

Thought leadership ideas for input into initial thinking on the Auckland Spatial Plan

Stephen Selwood, Chief Executive NZ Council for Infrastructure Development, September 2010

Overarching Infrastructure issues:

- Need to take a complete systems / strategy driven approach. Past investment has been dominated by piecemeal project by project methodology driven by traditional pay as you go funding and one by one consenting processes. It is critical that this changes. The Spatial Plan(SP) provides the opportunity for this and must include a prioritised and funded infrastructure plan that will lead spatial development of the city to achieve economic, social and environmental goals.
- Funding should follow strategy, not the other way around, as has been the practice to date
- Spatial Plan (SP) must recognise and protect existing and potential new regionally significant utility corridors / sites for
 - Three waters
 - Electricity for national (Transpower) and local lines companies (principally Vector)
 - Broadband – both fibre and wireless cell sites
 - Transport
 - Strategically important public facilities: hospitals; universities; stadia; courts; prisons etc
 - Aggregate supply – NB quarries are of regional significance for infrastructure.
- Recommend that all key agencies be asked to provide a summary of the asset management plans including maps of existing and planned infrastructure corridors, sites and locations. These need to be mapped as an input into the SP planning process.
- Opportunities for consolidation of corridors should be optimised as part of the SP process

Transport

Transport is the city shaping investment. NZCID's view of transport investment priorities are:

- Western ring route completed by 2015, as currently planned
- Inner city rail loop by 2020 and underground Quay street by 2020
- Transport solution for south east Auckland (eastern corridor) by 2025 – eastern suburbs are experiencing serious congestion and this will deteriorate significantly into the future, especially including access to and from the Port. This is likely to be a road and rail solution in our view.
- Additional harbour crossing by 2030

My personal view is that the development of the waterfront needs to be supported by the undergrounding of Quay Street, to enable the city waterfront connection. This could include an underground connection between the future harbour crossing, Grafton Gully, and potentially a future eastern corridor.

NZCID support the Roads of National Significance (incl Wellsford to Puhoi from both an economic strategy and safety enhancement perspective). Most importantly the completion of the Waikato Expressway and then development of SH29 Hamilton to Tauranga state highway linkages are of regional significance, as is the upgrade of rail connection between Tauranga and Auckland ports. The other strategically significant connection will be the east west SH1 to SH20 link Onehunga to South Eastern arterial.

Transport planning needs to understand the needs of commercial traffic (i.e. all light vehicle commercial trips from sales reps to builders, plumbers, window cleaner, consultants, bankers etc etc etc) as well as freight trips. Too much planning is centred on commuter trips. This fails to recognise that most firms 90% employ fewer than 20 staff and are dependent on private mobility.

We do not currently see an economic case for an airport city rail link within the life of the SP, but route protection should be provided for. Meanwhile a high frequency express bus service should be provided by means of bus shoulder lanes across the state highway network as well as ARTA's quality transport network on urban arterials.

Similarly we think the northern bus way has ample capacity for the foreseeable future for PT to the North Shore but needs to be supported by increased car parking capacity at the bus stations and express bus services to and from the stations from North Shore suburbs.

Intensification

We see the priority for intensification to be surrounding existing rail investments and stations incl New Market (noting private sector interest in developing the former Lion Brewery site for commercial and residential densification), New Lynn (the economics of the new station are dependent upon this), Manukau and Onehunga (to capitalise on the new spur lines) and then, when completed, at Aotea, Karangahape and Newton to support the new CBD loop.

All major new public facilities and traffic generators – stadia, conference centres, universities, hospitals etc should be adjacent to rail transport hubs. This is central to driving the economic viability of rail.

