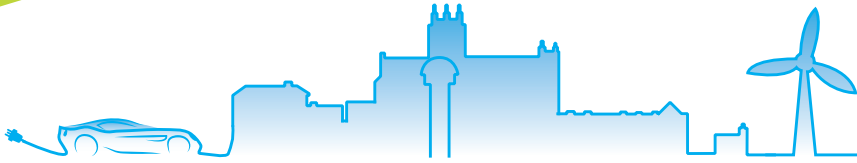


SMART FUTURE CITIES CONFERENCE



SMART FUTURE CITIES 2015

*Energy, Transport & The Built Environment
Innovations for Future Cities*

Smart accessibility: Shaping the Lower Hunter Region for the 21st century

Ian Donovan

Abstract

Despite being Australia's sixth largest urban region (population 2014: 562,500, similar to Canberra, Hobart and Darwin combined, and expected to reach 760,000 by 2030), planning and provision for public transport in the Lower Hunter arguably receives little more priority than in a large country town. Long-term under-investment in public transport and poor integration with urban planning have contributed to very low patronage levels. How-

ever, growing population and congestion, transition from a consumption economy, the 'peak car' phenomenon, decarbonisation of urban transport and others factors all point to the need for significant rebalancing between public, private and active transport modes, with an emphasis on 'accessibility' rather than 'mobility'. The issue has been heightened by the contentious removal of a key segment of the regional rail network. In contrast, comparable medium-sized cities overseas have been extending their rail networks. The presentation will examine six key actions for reshaping inter- and intra-regional accessibility to meet the needs of the 21st Century:

1. Planning for high speed rail
2. Bringing intercity rail up to scratch
3. Re-routing the East Coast rail freight corridor
4. Shifting to a 'network effect' public transport system
5. Locating travel-generating activities according to accessibility
6. Reforming regional public transport governance.

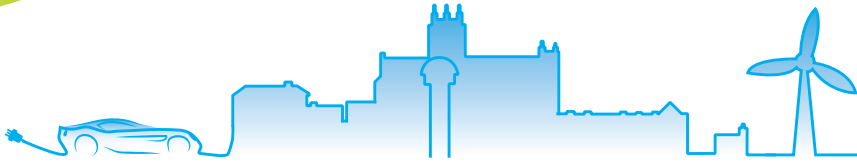
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SMART FUTURE CITIES CONFERENCE



SMART FUTURE CITIES 2015

*Energy, Transport & The Built Environment
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Smart accessibility: Shaping the Lower Hunter Region for the 21st century

Thu 1 Oct 2015, 12.40 pm, Newcastle City Hall, Newcastle Australia.

Presenter: Ian Donovan

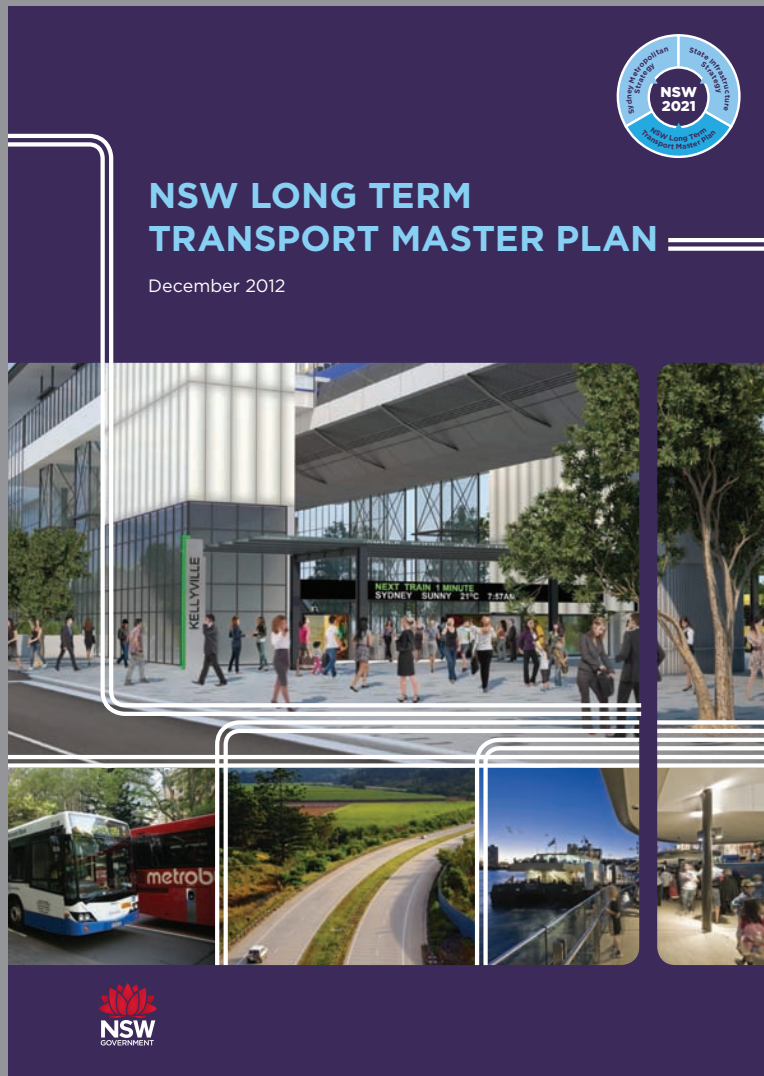
supported by...



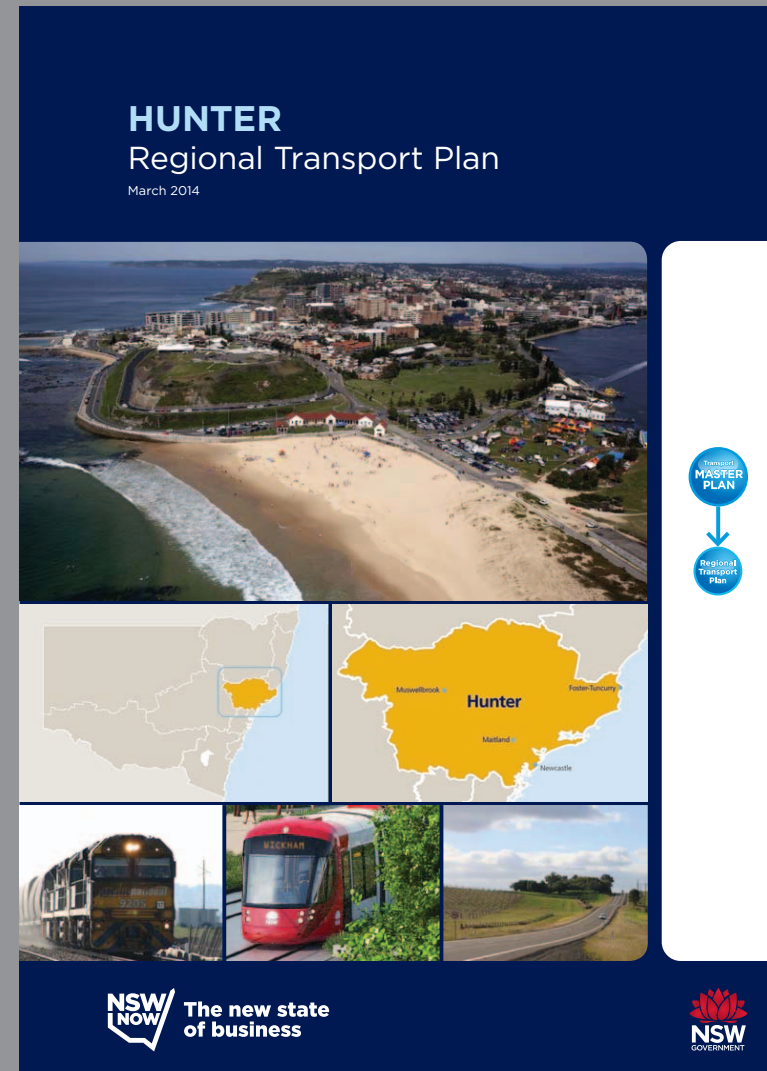
Office of
Environment
& Heritage



How much priority?



140 pages on Sydney ...
and two pages on Newcastle



“Action: deliver public transport
improvements” ... less than a page

What was Sydney planning ...

