



Integrated transport - investing in Auckland's Future

Briefing to Auckland Council

February 2015

Overview

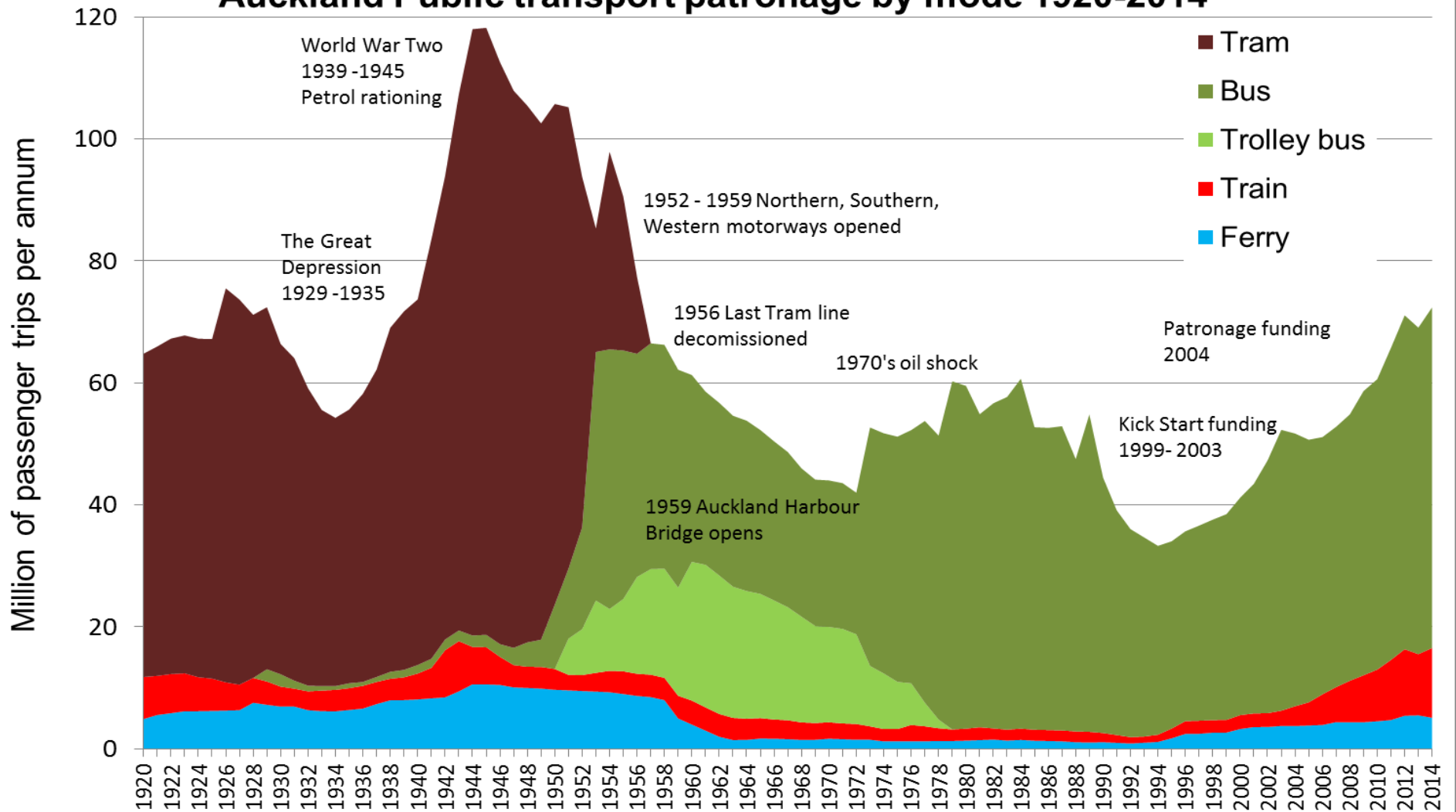
- **Strategic Context**
- **City Rail Link**
- **Light Rail**
- **Summary**



