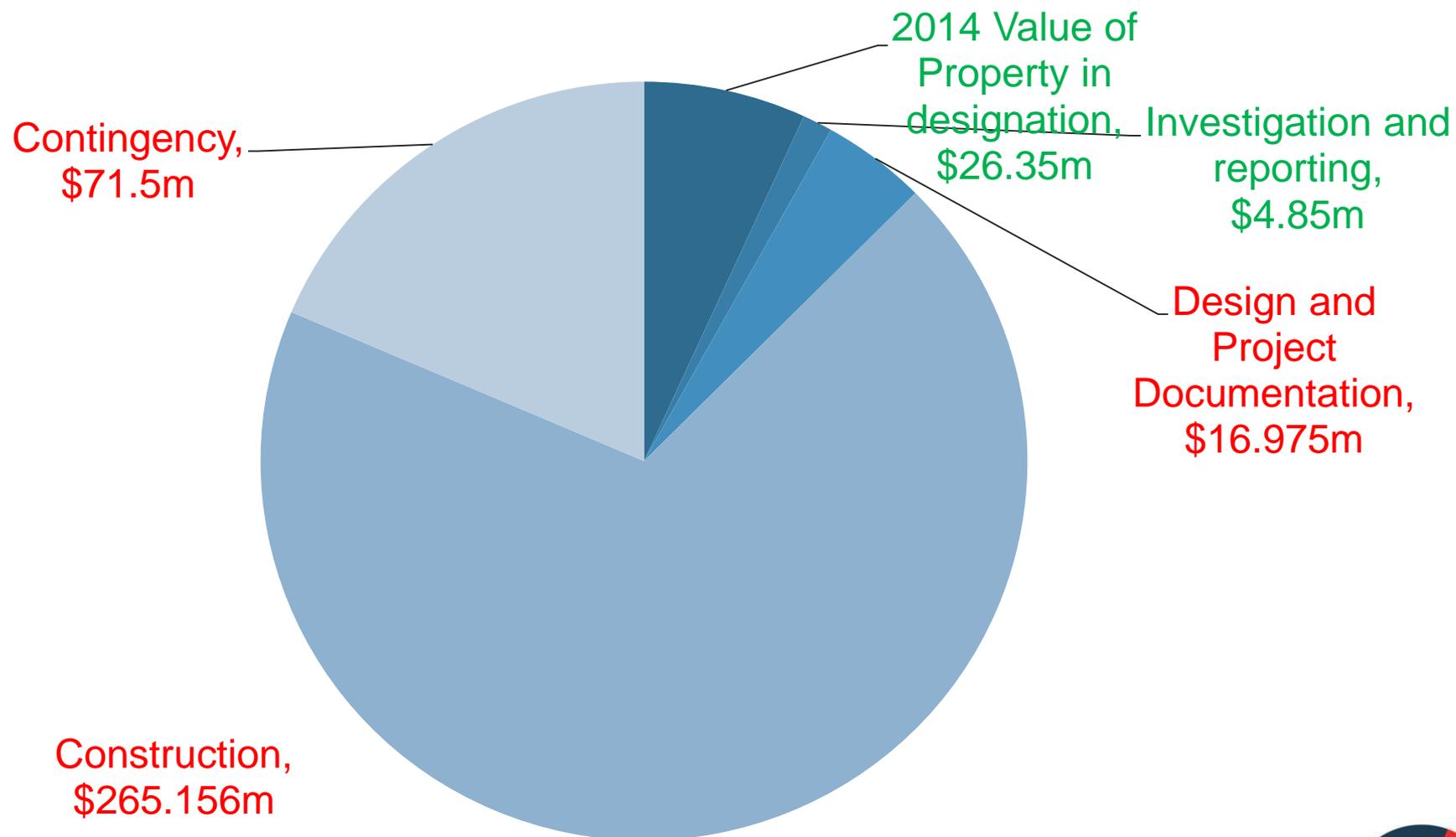


Modelling predictions - travel times



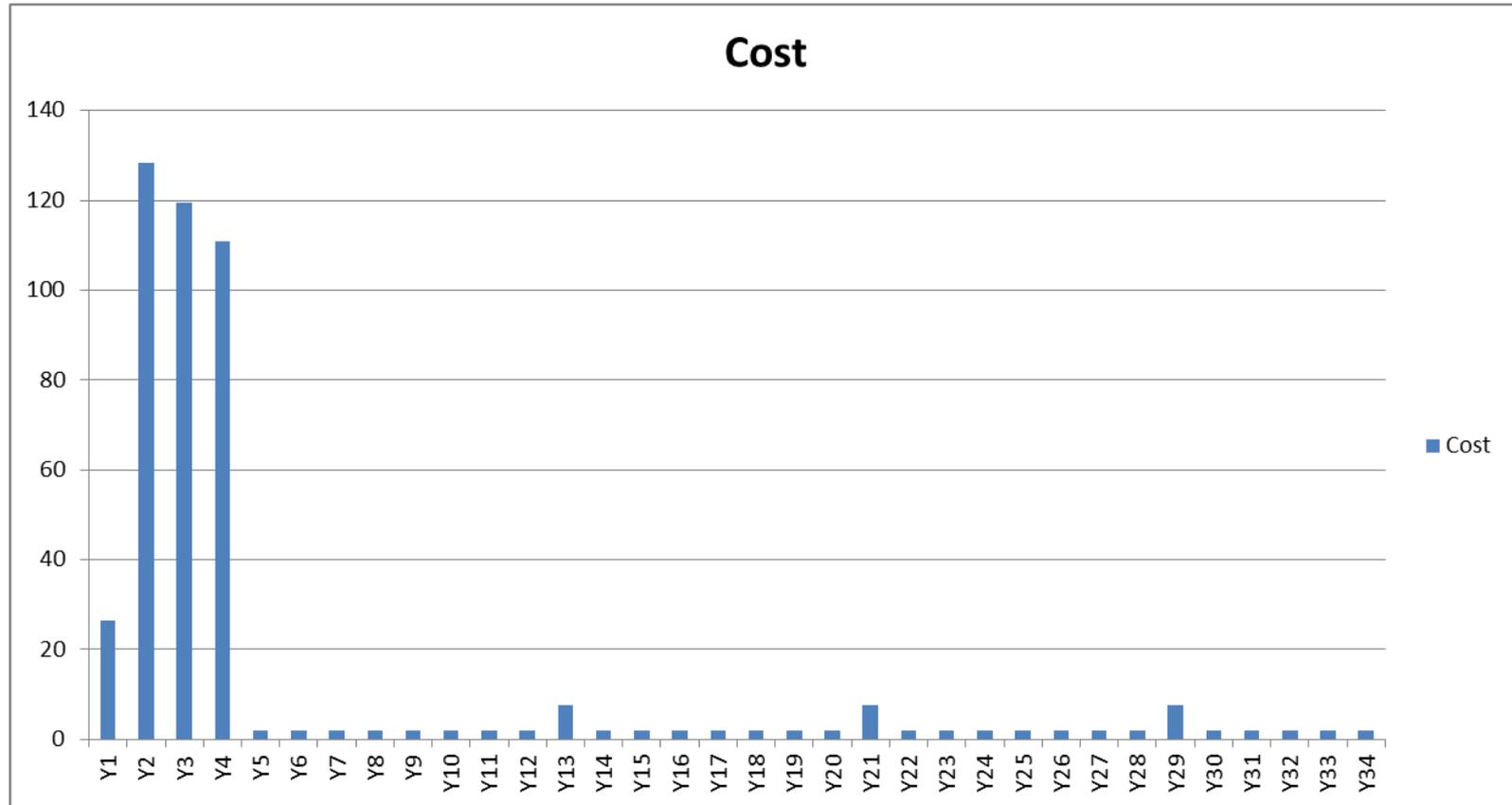
What will Penlink cost?

Project Estimate (\$384.831m)



(\$31.2m) land largely in Council ownership,
Investigation / reporting completed.
(\$353.631m) estimate to completion