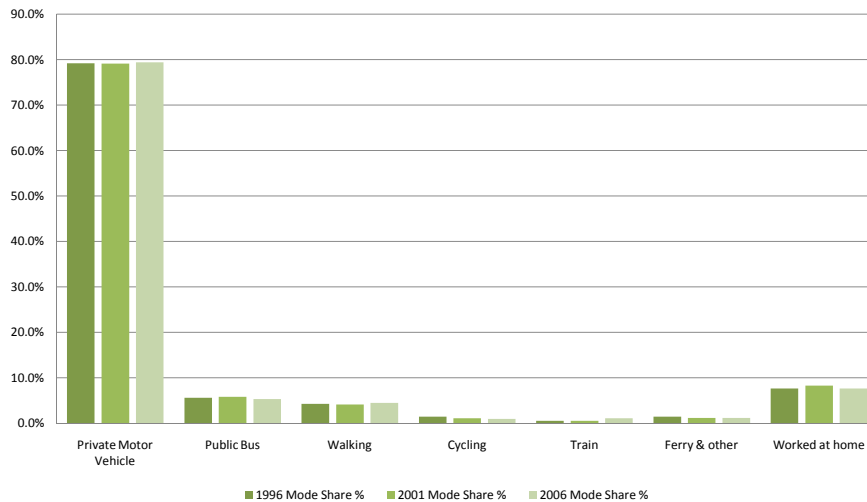
There are significant opportunities for intensified development of Housing NZ land in Glen Innes, Orakei, Otara etc. We would recommend PPP social housing developments ala Bonnyrigg in Sydney (see http://www.wwg.nsw.gov.au/NSW_Projects/bonnyrigg_living_communities_project_social_housing_ppp) this provides a private sector part funded development of land that meets intensified land use development, and incentivises private sector delivery of improved social outcomes. (I'm planning to take a delegation there later this year or early next year).

Broadband

The significance of Ultrafast broadband needs to be factored into the SP. 2006 census shows more people worked from home than took public transport. See graphs below. Even with a significant investment in public transport and assuming very aggressive mode share shift and intensification, private vehicles volumes on the roading network will still increase by 40% (assuming 2% compound demand growth) in 20 years. We need to consider the potential of UFB and teleworking etc in the future as a means to help curb transport demand growth.

We will also need to implement some form of road user pricing to help drive behavioural shift and to help fund investment in both PT and roads. (See separate comment on funding).

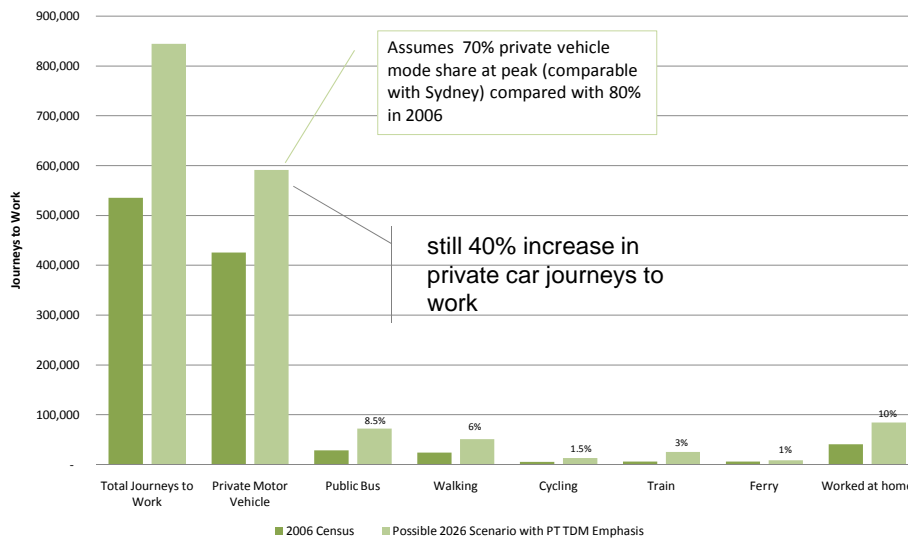
**Auckland Region Travel to Work Mode Share
Census 1996, 2001, 2006**



More people work from home in Auckland than take public transport...