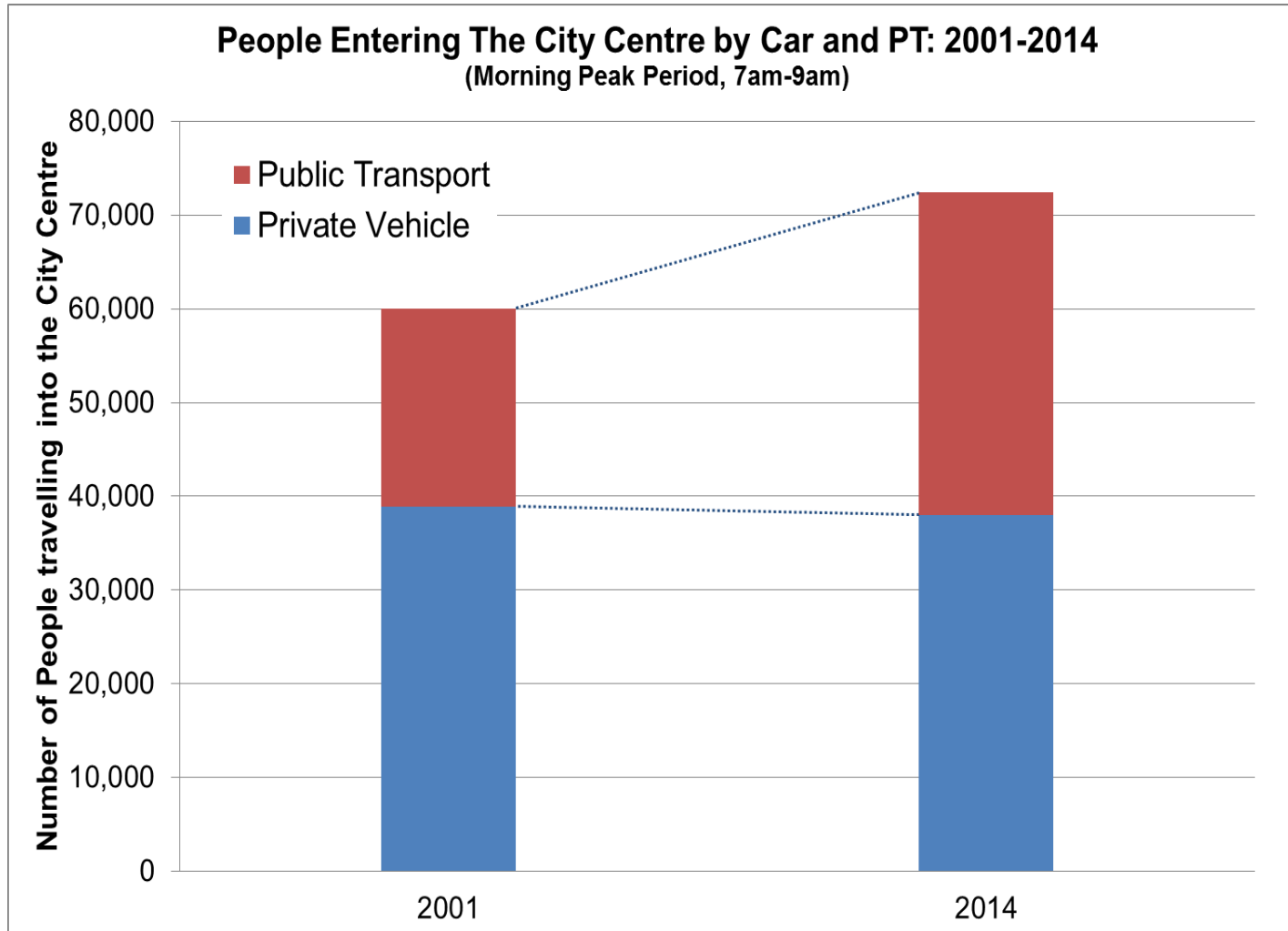
Strategic Context



Auckland Public transport patronage by mode 1920-2014

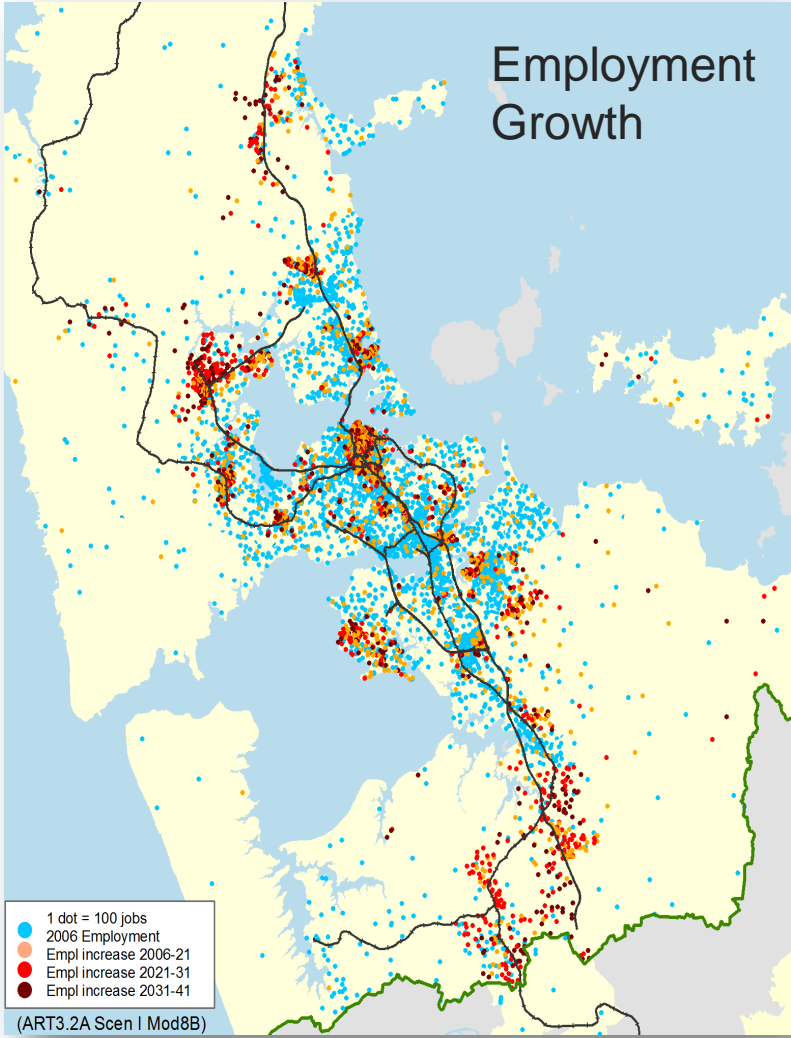
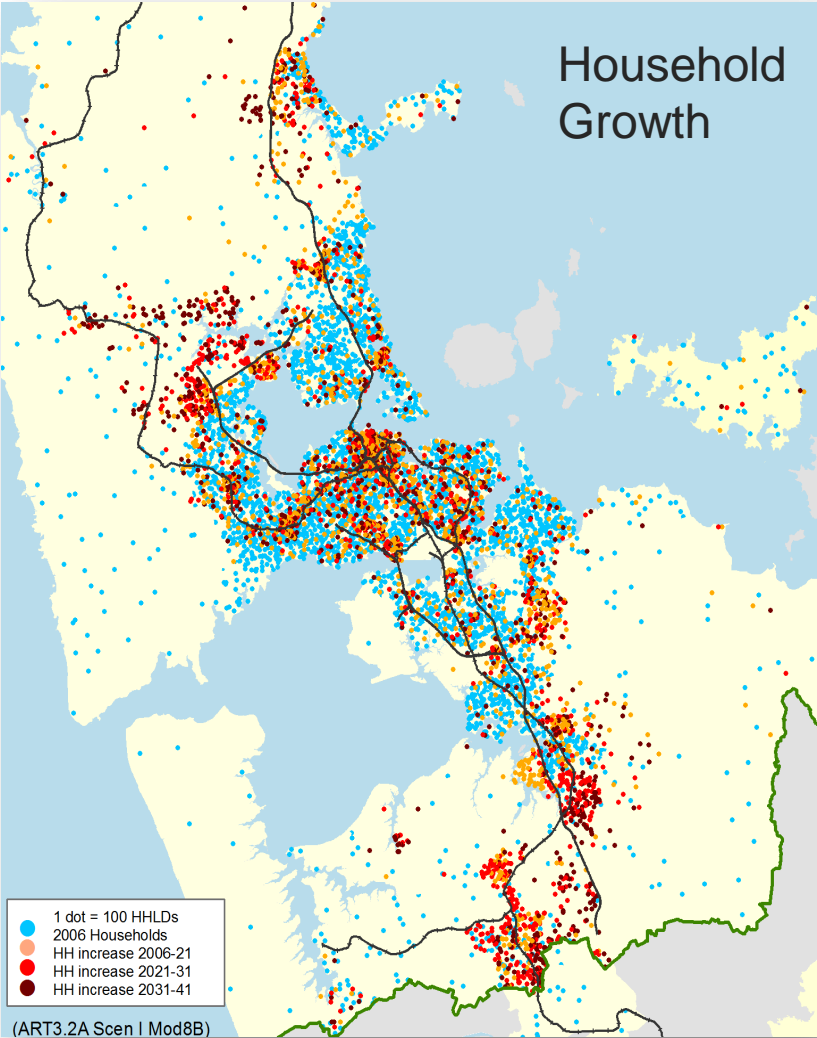


City Access

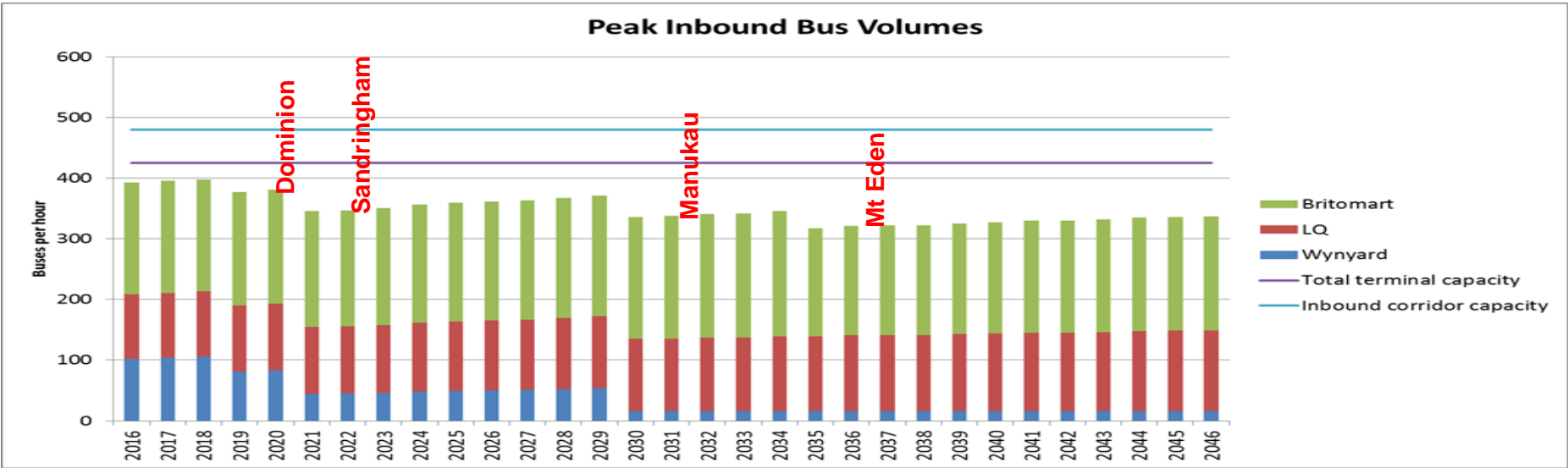
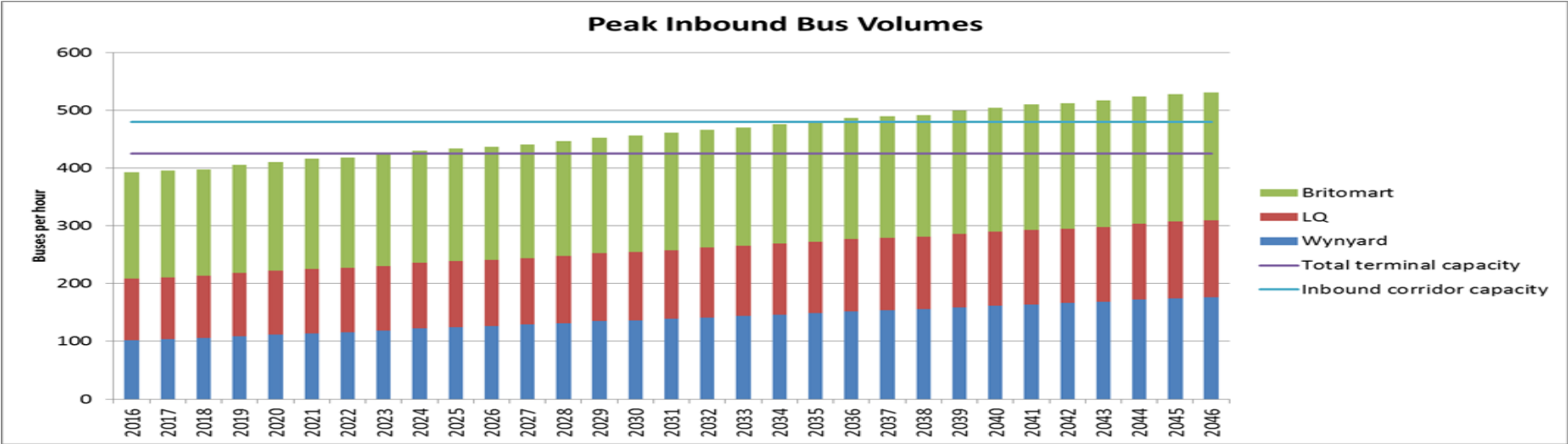