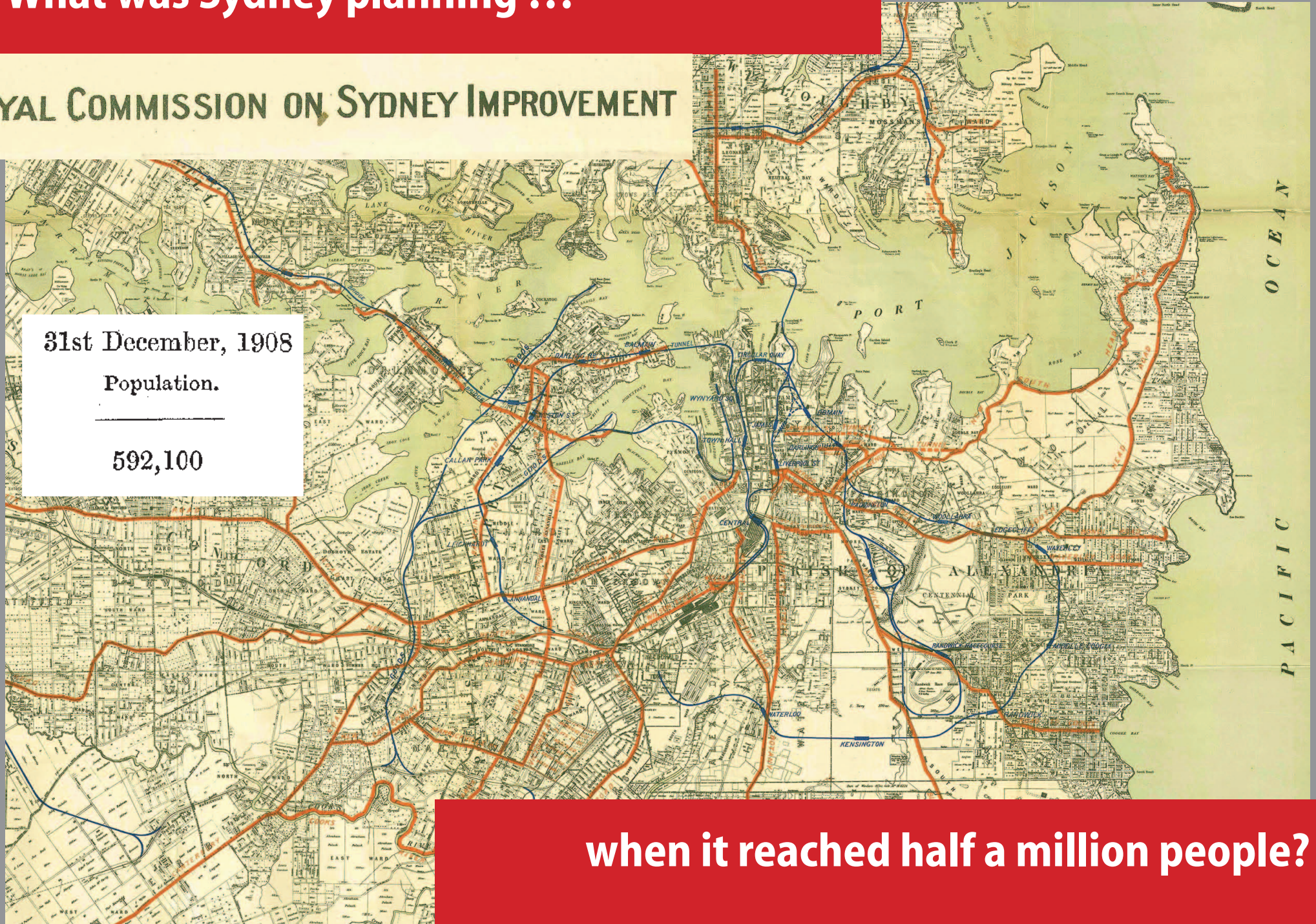
ROYAL COMMISSION ON SYDNEY IMPROVEMENT

31st December, 1908

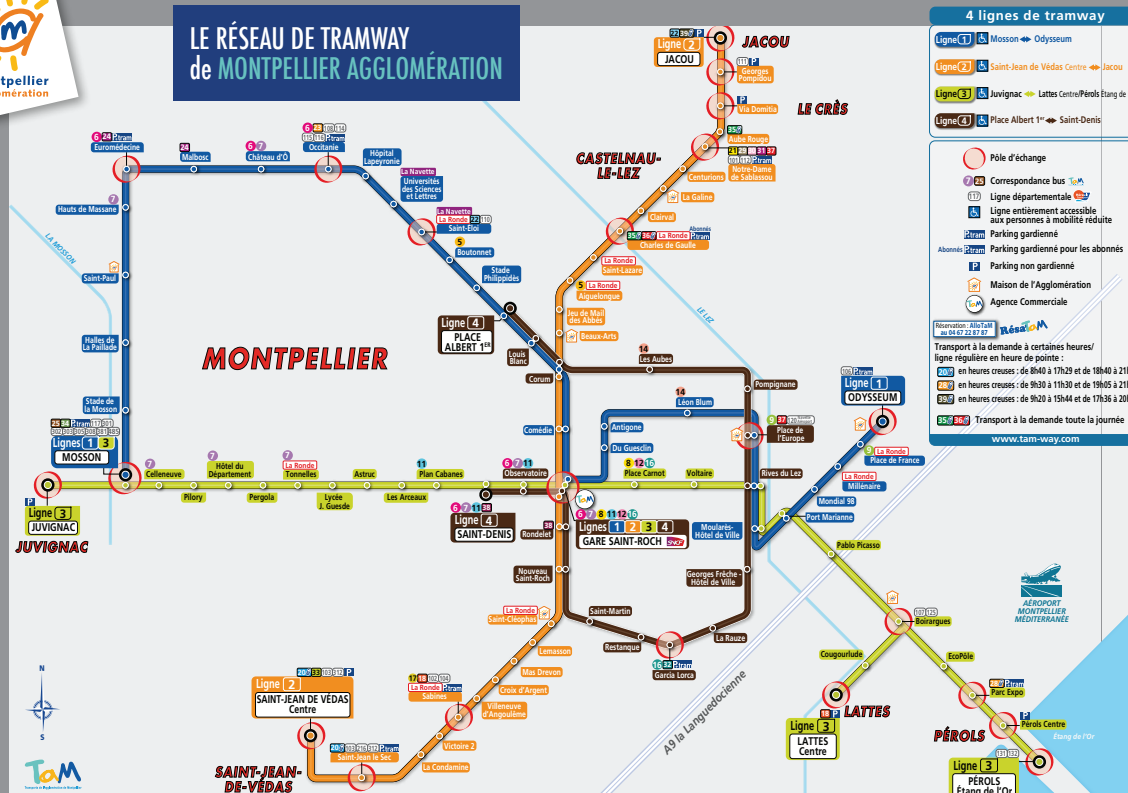
Population.

592,100

when it reached half a million people?



Montpellier... medieval to high tech



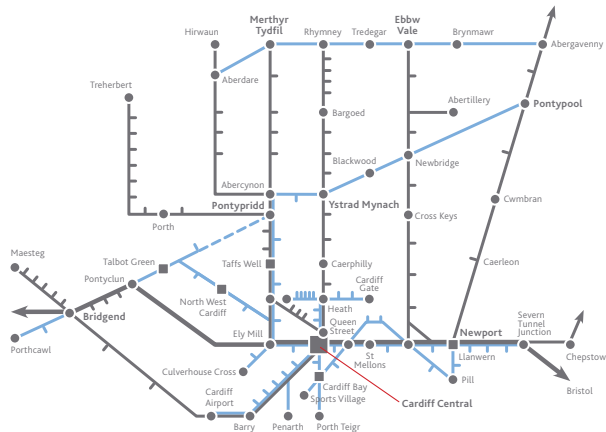
Photos: Hall 2014.



Lille... coalfield to European crossroad

“Old South Wales”: regional accessibility ...

Report to the Minister for Economy, Science and Transport



A Cardiff Capital Region Metro: Impact Study

October 2013



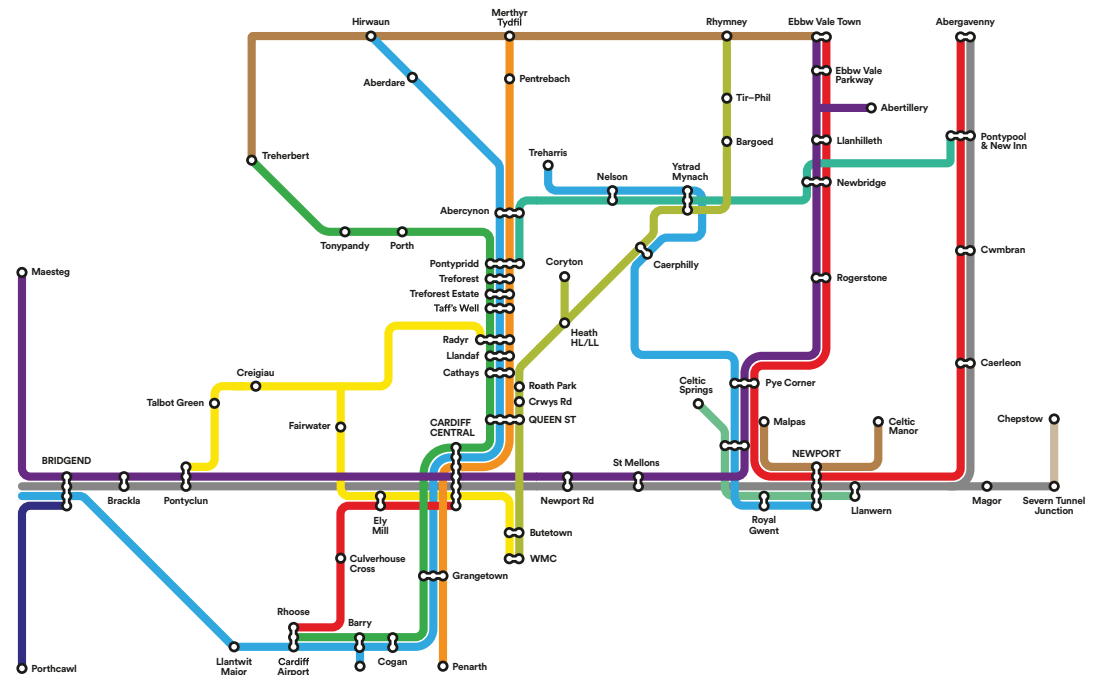
CAPITA

steer davis gleave

“Connecting more people to more places”