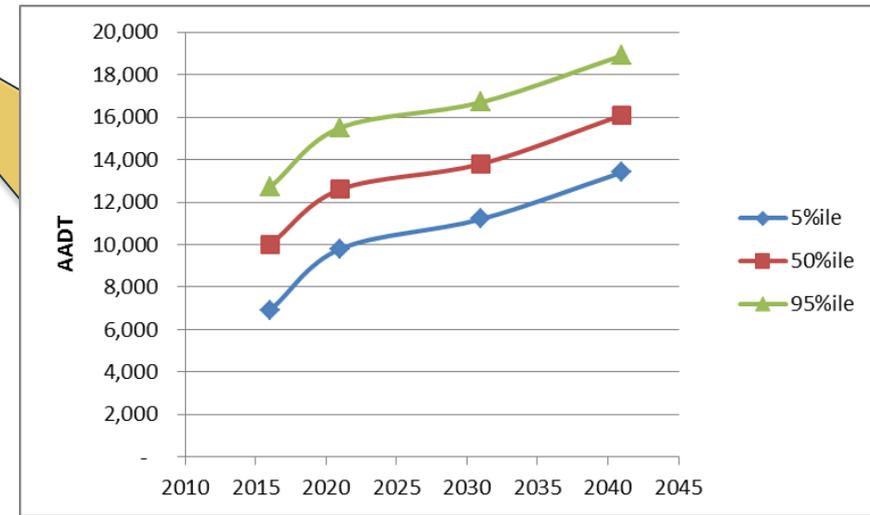
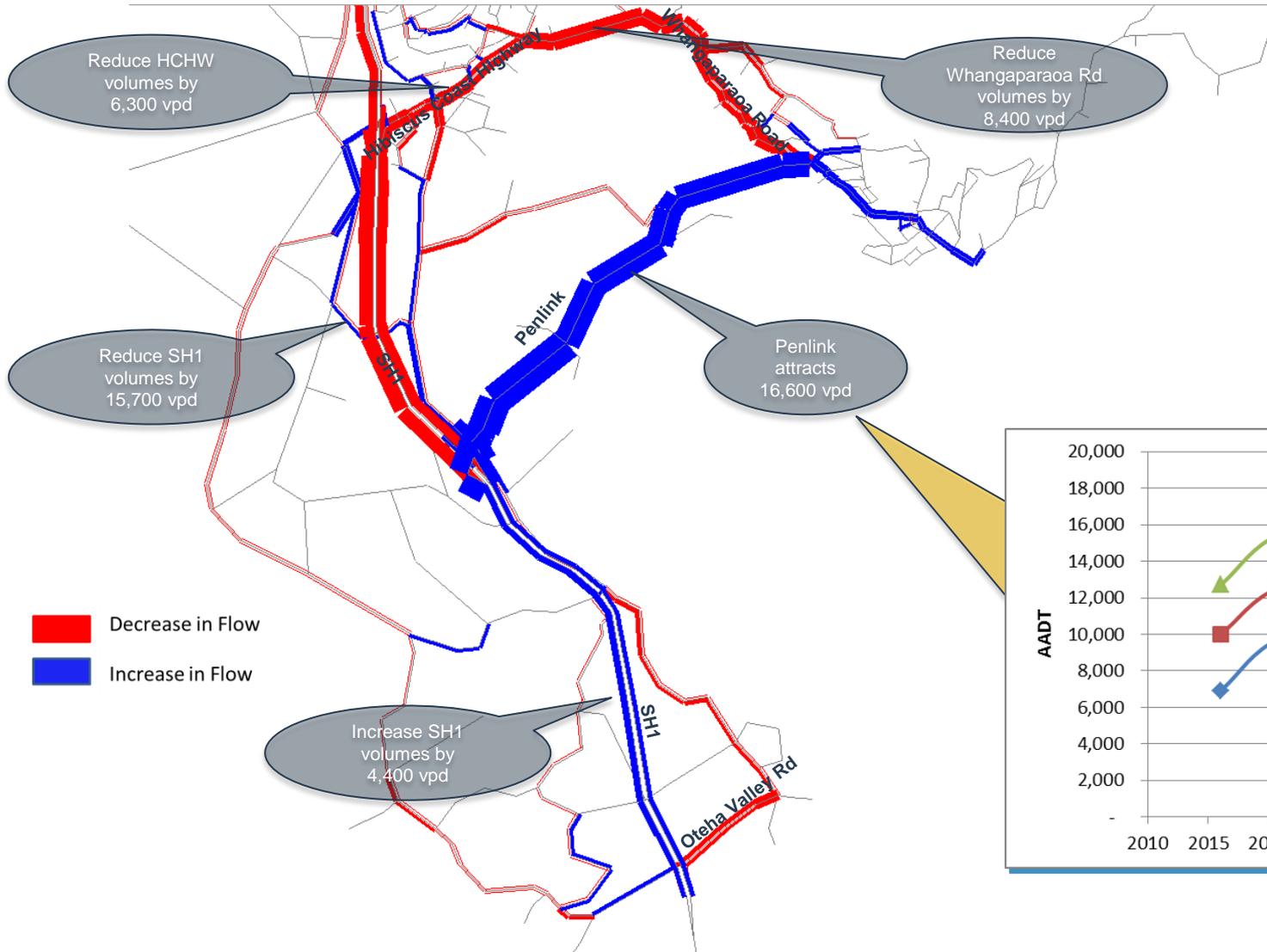
Estimated cost profile