<i>Method of travel to work - Census 2006</i>	Auckland 2006	Wellington 2006	Brisbane 2006	Perth 2006	Adelaide 2006	Sydney 2006	Melbourne 2006
Private Motor Vehicle	79.4%	64.2%	76.5%	80.8%	81.2%	69.0%	76.7%
Public Bus	5.3%	8.9%	5.9%	5.1%	6.8%	6.1%	1.4%
Train	1.1%	6.8%	6.9%	4.9%	2.7%	13.9%	11.9%
Walking	4.5%	10.4%	3.5%	2.5%	3.1%	4.7%	3.4%
Cycling	0.9%	1.9%	1.1%	1.1%	1.5%	0.6%	1.3%
Other (Ferry, Plane, helicopter, other)	1.2%	1.0%	1.5%	1.6%	1.2%	1.3%	1.1%
Worked at home	7.6%	6.7%	4.5%	4.1%	3.5%	4.4%	4.2%
Total Workers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Potential 2026 Scenario with emphasis on Travel Demand Management and Public Transport



Assumes growth rate of 2% (last 10 years has been 2.8%)

Funding / Road Pricing

Pay as you go funding of transport investment via traditional sources such as road user charges, fuel excise and rates will not be sufficient to meet the levels of investment required. NZCID estimates transport funding gap of at least \$5 billion. That equates to \$360m per annum over 30 years at 6%. That's equivalent to a 25% increase in rates, a 30 cents per litre increase in fuel excise, both of which will be politically unsustainable. Note also that fuel tax excise will continue to diminish over time as fuel efficiency, hybrids, electric and alternative power vehicles start to permeate the vehicle fleet. That will help predicate the need to move to road pricing as a significant funding mechanism and demand management tool for transport.

A \$1 average toll on all vehicles joining the motorway network would raise circa \$330m per annum which could then be topped up with PT user charges etc. to repay debt. We describe this as an "average toll" of \$1. That is it'd be "say" \$2.00 or \$3.00 at peak, free at night and \$1.00 inter peak, weekends etc. Commercial vehicles would pay a premium. This should be introduced by 2020 to coincide with inner city rail loop and expanded PT rail and bus services and to help fund AMET1 and the new the new harbour crossing.

We recommend network tolling (i.e. gantry on all motorway on-ramps) rather than cordon tolling for four main reasons:

1. Most travel on motorway is intra regional and not city bound – only 10% employment is CBD based.
2. Enables the toll to be relatively light – 1/3 of the cost of a cup of coffee - as opposed to punitive cordon tolls approach
3. Raises a lot of money

4. Easy to implement

Road pricing would need to be sold as a package to fund the “transport system of the future” incl rail, bus, harbour crossing etc. incl the benefits of faster better travel times (relative to what would be the case otherwise anyway!).

Other Key Issues to be resolved in Spatial Plan

- Phasing of Wynyard quarter land development vs. land development adjacent to CBD rail loop. Doubt that both will be economically viable if developed side by side
- Demarcation of port land from city land – suggest that port have Bledisloe wharf east and city Captain Cook west to be phased over time with port development plan. (Auckland Regional Holdings analysis shows that NZ will need port capacity of both Auckland and Tauranga to handle freight growth for the future. It's not either Tauranga or Auckland it's both.)
- Decision on future city axis – Queen Street alignment or Quay street alignment? Shift already emerging with ASB decision to vacate ASB tower in Albert Street and shift to Jellicoe Street.
- Harbour bridge or tunnel? (Personally I love the look of the bridge but can't see how they'd get consents to land it and make the necessary transport connections at either end. I suspect you'd do tunnel first and then replace the existing bridge some time into the future with an iconic new bridge on the existing alignment).
- Is the current alignment for the new harbour crossing to feed into spaghetti junction the best solution or should the connection be further east connecting to Grafton and or an eastern corridor? The latter is more expensive, but is it a better solution long term??

I look forward to working as part of any thought leadership team that comes to fruition.

Kind regards

Stephen