“Enabling development and regeneration”

“Creating a more liveable and economically dynamic region”

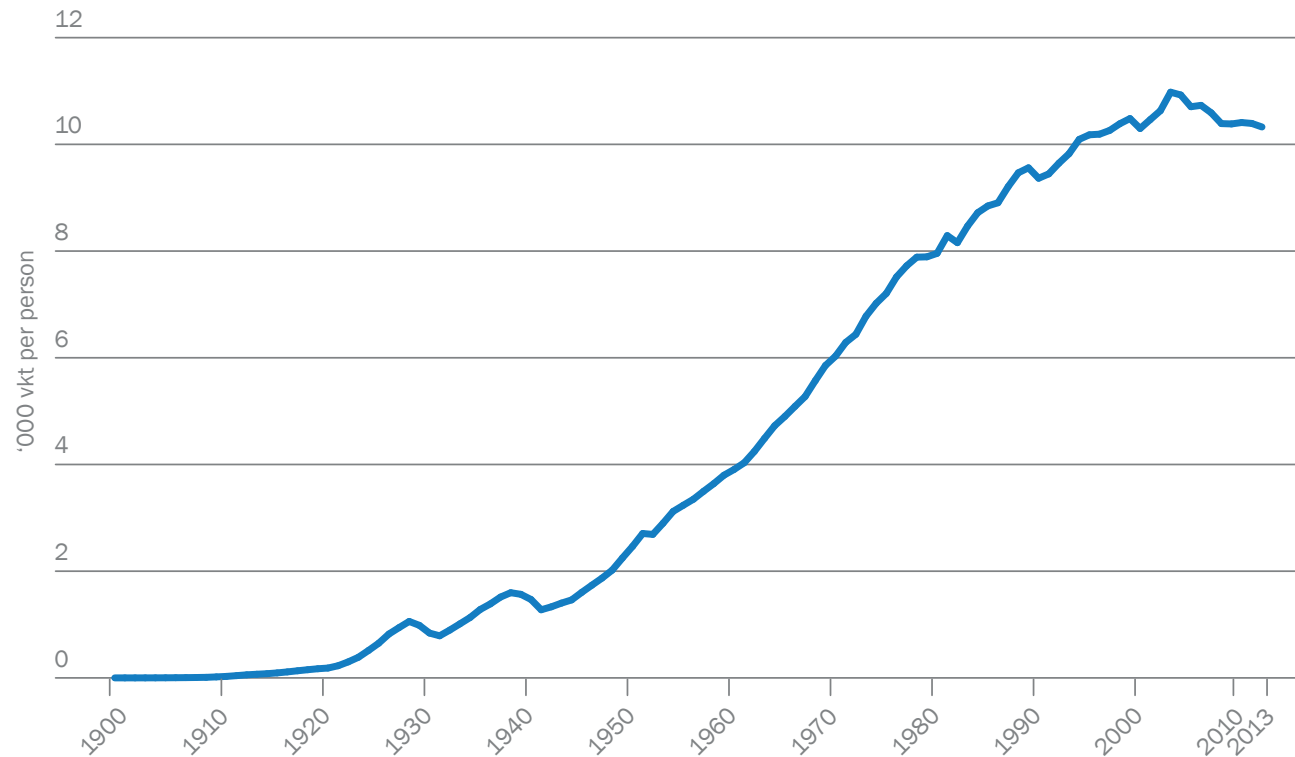


<http://gov.wales/topics/transport/public/metro/?lang=en>

as a catalyst for economic change

Per capita mobility reaches saturation ...

Vehicle kilometres travelled per person for Australia, 1900–2013



Source: Department of Infrastructure and Regional Development (2015). *State of Australian Cities 2014-2015*. DIRD, Canberra.

Paradigm shift ...

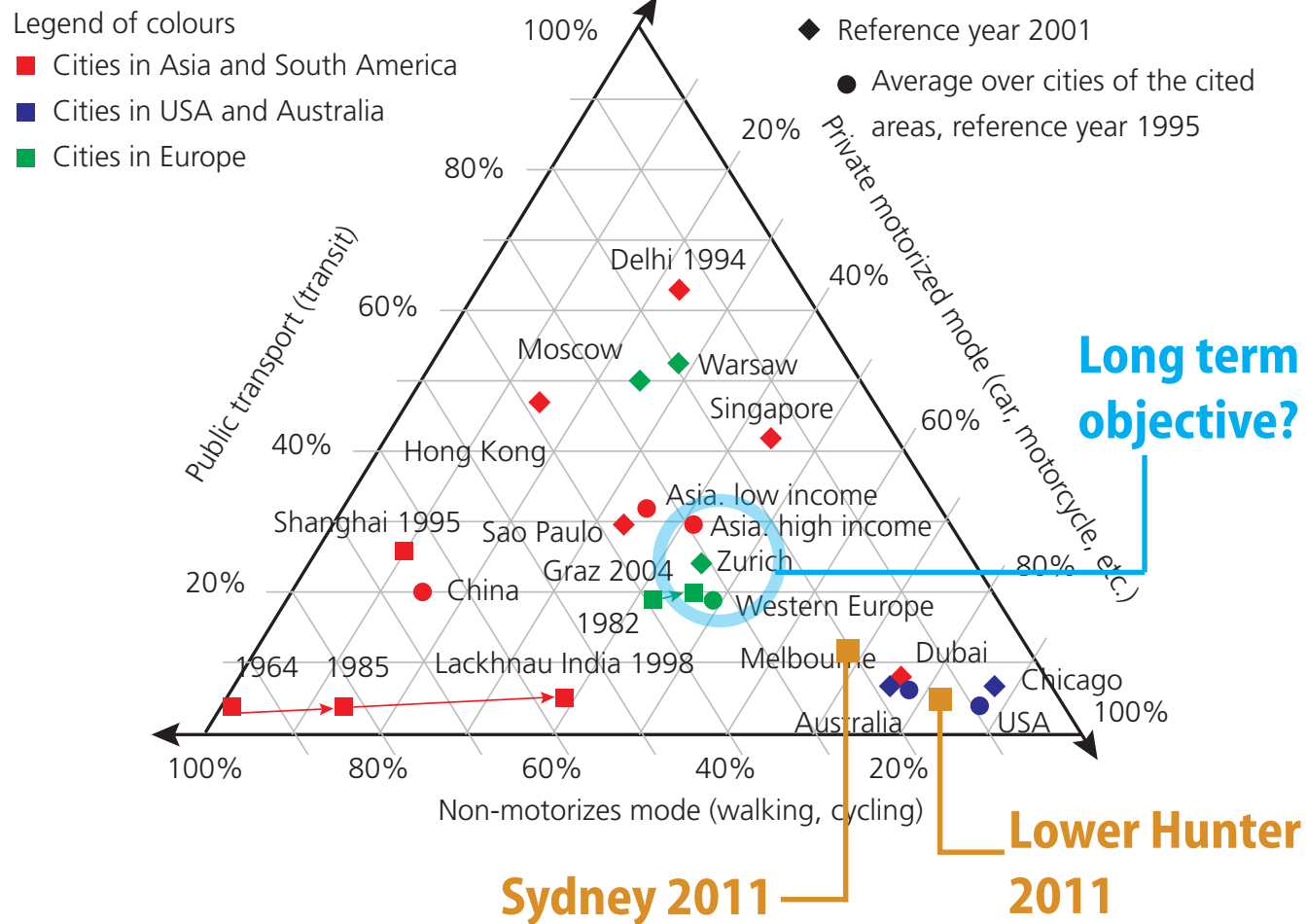
Mobility

- freedom of movement / travel
- focuses on transport systems in their own right
- supply-oriented ("build more roads")

Accessibility

- reaching services & activities with acceptable time, cost & environmental impact
- focuses on land use & transport as interacting systems
- 3 means of access:
 - proximity
 - travel
 - telecommunication

Modal split ...



Source: Sammer, Gerd (2013). 'Transport systems', pp 135-154 [Fig 10.1] in Grubler, A. & Fisk, D. (eds) *Energizing sustainable cities: assessing urban energy*. Routledge, Abingdon UK.

Sydney & Lower Hunter data from NSW Bureau of Transport Statistics (2012).

where do we aim to be by mid century?