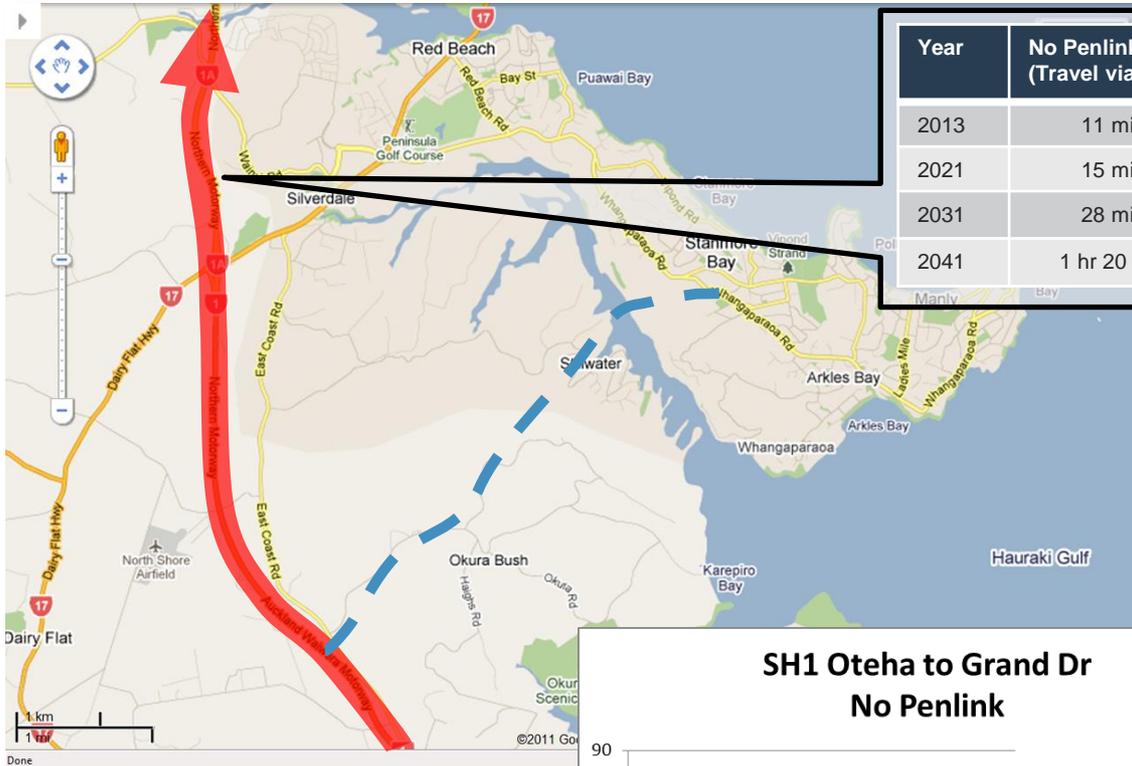
Construction cost plus operations / maintenance

How will Penlink impact traffic conditions?

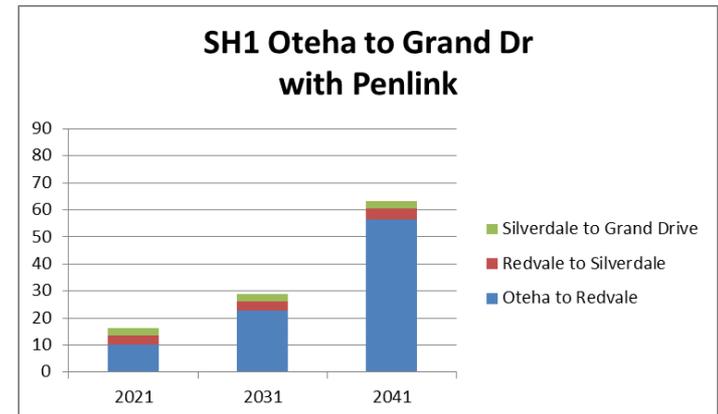
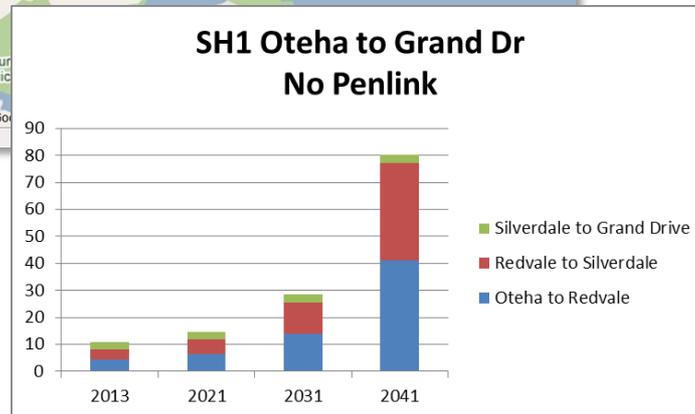
Change in traffic flows (2041 tolled scenario)