- The number of people entering the city centre is increasing
- Since 2001, more people take PT to the city centre during the morning peak and fewer take cars

Growth Challenge



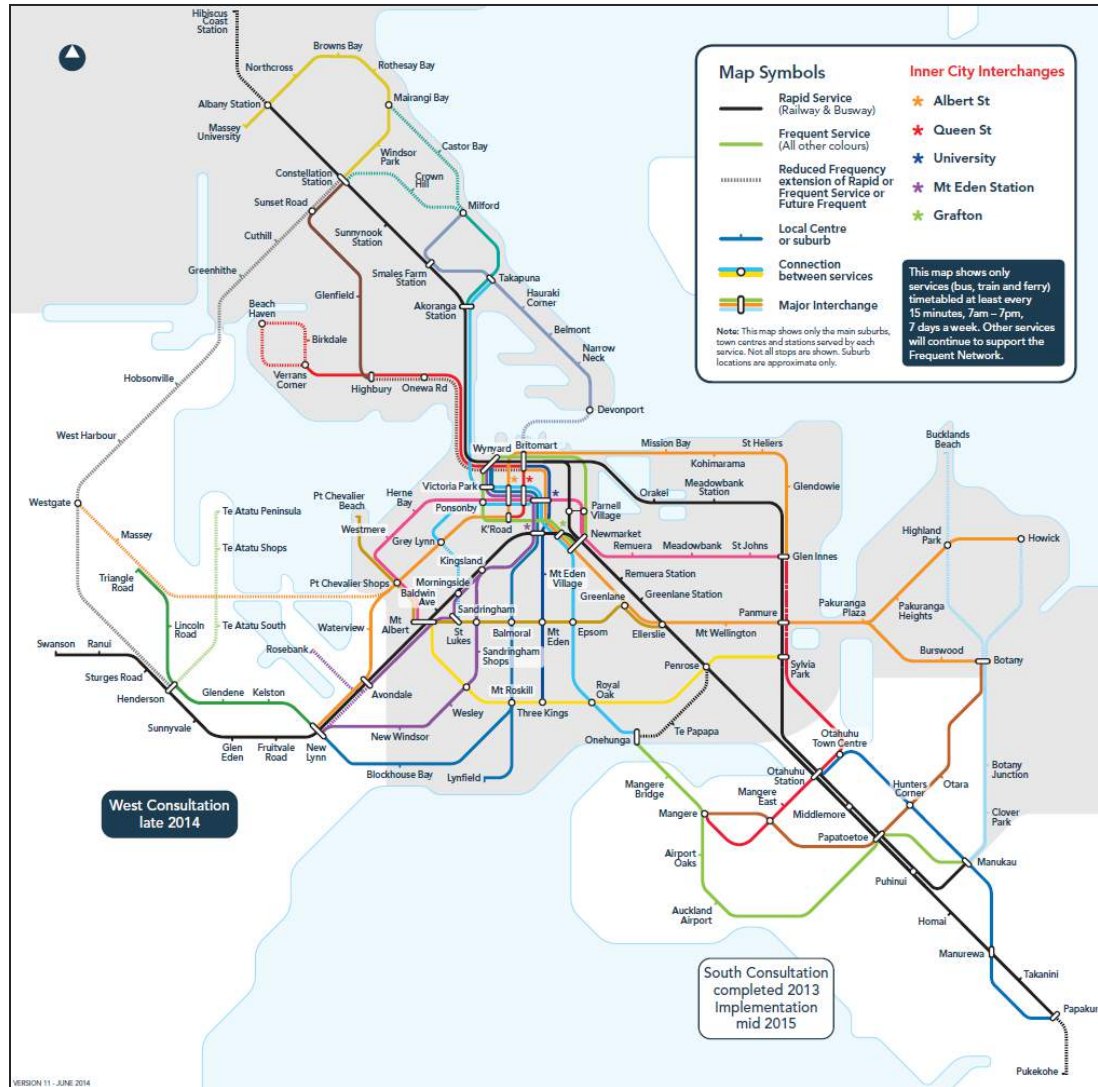
City Centre Capacity



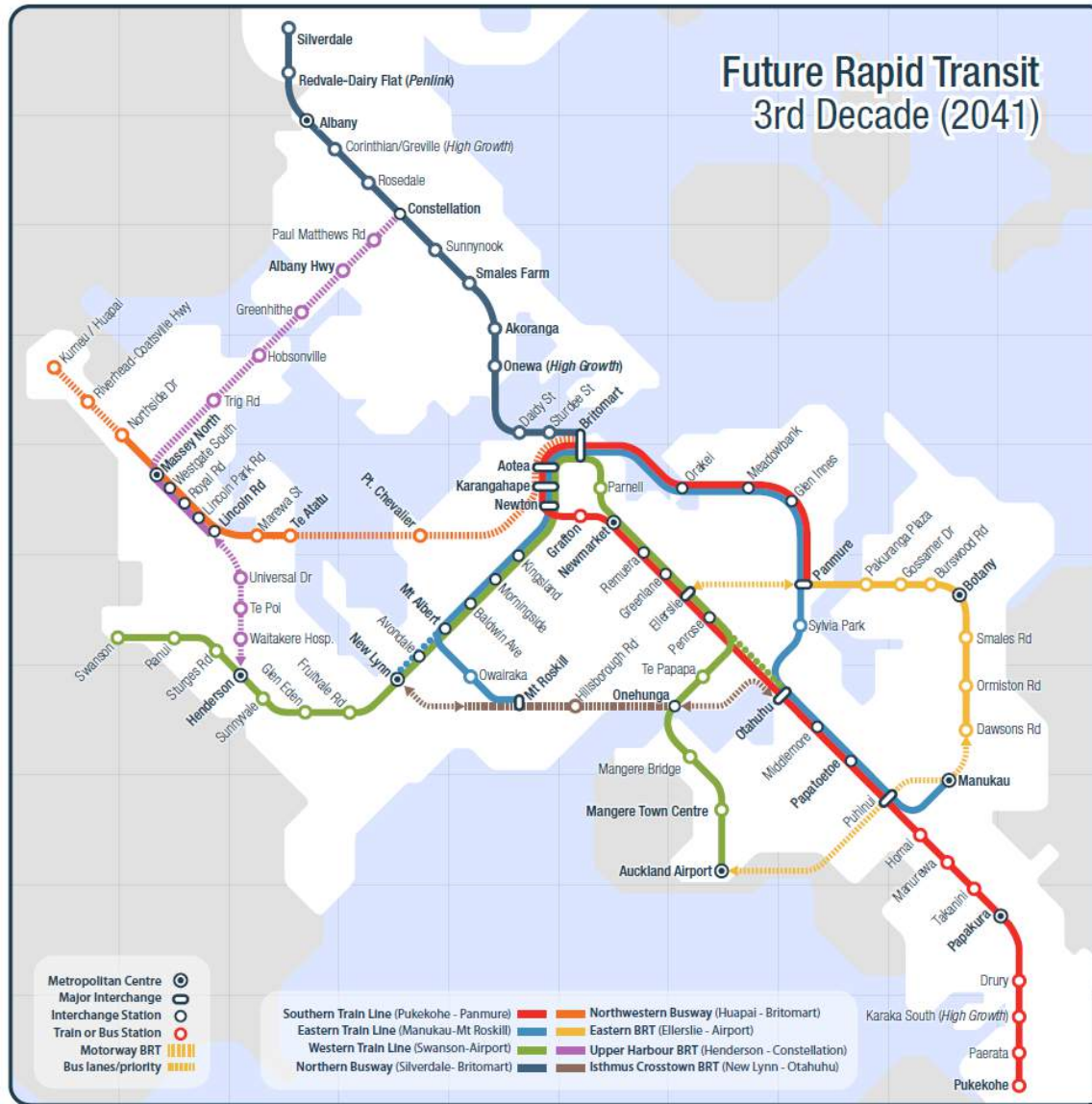
City Centre Congestion



Frequent Transit Network (FTN)