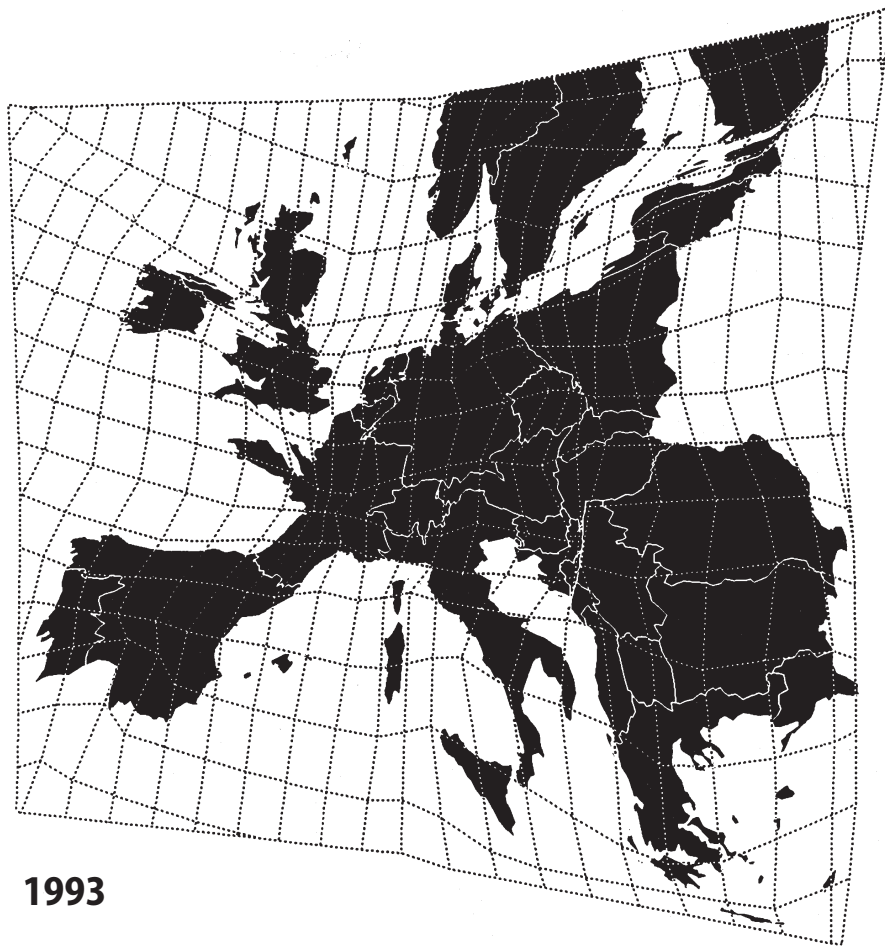
1. Planning for high speed rail



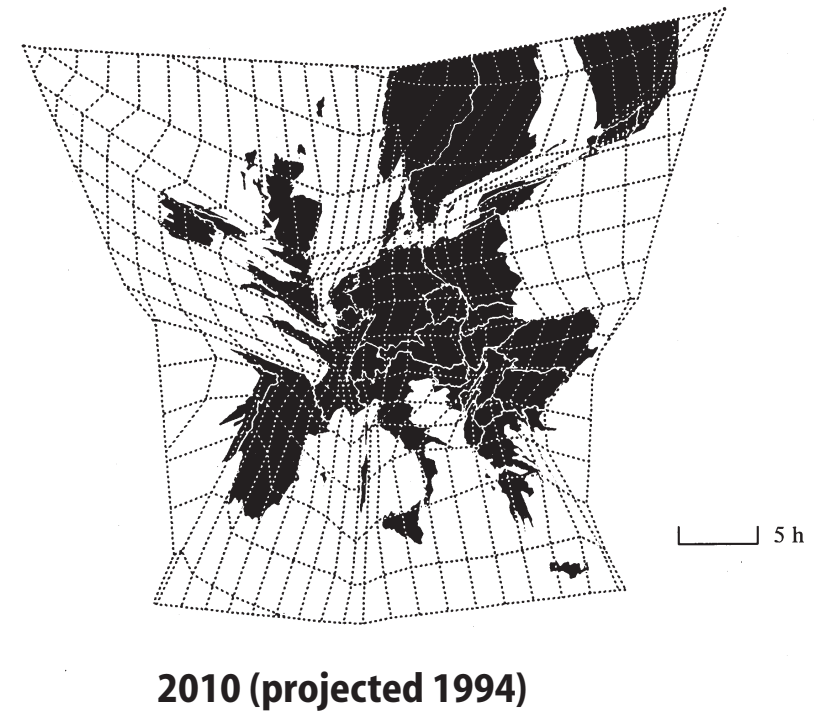
Photos: Utopia TV Pty Ltd 2014

Can we leave it to the Nation Building Authority?

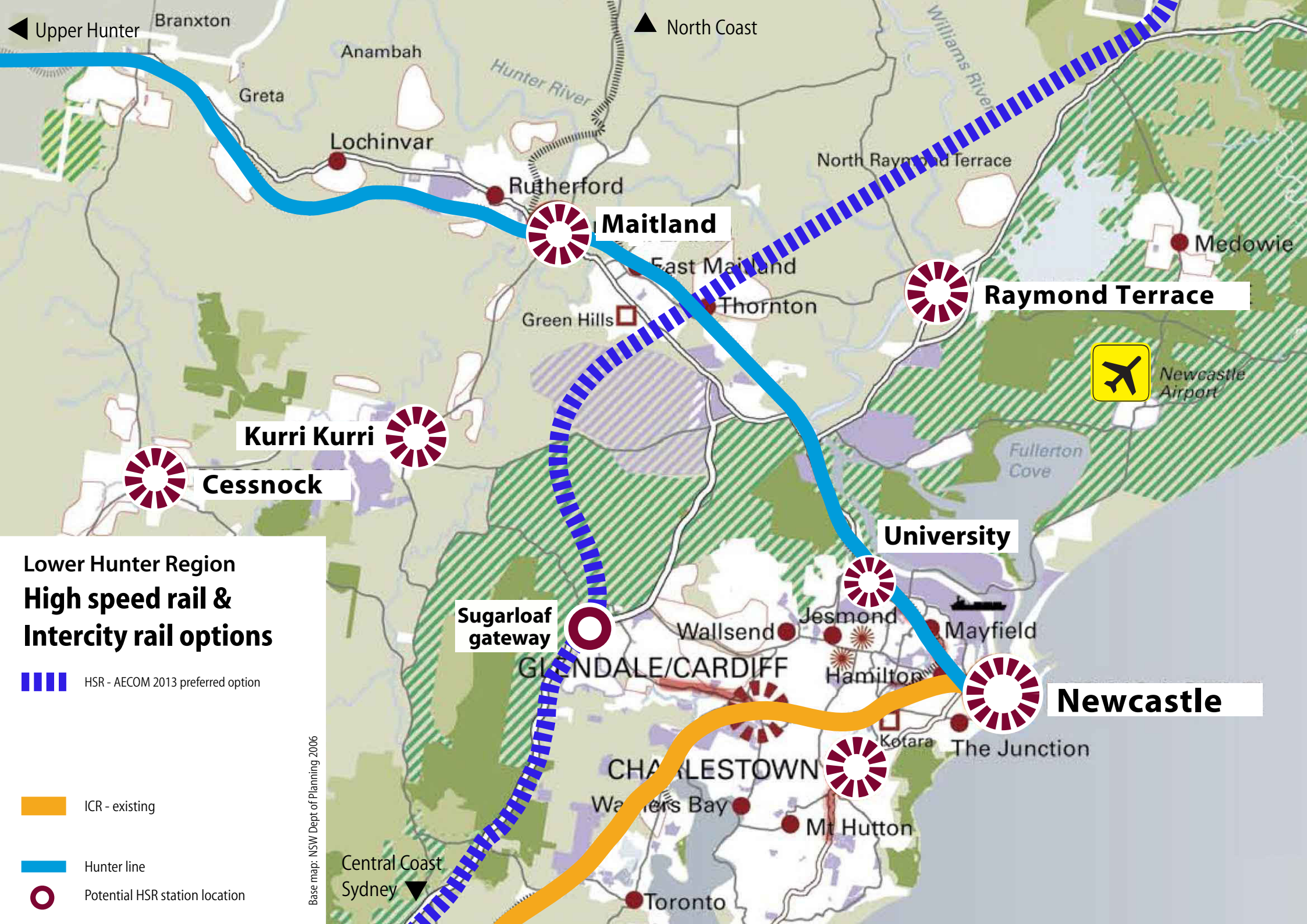
HSR compresses & distorts time-space ...



Source: Spiekermann & Wegener, M. (1994). The shrinking continent - new timespace maps of Europe. *Environment and Planning B*, 21(6): 653-673.