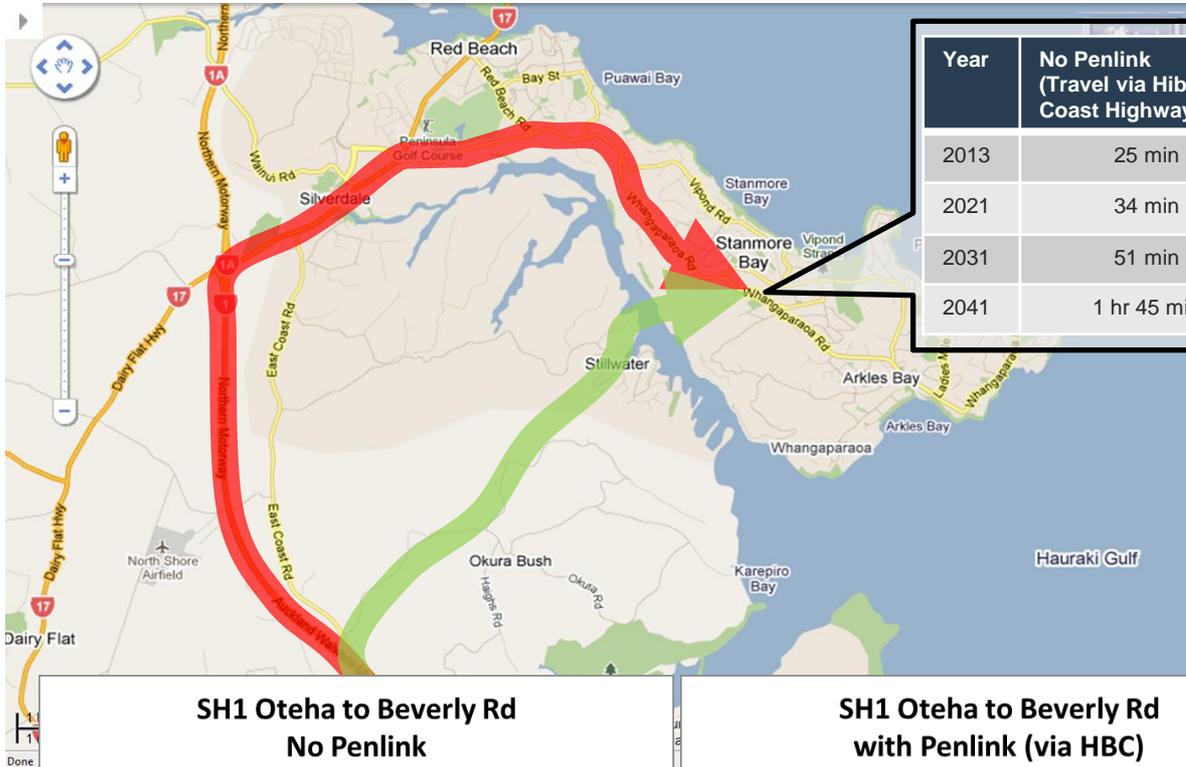
SH1 Oteha Valley to Grand Drive Interchange - PM Peak



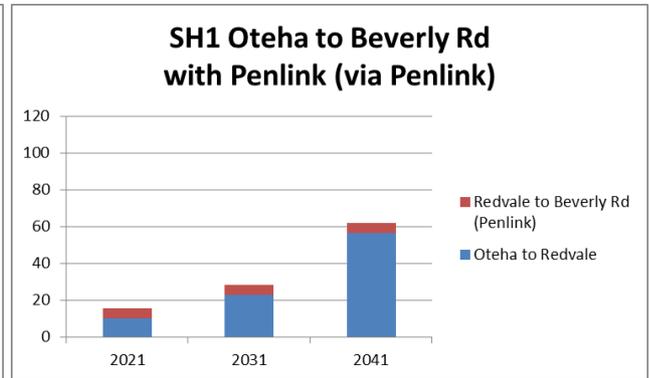
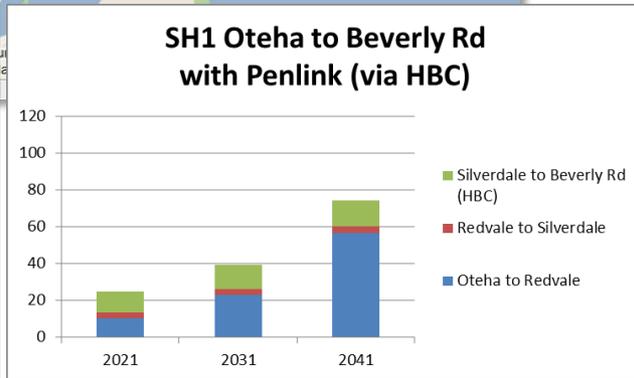
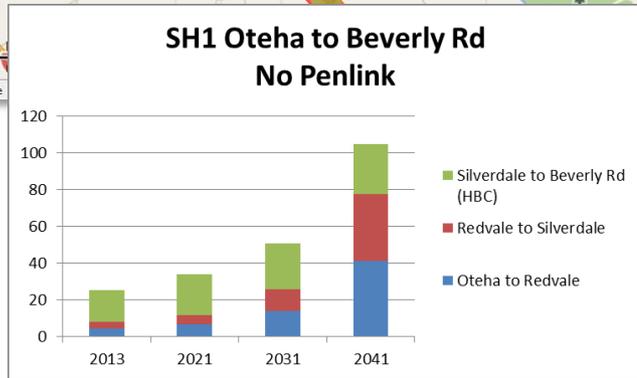
Year	No Penlink (Travel via SH1)	With Penlink (Travel via SH1)
2013	11 min	
2021	15 min	16 min
2031	28 min	29 min
2041	1 hr 20 min	63 min