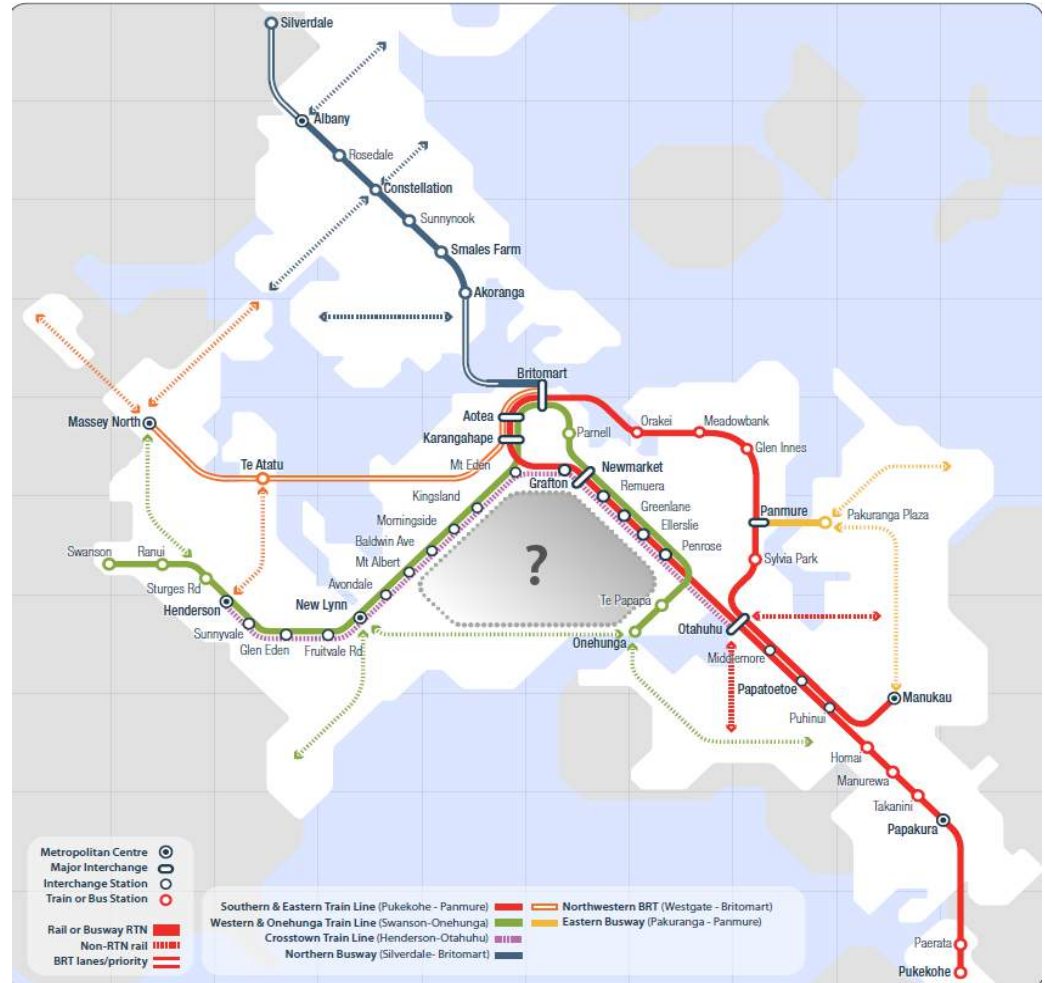


Rapid Transit Network (RTN)



Light Rail

- CRL does not address access from the north, the central and southern isthmus or university and Wynyard Quarter
- Buses from non rail areas will create significant congestion and affect economic growth
- Bus terminal capacity is at a premium and will become challenging and costly
- More of the same means bumper to bumper cars will be replaced by wall to wall buses



CCFAS Findings

- Access crisis into the city centre by 2021 with medium population growth and despite completion of all (pre-CRL) planned transport improvements.
- Auckland’s growth will outstrip its road capacity and maximising rail is an essential part of an integrated access solution
- Bus-only investment will meet demand for only a few years and require significant land take for priority lanes and depots

Now	2021	2041
Network at capacity, especially on critical corridors	Bus volumes on key routes will need to double	Virtually all key road corridors at capacity
Vehicle speeds 16kph	Vehicle speeds more than halve to 7kph	Vehicle speeds down to walking speed- 5kph
Rail approaching capacity	No additional rail services can be provided	Rail over capacity but additional services can't be provided
Access to city centre becoming constrained	Access to city becoming restricted	Demand for travel to city centre cannot be met



CCFAS2 Objectives

- Significantly contribute to lifting and shaping Auckland's economic growth
- Improve the efficiency and resilience of the transport network of inner Auckland and the city centre
- Improve transport access into and around the city centre to address current problems and for a rapidly growing Auckland
- Provide a sustainable transport solution that minimises environmental impacts
- Contribute positively to a liveable, vibrant and safe city
- Optimise the potential to implement a feasible solution



CCFAS2 scope

Corridors:

Comprehensive review of urban arterials and city centre corridors

Focus on those with significant PT patronage and/or connections to significant land use

Network:

Multi modal networks were developed that targeted forecast demands
Different combinations of corridors and modes were developed

All network options included CRL and surface bus improvements
New bus network







Modes:

Multi modal combinations considered including a mix of public transport options:

- Bus, high capacity bus (double decker/bendy), bus rapid transit
- Commuter rail
- Light rail



Typical mode capacity

Modal Characteristics	Bus shared path	Bus lane separate	Busway priority	Light rail shared path	Light rail priority	Commuter rail
Maximum capacity (people/hr)	2,500 	4,000 	6,000 	12,000 	18,000 	20/25,000 
Average speed (km/h)	10-14	14-18	15-22	15-22	18-40	18-40
Cost (est) \$m/km	n/a	<1	35	20-40	50-100	>



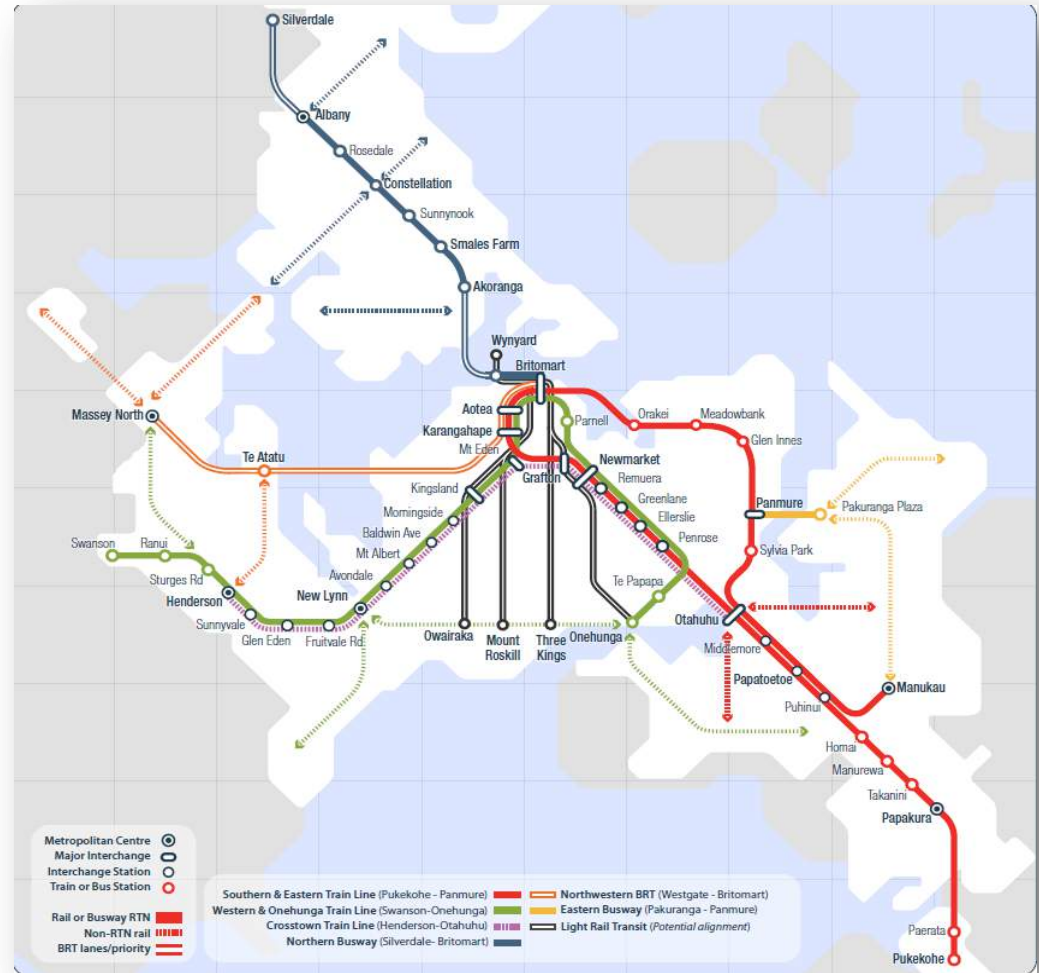
Commuter and light rail

Commuter rail – CRL – links what exists

- A regional solution to optimise rail for an efficient transport network

Light rail- a new solution

- Optimises road within the transport network



City Rail Link



- CCFAS identified CRL with surface bus improvements as the only option to meet predicted transport demand
- Auckland's number one transport priority
- Provides for growth
- Catalyst for economic development
- Integrated land use
- Supports special housing areas
- Environmental imperatives