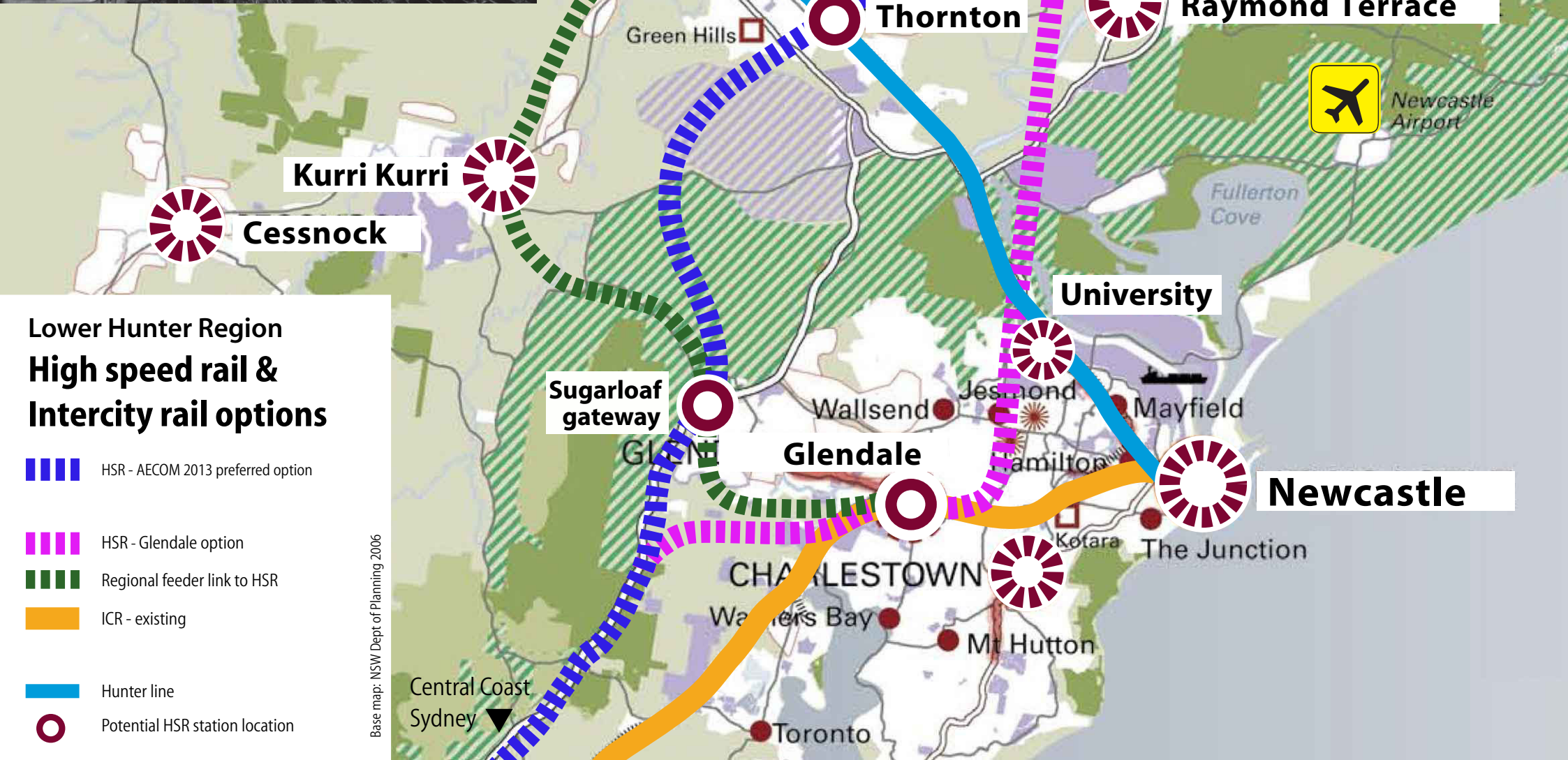
& widens differential accessibility





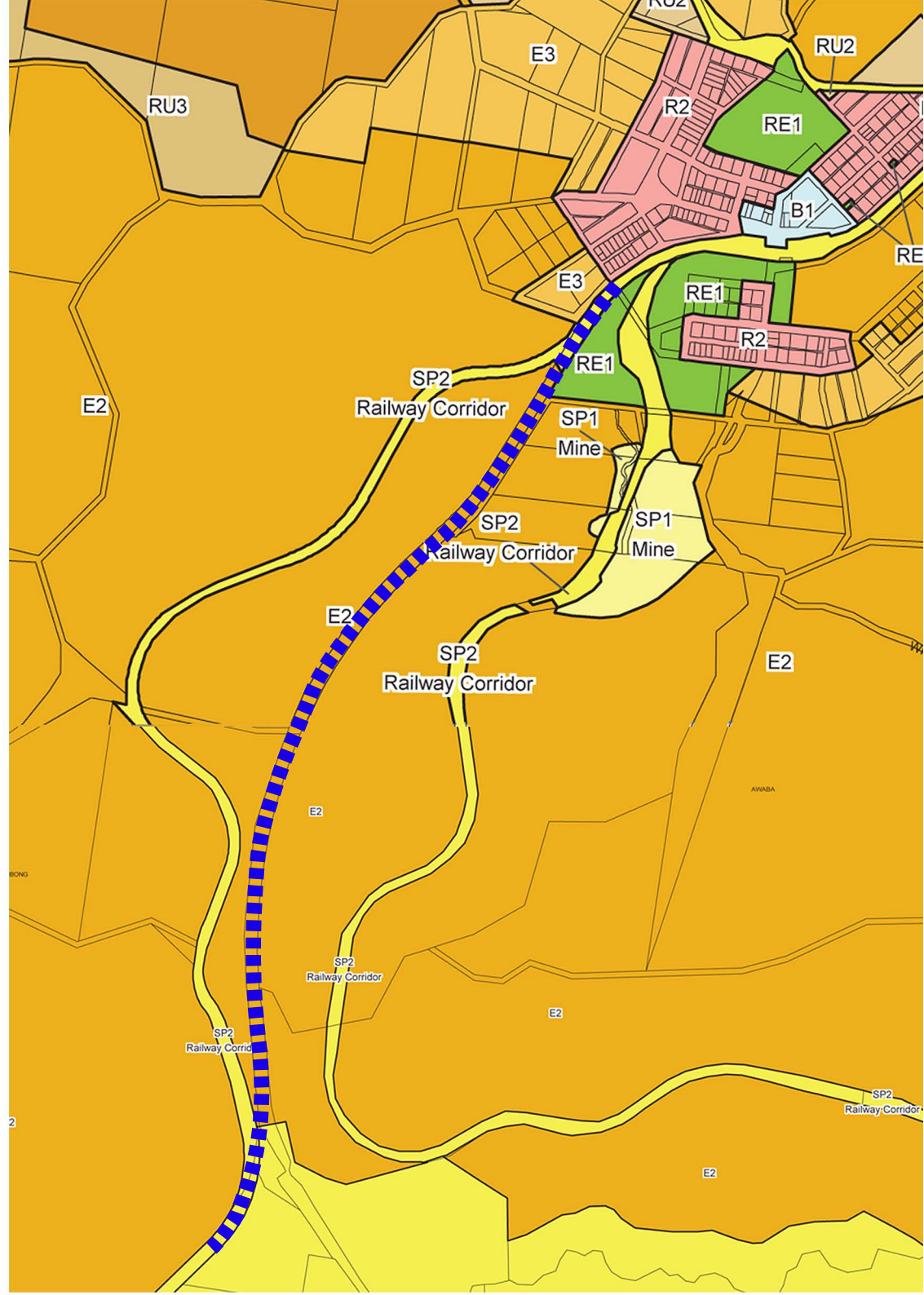
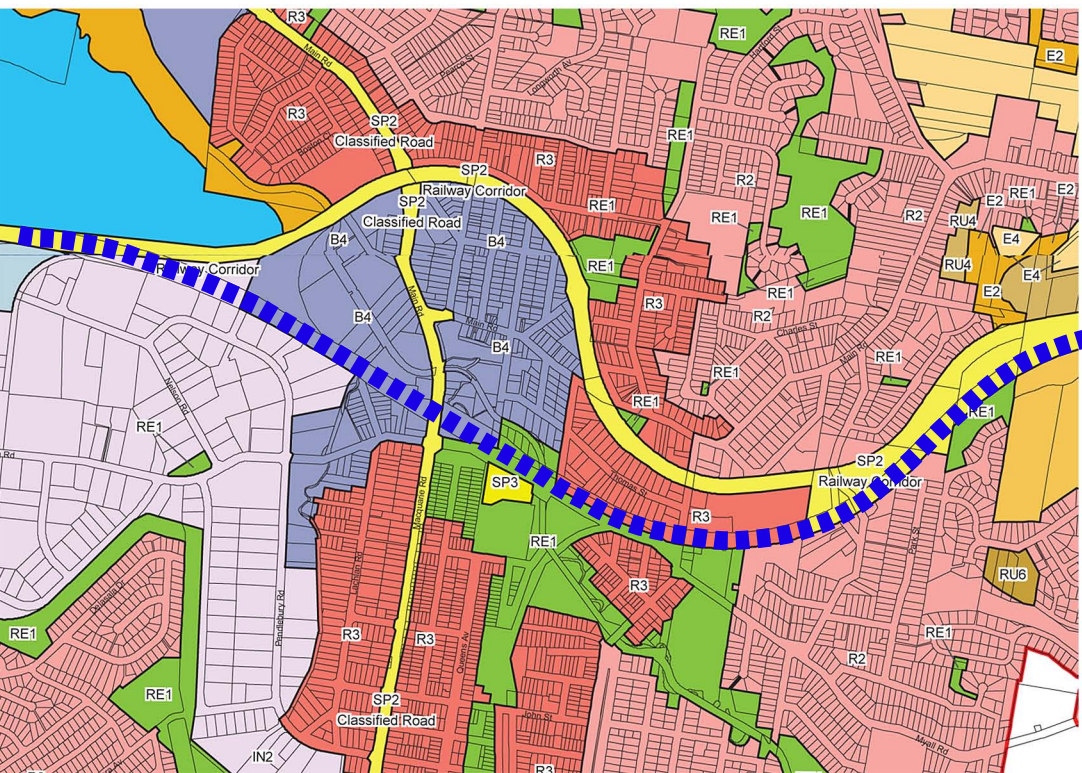
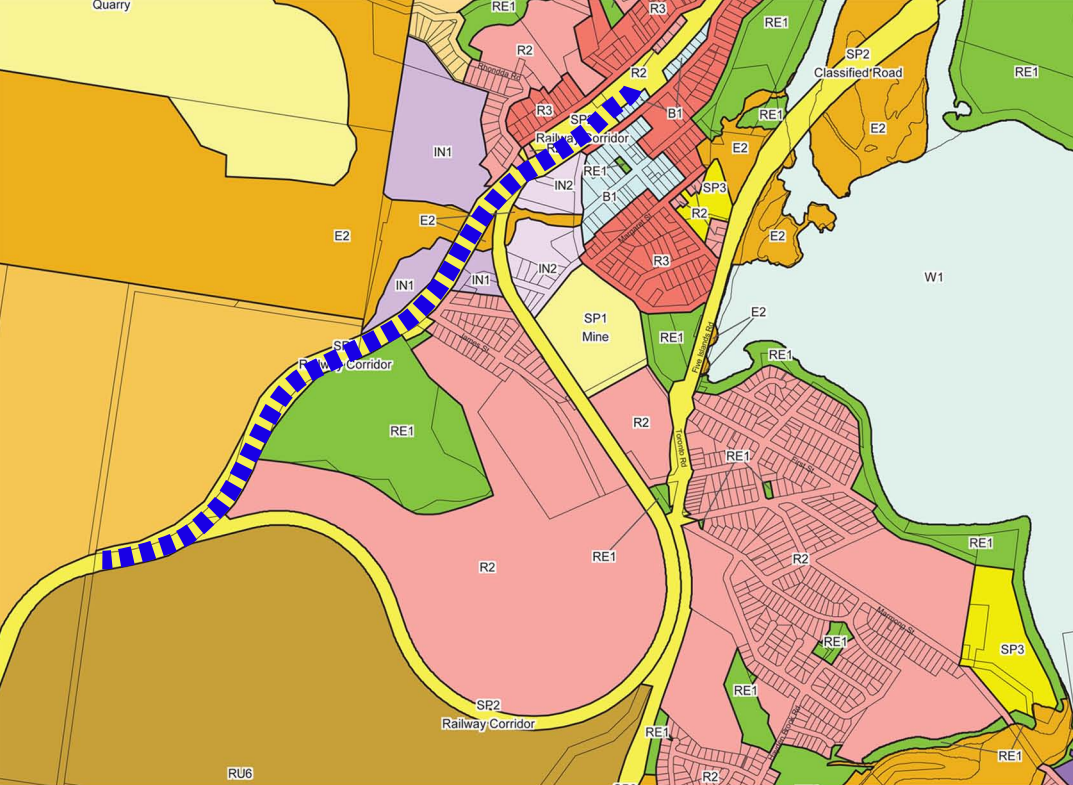