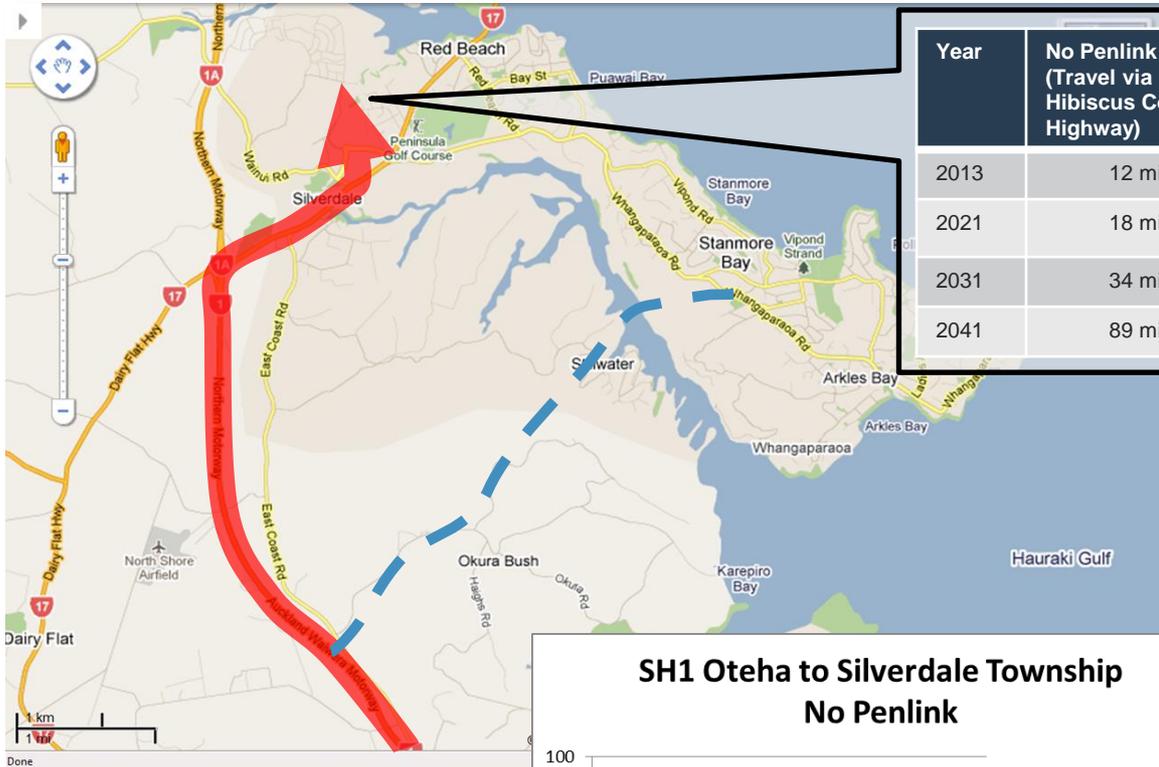
SH1 Oteha Valley to Beverly Road - PM Peak



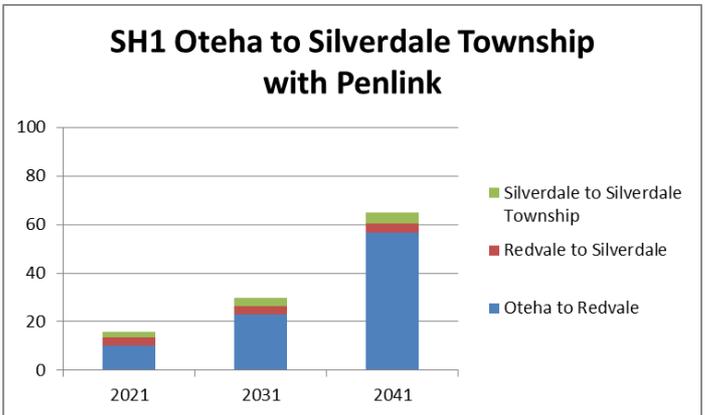
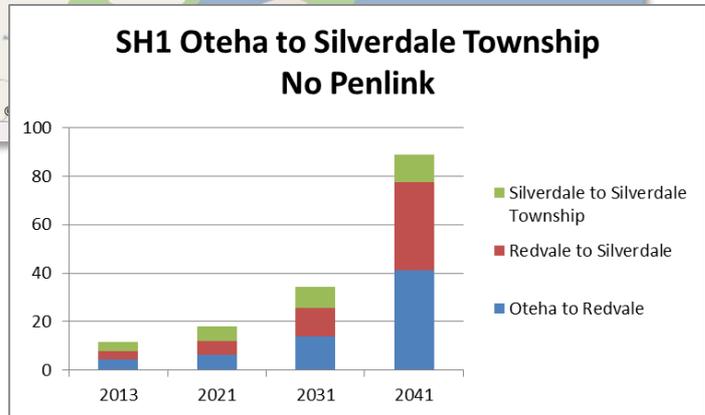
Year	No Penlink (Travel via Hibiscus Coast Highway)	With Penlink (Travel via Hibiscus Coast Highway)	With Penlink (Travel via Penlink)
2013	25 min		
2021	34 min	25 min	16 min
2031	51 min	39 min	28 min
2041	1 hr 45 min	1 hr 15 min	62 min