Travel Times to City Rail Link Stations					
From	To	Travel by train / bus (minutes)			Percentage improvement in travel time
		Before CRL	After CRL	Reduced travel time	
New Lynn	Aotea Station	51	23	28	55%
Morningside	Aotea Station	39	14	25	64%
Onehunga	K'Road Station	47	27	20	43%
Manukau	K'Road Station	61	42	19	31%
Newmarket	Aotea Station	27	10	17	63%
Britomart	Mount Eden	16	9	7	44%





CRL - Driving Auckland Development

“The CRL is the foremost transformational project in the next decade. It creates the most significant place shaping opportunity” — Auckland Plan



“Auckland’s central business district needs 18 more PWC Towers, 18 Metropolis buildings and 18 shopping centres by 2031” — Alan

McMahon national director of research and consulting at Colliers International

- CRL notified Jan 2013
- Designation confirmed April 2014
- Six appeals now in mediation
- About 70 properties being purchased- nearly 50 to date
- About 30,000sq m of property under active management
- November 2014 – Council resolved to fund early construction
- Subterranean purchase to start this year



2015	2016	2017	2018-2024
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Main Works

NoR & Property Aquisition

Reference Design & tender preparation

Tender & Construction

Early Works

Design & consenting
(Phase 1)

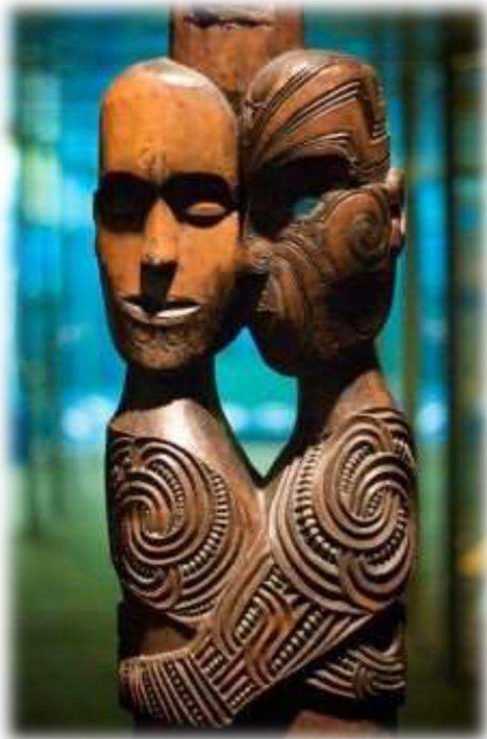
Construction (Phase 2)





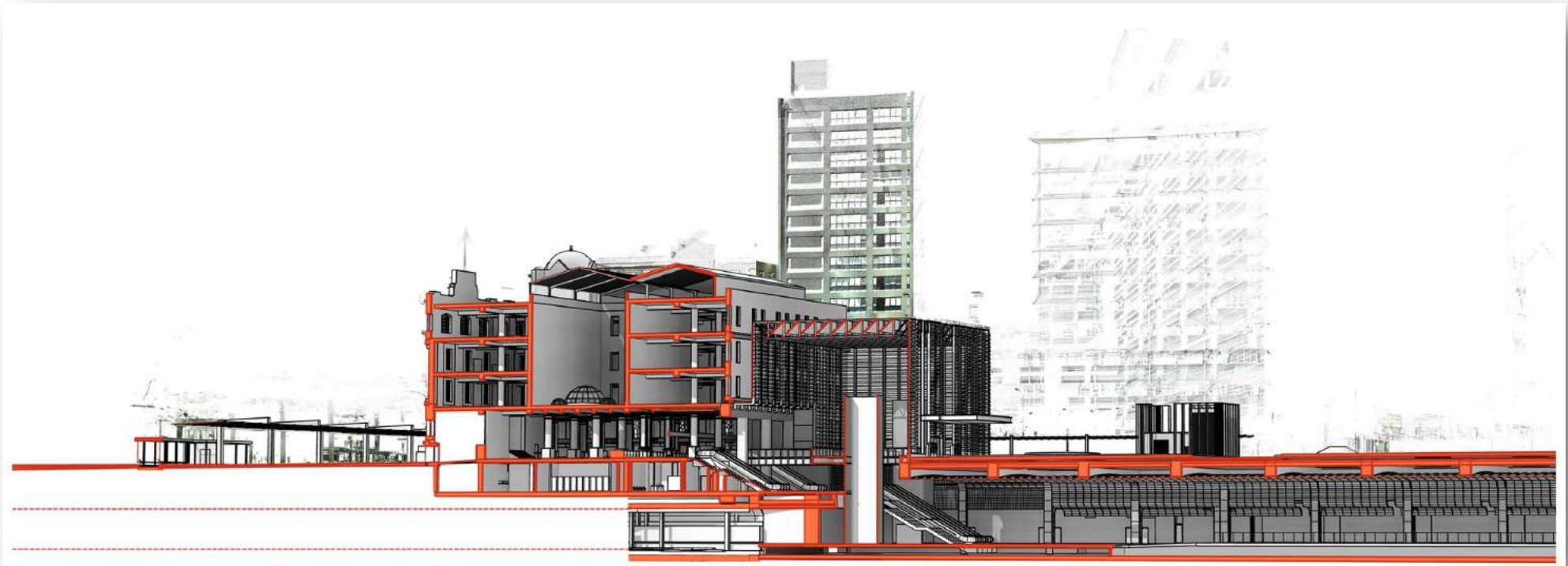
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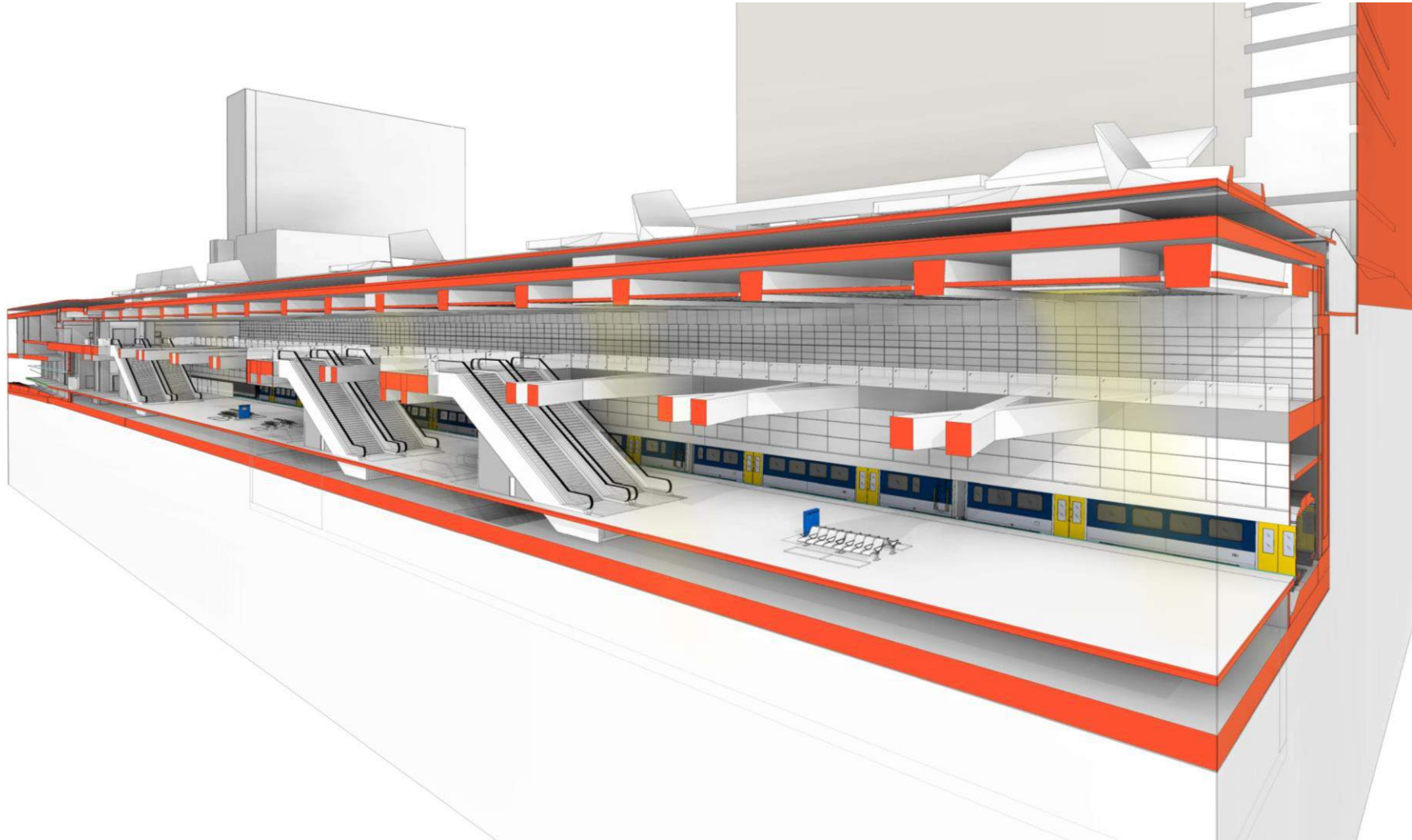
ARUP