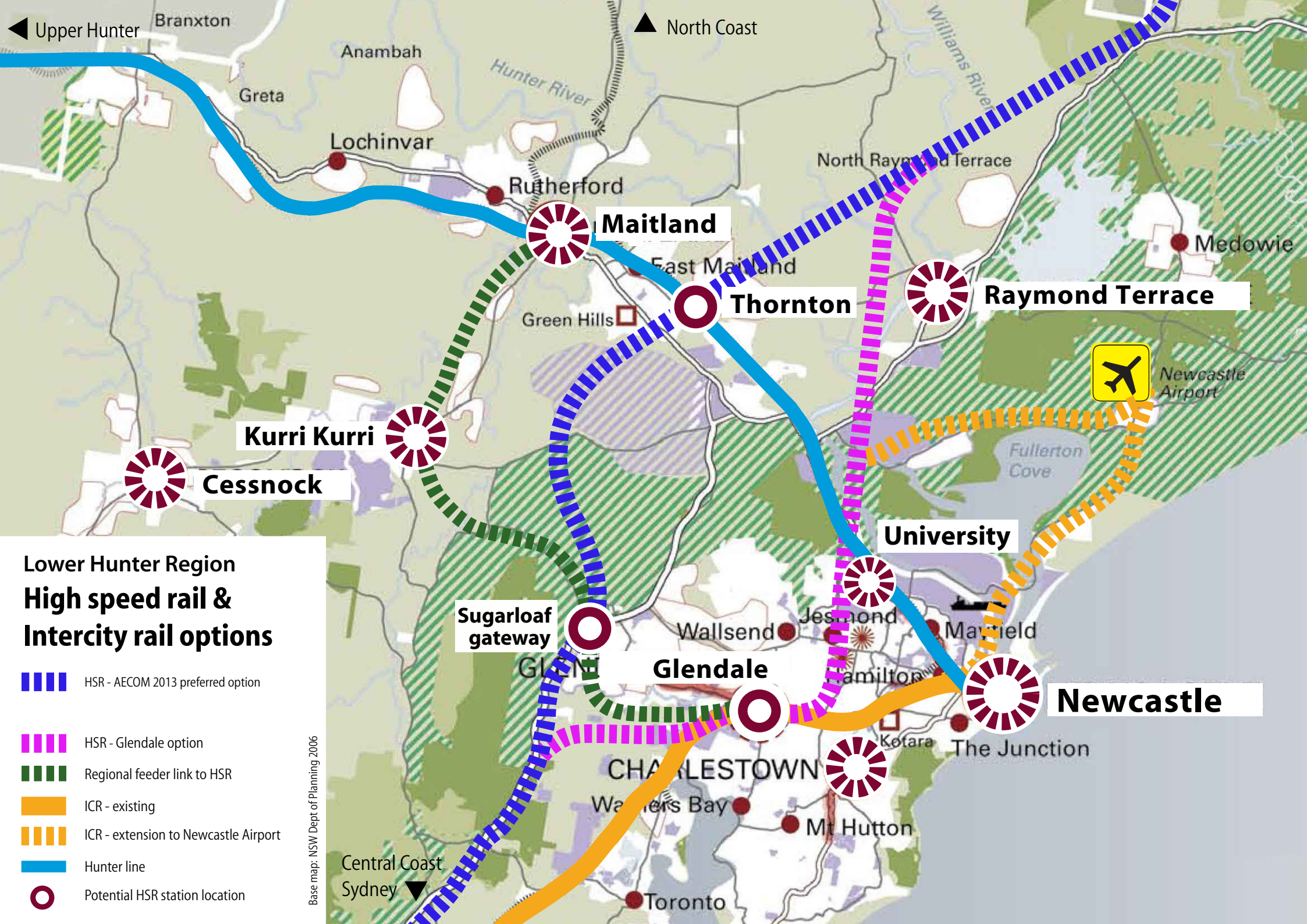
Glendale ?



2. Bringing intercity rail up to scratch







**Lower Hunter Region
High speed rail &
Intercity rail options**

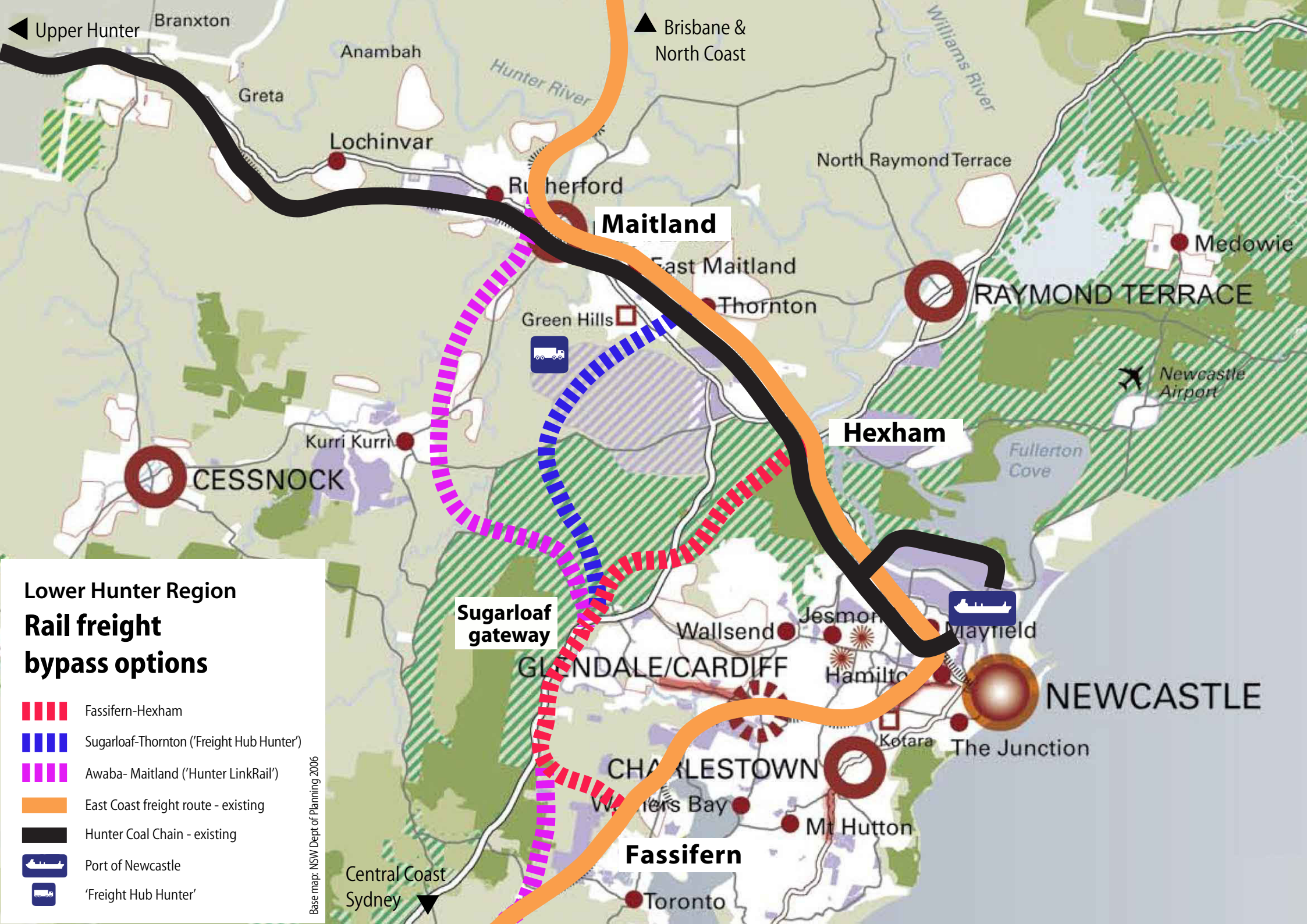
- HSR - AECOM 2013 preferred option
- HSR - Glendale option
- Regional feeder link to HSR
- ICR - existing
- ICR - extension to Newcastle Airport
- Hunter line
- Potential HSR station location