SH1 Oteha Valley to Silverdale - PM Peak

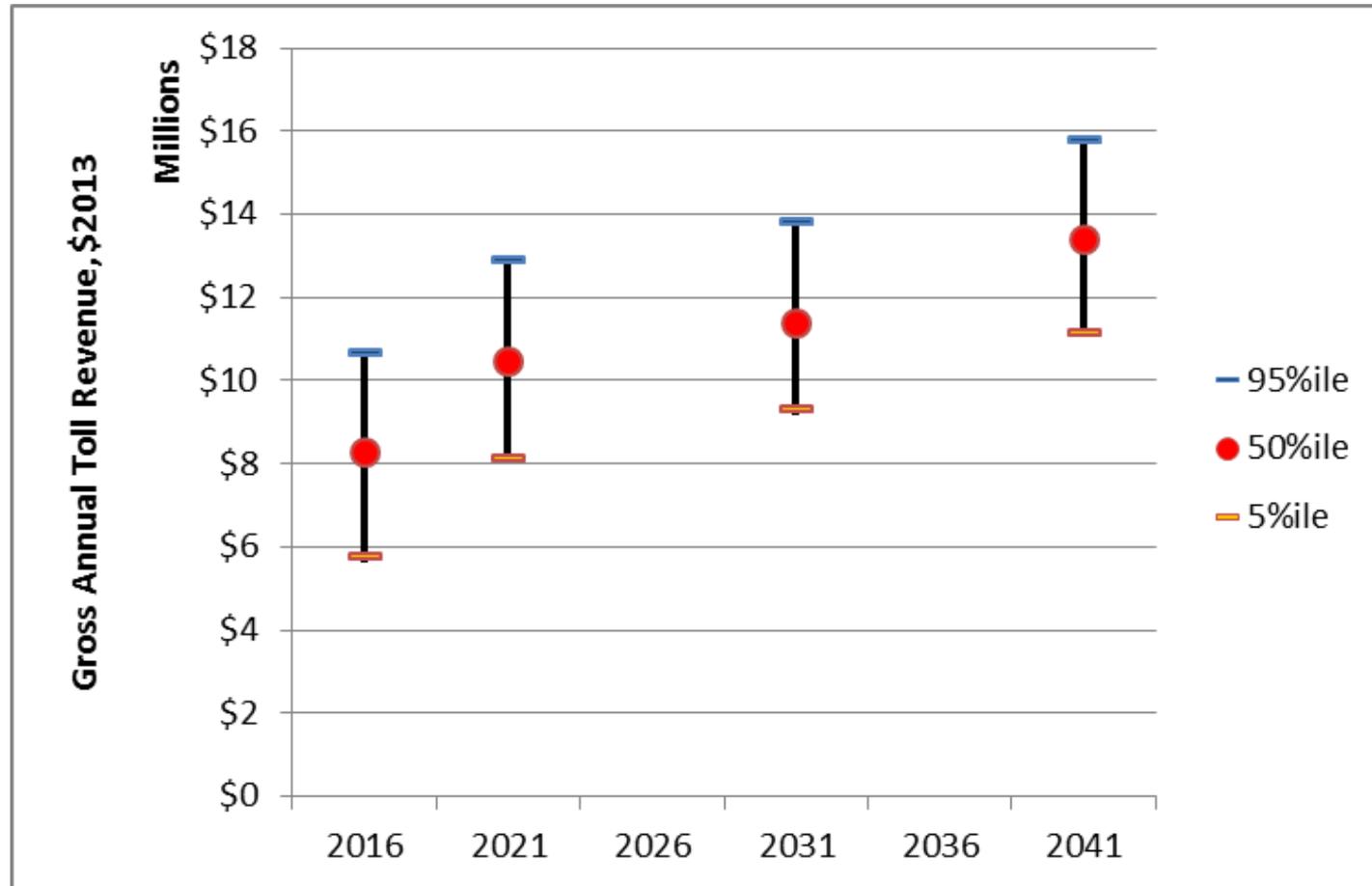


Year	No Penlink (Travel via Hibiscus Coast Highway)	With Penlink (Travel via Hibiscus Coast Highway)
2013	12 min	
2021	18 min	16 min
2031	34 min	30 min
2041	89 min	65 min



How much revenue could be generated from tolls?