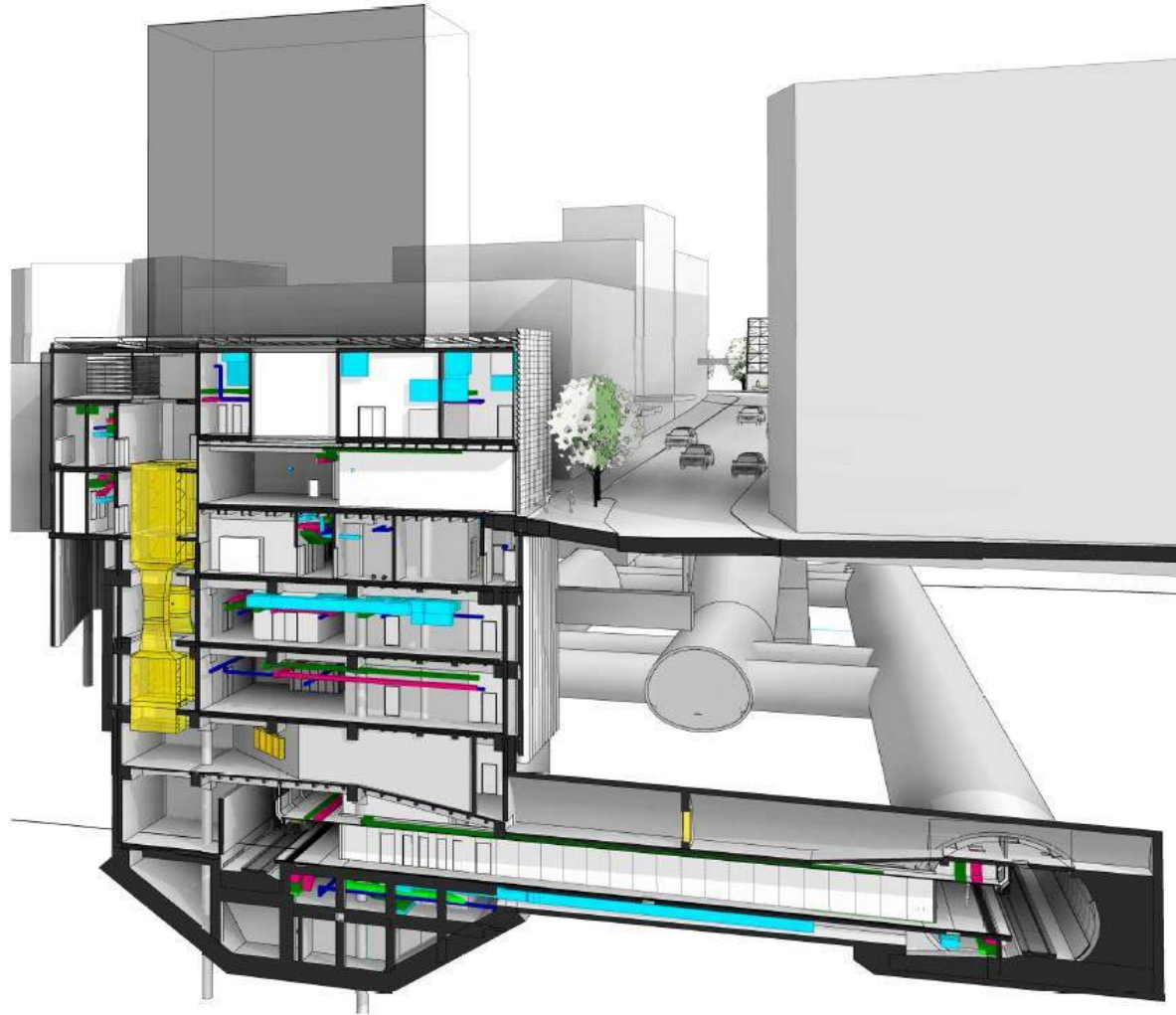


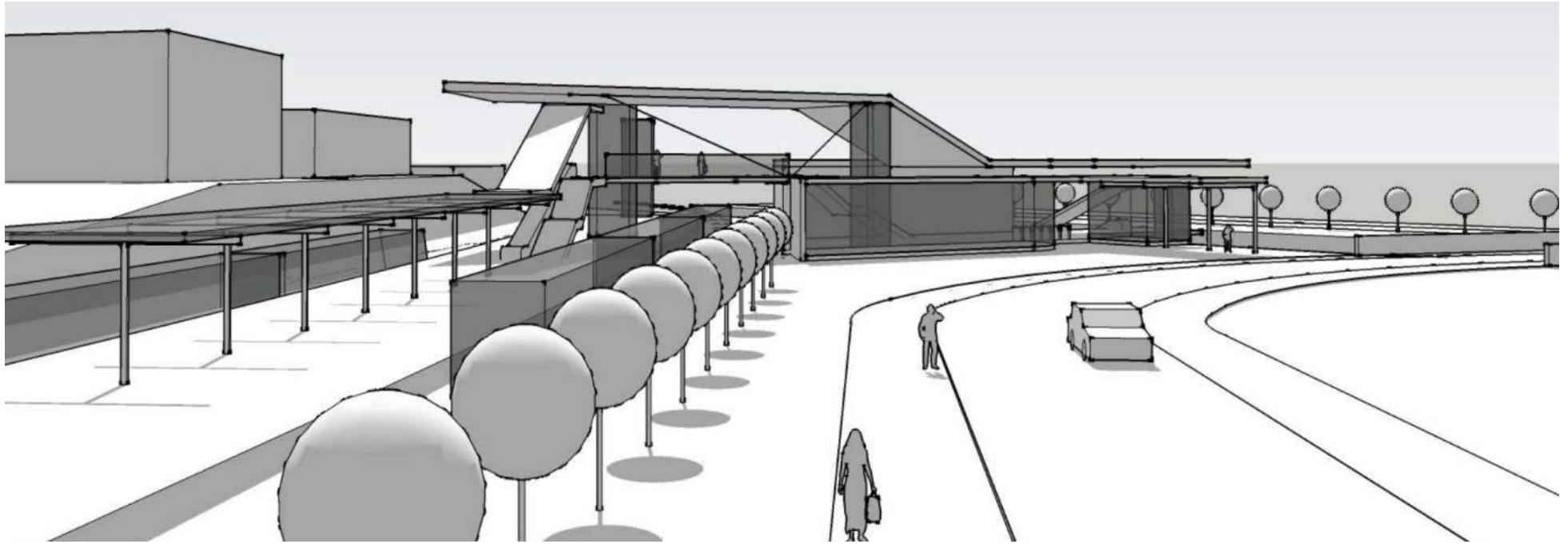
- 100 strong integrated design team in co-located project office
- Expertise drawn from New Zealand, Europe, Asia, America and Australia
- Benchmarking best practice from new underground railways around the world
- Significant design work with Manawhenua to combine cultural and technical excellence to create a unique experience