Base map: NSW Dept of Planning 2006

3. Re-routing the East Coast rail freight corridor







Lower Hunter Region Rail freight bypass options

-  Fassifern-Hexham
-  Sugarloaf-Thornton ('Freight Hub Hunter')
-  Awaba- Maitland ('Hunter LinkRail')
-  East Coast freight route - existing
-  Hunter Coal Chain - existing
-  Port of Newcastle
-  'Freight Hub Hunter'

Base map: NSW Dept of Planning 2006

4. Shifting to a 'network effect' public transport system

NEWCASTLE
HERALD
WEBSITE OF THE YEAR

Big drop in use of Hunter public transport

By ALISON BRANLEY Aug. 24, 2012, 10:07 a.m.

NEWCASTLE
HERALD
WEBSITE OF THE YEAR

Opinion: Prune bus stops and create express lanes

By MATTHEW ENDACOTT Feb 13, 2014, midnight.

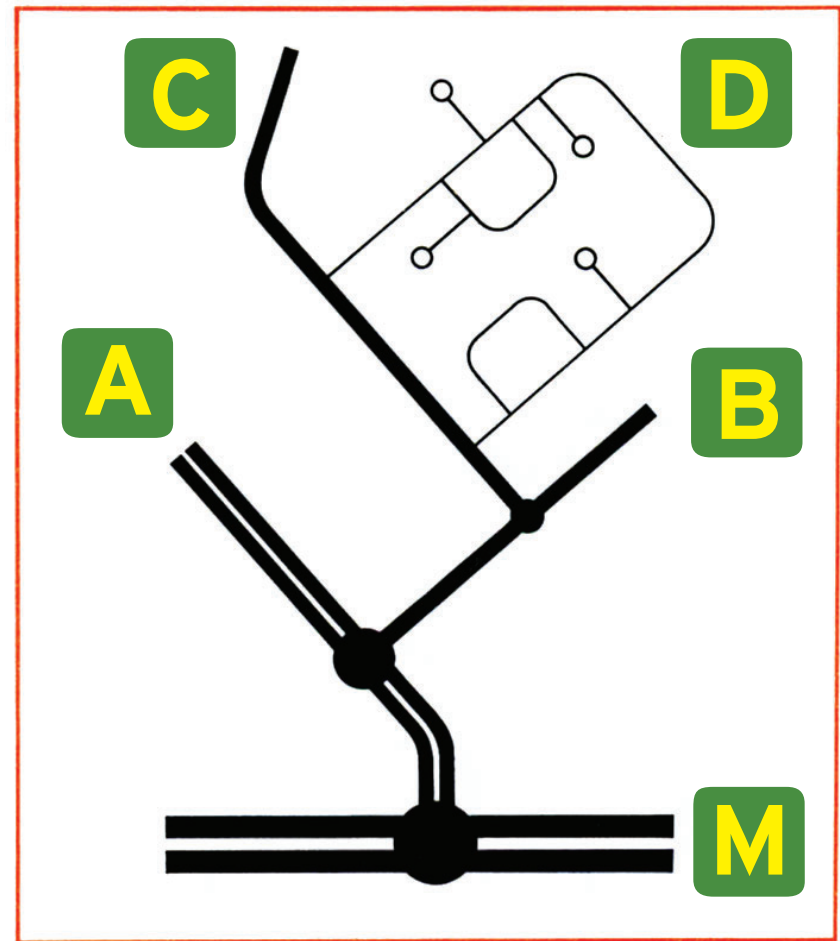
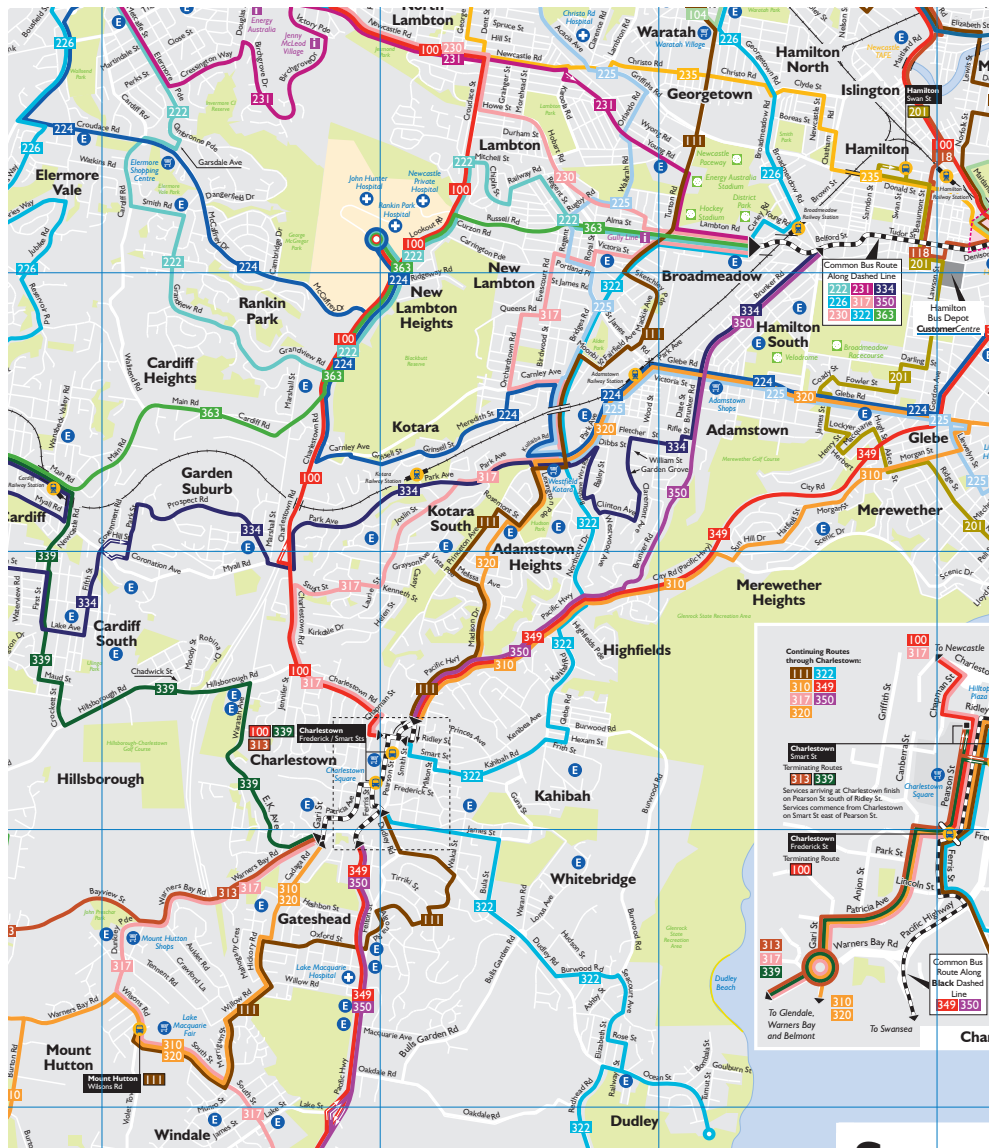
NEWCASTLE
HERALD
WEBSITE OF THE YEAR

Commuters putting brake on bus travel

By MATTHEW KELLY May 28, 2015, 10 p.m.