Gross annual toll revenue

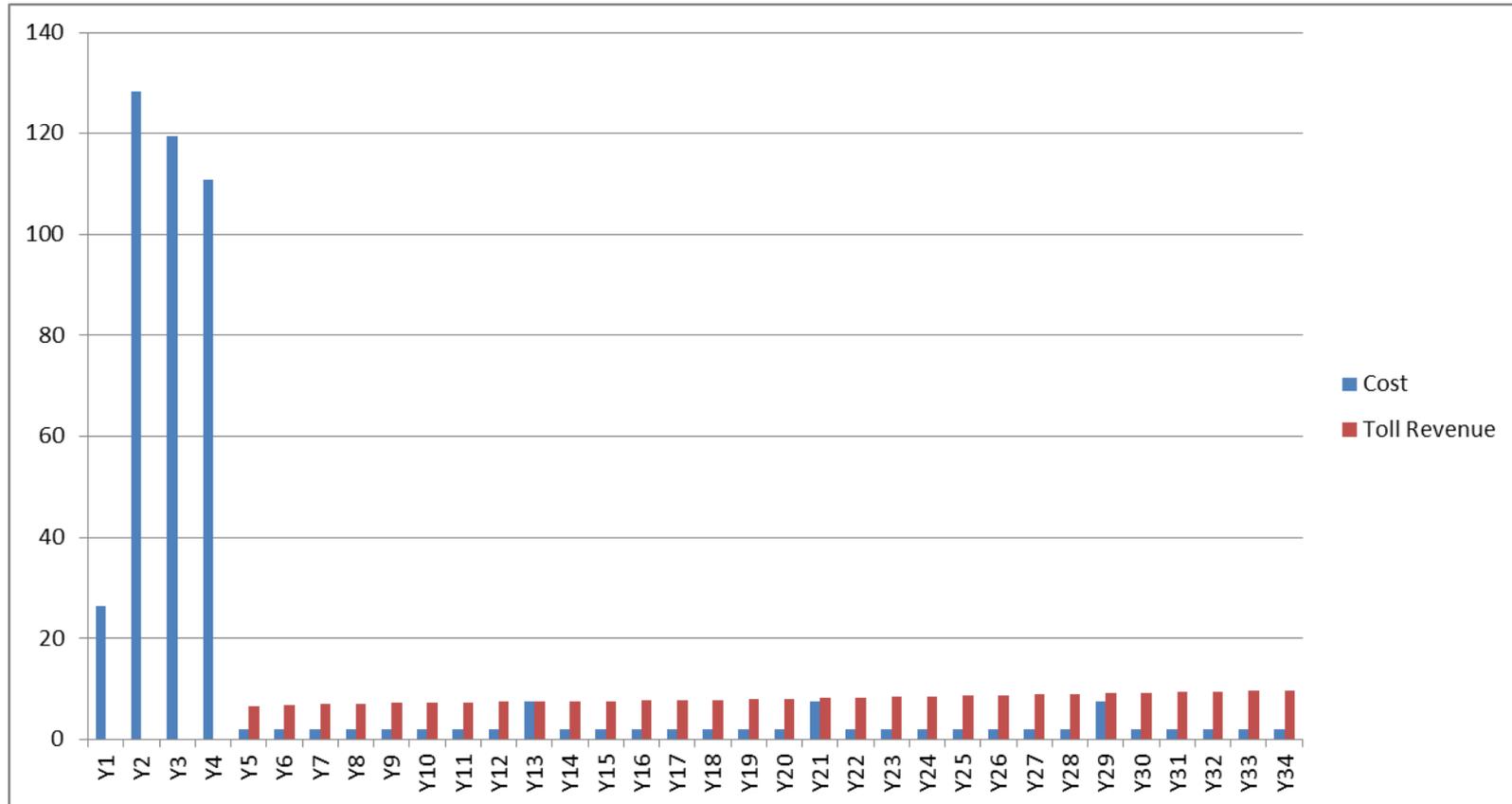


Tolls

Over 30 year period:

- Estimated revenue on PENLINK is \$321million
- Discounted revenue \$112m NPV
- Transaction costs assumed to start at 60c/vehicle and decline to 50c/vehicle
- Estimated toll transaction cost on PENLINK is \$77million
- Discounted transaction cost \$28m NPV

Estimated revenue vs opex



Toll revenue compared with operations and maintenance costs

What will the transport benefits be?

Project Benefits

Table 3 – Key Economic Evaluation Results

Item	Value	
Construction Cost, \$M	358.5	
Property Cost, \$M	26.4	
Present Value of Project Costs (including toll transaction costs), \$M	387.8	
Present Value of Transport Benefits, \$M	810.1	
Present Value of Agglomeration Benefits, \$M	105.3	
Present Value of Other WEBS, \$M	46.8	
Present Value of Gross Toll Revenue, \$M	113.1	
Benefit Cost Ratios	National (BCR_N)	Government (BCR_G)
Transport Benefits only	2.1	2.5
With Agglomeration Benefits	2.4	2.9
With Agglomeration and Other WEBS	2.5	3.1

Who will use Penlink?

Predicted origin/destinations for trips across the bridge