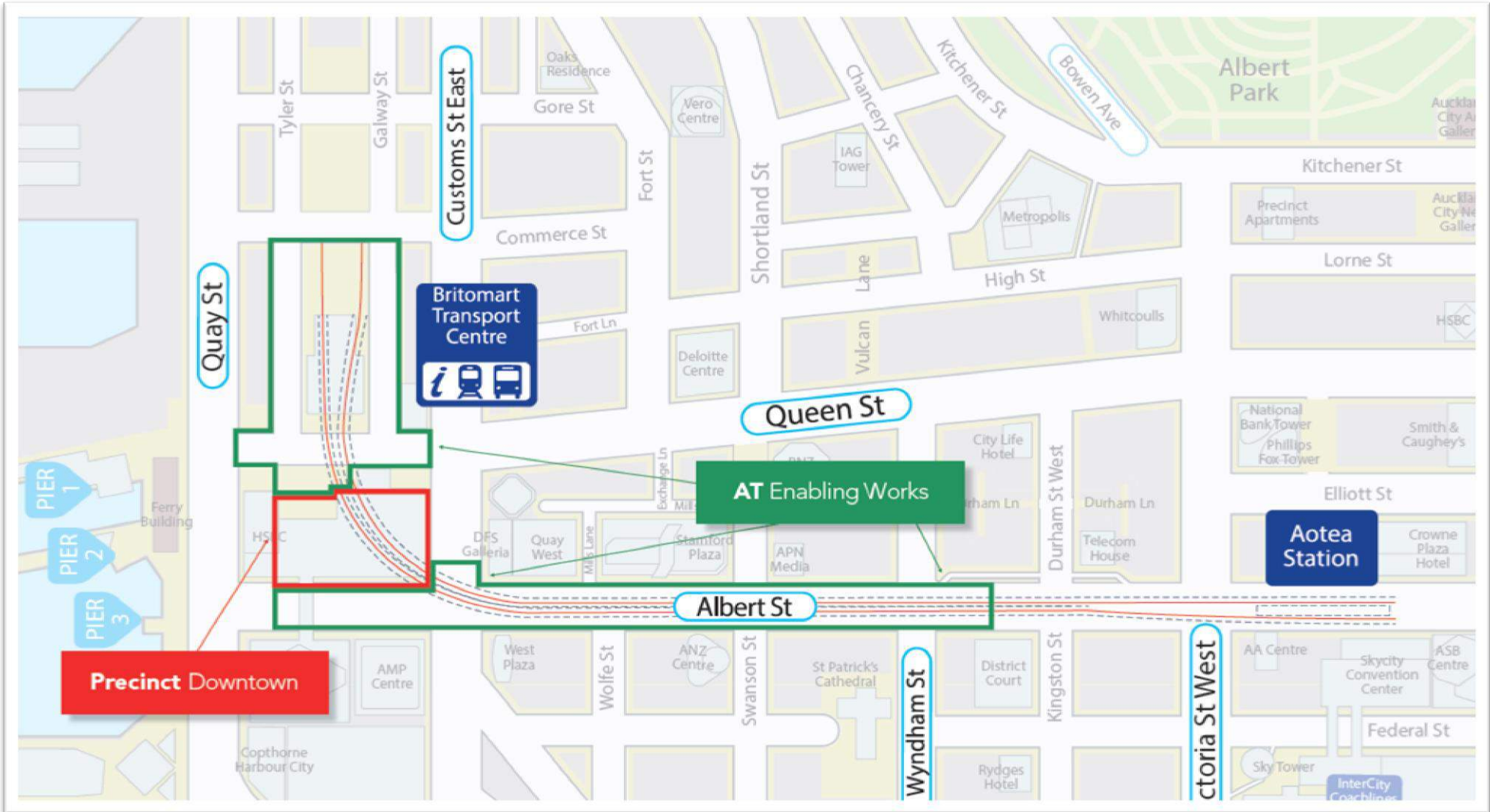






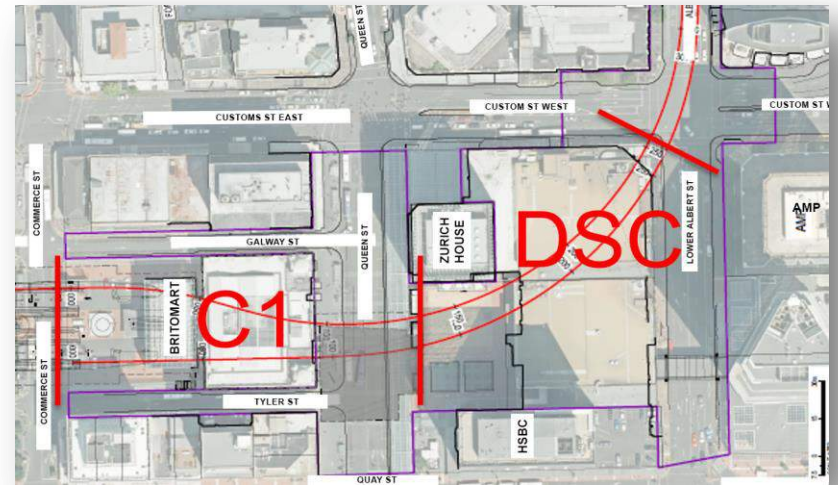






Contract 1 – Britomart to Downtown Shopping Centre (DSC)

- Temporary accommodation at Britomart behind the glass box
- Temporary bridging and decking for pedestrians and cyclists on lower Queen St
- Removing the subway between the CPO building and DSC

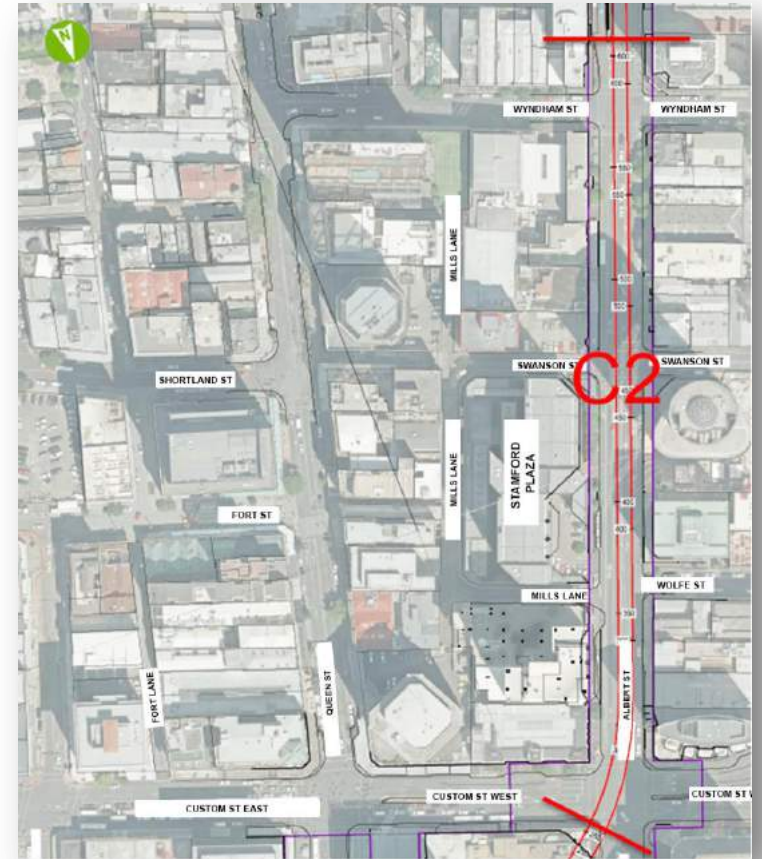


Downtown Shopping Centre (DSC)

- Precinct to develop a 40 level tower on DSC site, and constructing CRL tunnels below

Contract 2 – Albert St from Downtown Shopping Centre to Wyndham St

- Running tunnels up Albert St to the southern side of the Wyndham St intersection
- A laydown area in lower Albert St and keeping Customs St active
- Stormwater relocation from Wellesley to Swanson Streets



Early 2015

- Resource consents notified
- DSC agreement
- Early works design contract awarded
- Community Liaison Group (CLG) set up
- Main works reference design

Mid – late 2015

- Early works detailed design complete
- Negotiation process for early works construction
- Work starts at Britomart to Wyndham Street

2016+

- Works progress in the city centre and become more evident
- CLG continues
- Ongoing communication with affected parties