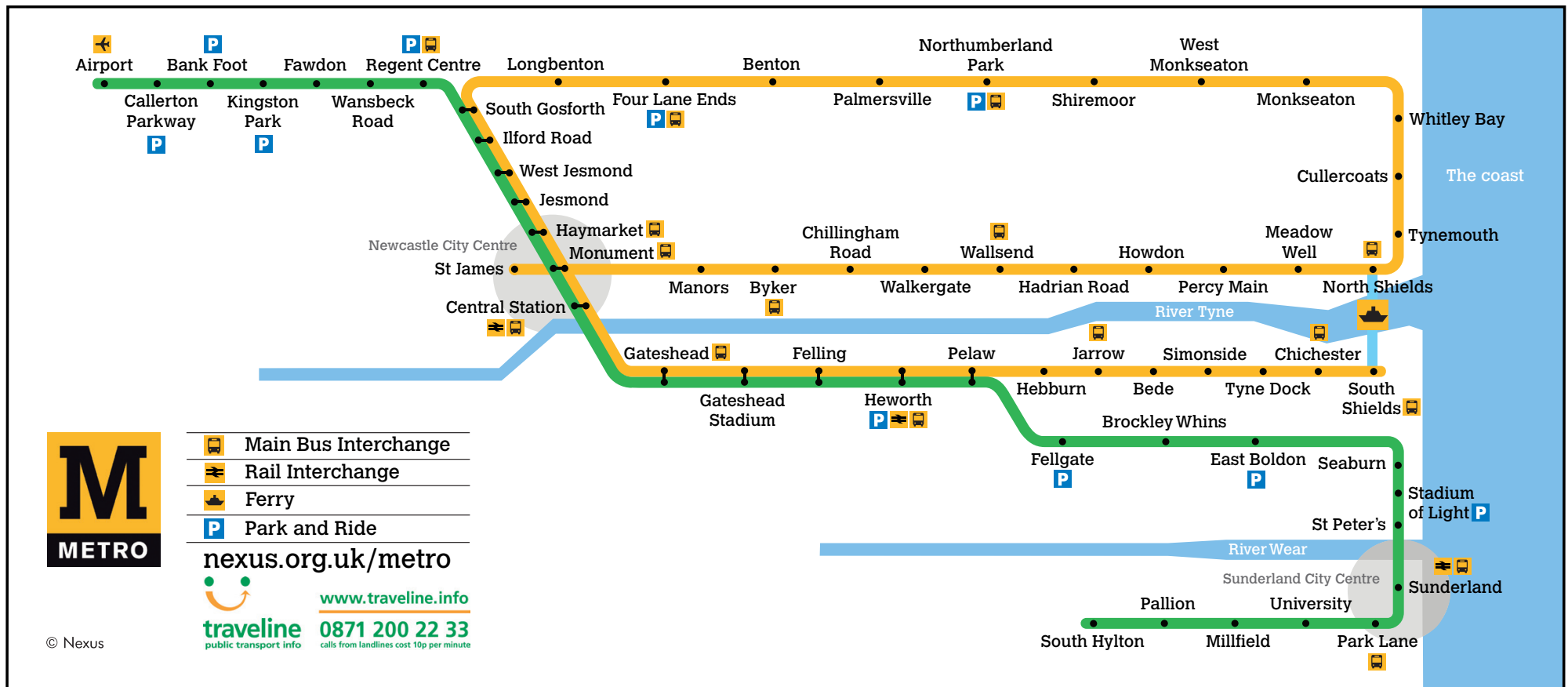
Imagine if the RMS ran buses ...



we'd have a legible heirarchy feeding into fast M routes

Too grand for Newcastle?

Tyne & Wear METRO



Metros are not just for Paris or Moscow

Radial ...



like Melbourne's trams

What might a Hunter Metro look like?



Hybrid rail ...

TramTrains

Electric trams that also run on main line railways



TrainTrams

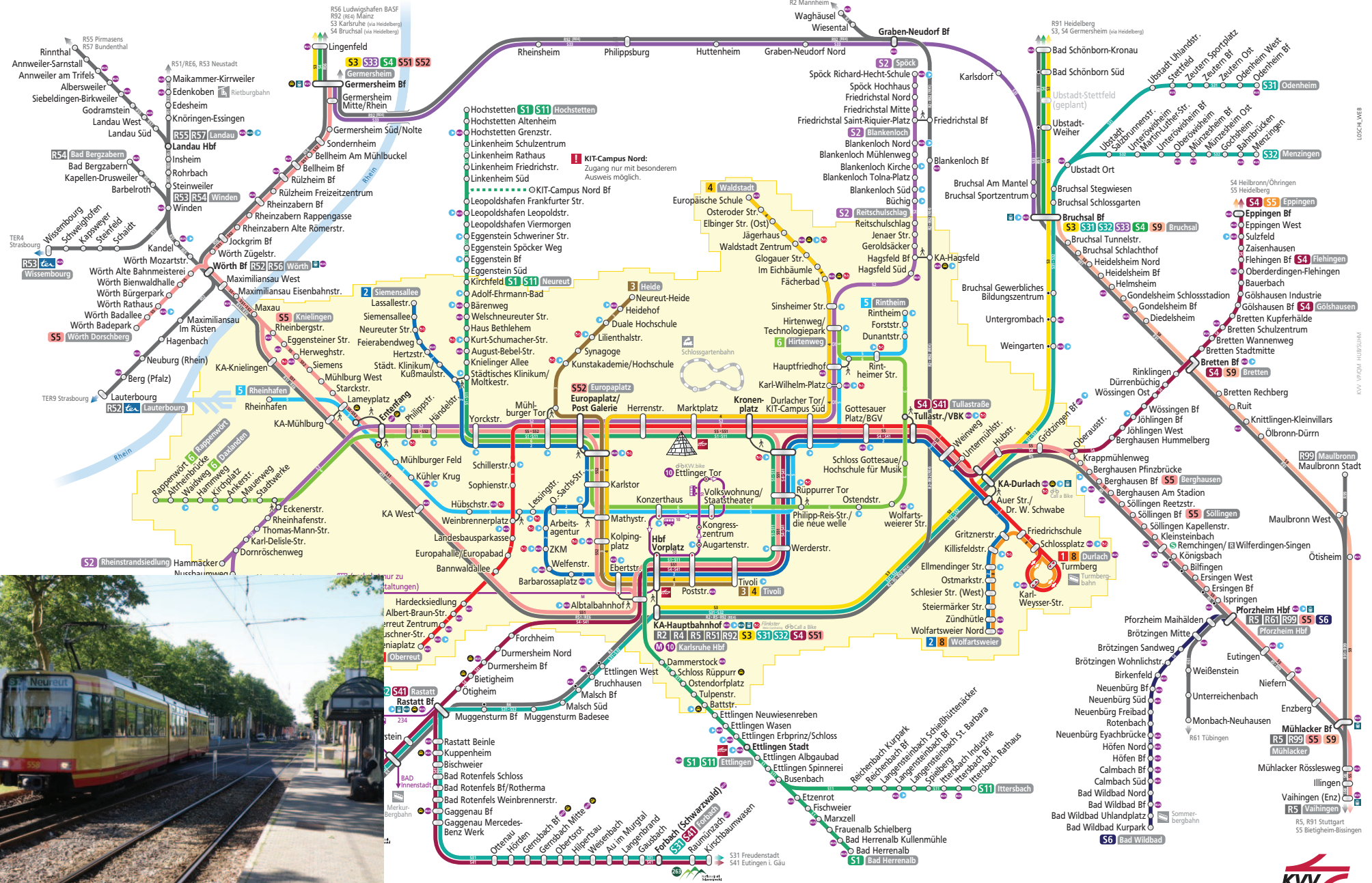
Diesel rail cars that also run on streets
(but always segregated from cars)



smart solution for the Hunter Region?

Truncation? Karlsruhe *extends* regional rail into city centre

Liniennetzplan



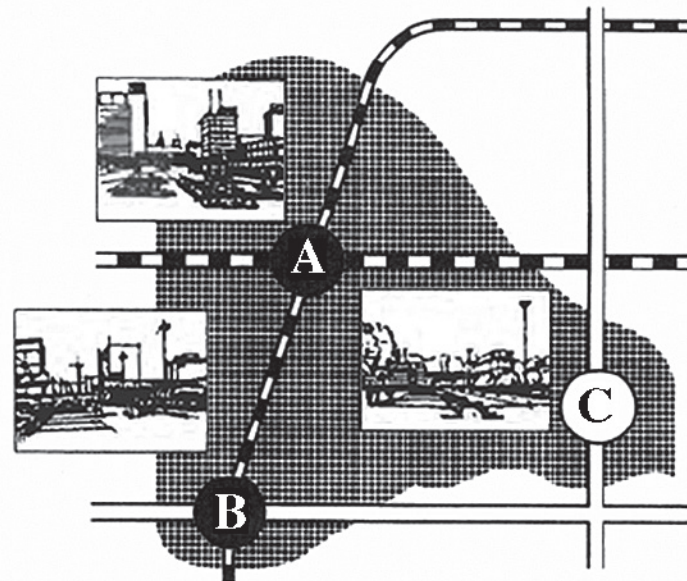
5. Locating development according to accessibility



Copenhagen's 1947 "Finger Plan" guided by rail lines



Residential intensification along proposed light rail, Canberra



'Dutch ABC' policy: locational criteria based on accessibility

6. Reforming regional transport governance



Tyne and Wear Passenger Transport Executive, trading as 'Nexus' - an executive body of the North East Combined Authority (Newcastle-upon-Tyne - Sunderland)



Strathclyde Partnership for Transport (Glasgow)



Communauté d'agglomération Montpellier Agglomération



Transports Publics de Genève et Alentours (Geneva Region, Switzerland & France)

“One network, one fare, one ticket”

6 steps for reshaping the Hunter



1. Plan for high speed rail

- Integrate station location with regional accessibility
- Plan & secure corridors & connecting links

2. Bring intercity rail up to scratch

- Reduce travel times & improve rolling stock to international standards
- Plan a rail connection to Newcastle Airport

3. Re-route the East Coast rail freight corridor

- Maximise scope for expanding passenger services; plan & secure corridors

4. Shift to a 'network effect' public transport system

- Adopt the 'go anywhere, anytime' principle, & offer a competitive alternative to the car
- Plan a Hunter Metro; investigate network design, mode selection, regeneration & economic impact
- Consider hybrid rail options; ensure that options are not closed off

5. Locate development according to accessibility

- Build accessibility principles into planning policies & development guidelines

6. Reform regional public transport governance

- Form a Hunter Transport Alliance to carry out service planning, coordination & marketing

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