Light Rail

**Auckland
Transport** 
An Auckland Council Organisation



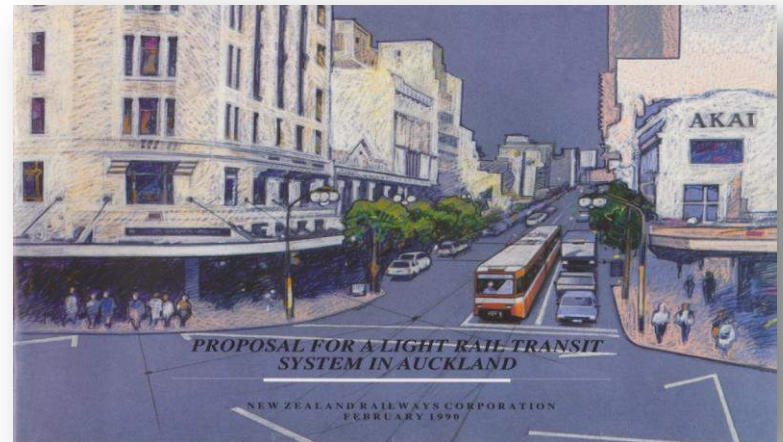
History

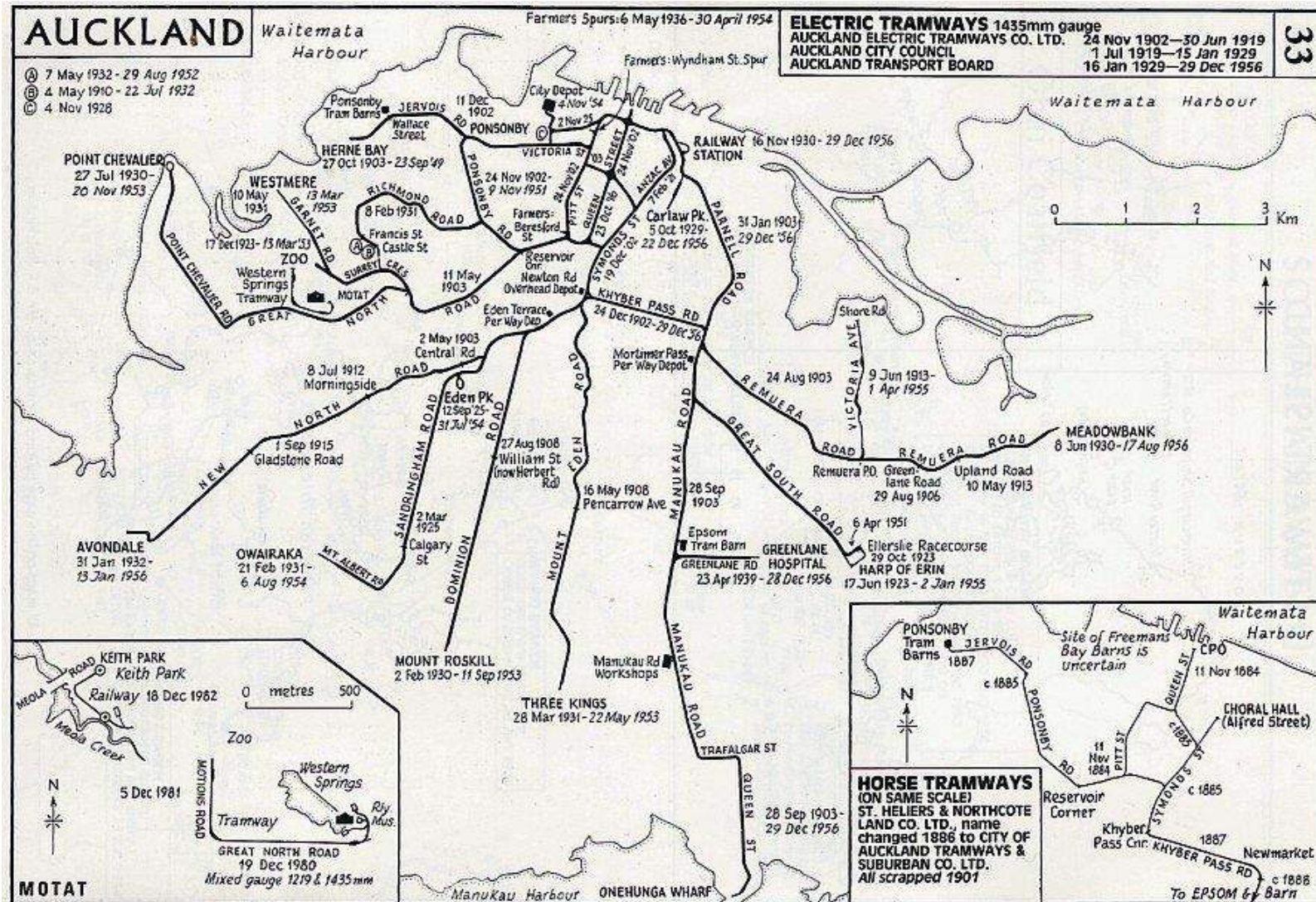
- Horse drawn trams start 1884
- Electric trams start 1902
- Last tram 1956 – covered 72kms
- Trolley buses roll out 1949-56
- Trolley buses end 1980

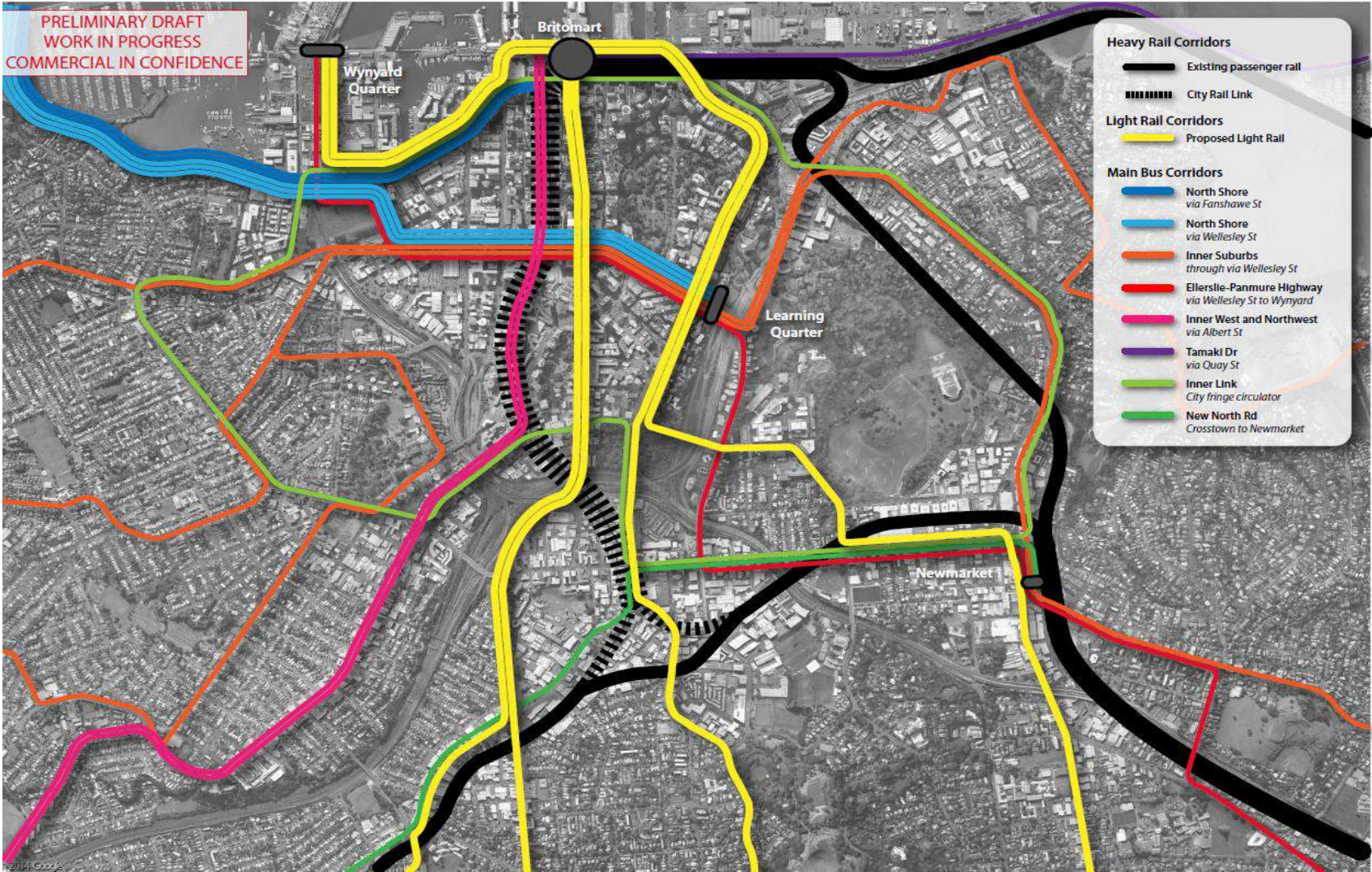
More recently

- 1990 NZ Rail proposed light rail to ARC and ACC
- ARC proposed light rail on western line and city centre
- ACC future proofs Britomart for light rail
- Central Transit corridor design in early 2000s
- 2012 CCMP includes light rail potential
- Waterfront Plan considers trams

LRT Overview







Queen St past and future

LRT Overview





Queen St. showing G.R.O. Auckland, N.Z. 5361



- Greater capacity (300 people)
- Uses less road space
- More doors to keep the dwell times below 30 seconds at peak
- Faster
- Level boarding across a narrow gap
- Improved way finding
- Space efficient- no need for terminus or turn around
- Quiet
- More likely to get people out of their cars
- Permanent infrastructure encouraging development

International Experience

LRT Overview



Gold Coast - ahead of expectations -
238k passenger trips in the first 14 days





Summary



Summary

- CRL starts construction later this year
- No solution to city centre road congestion identified that doesn't involve light rail
- Regular report back to council on these initiatives



Platform 2
to Waitakere

Delivering transport choices
to get you where you want,
when you want.

Our Vision

