

- Sydney is growing
- Growth in Port Botany TEUs
- Existing freight market
- Future freight market
- Alternative view
- Why Moorebank is a bad idea

- **Sydney is growing**
- Growth in Port Botany TEUs
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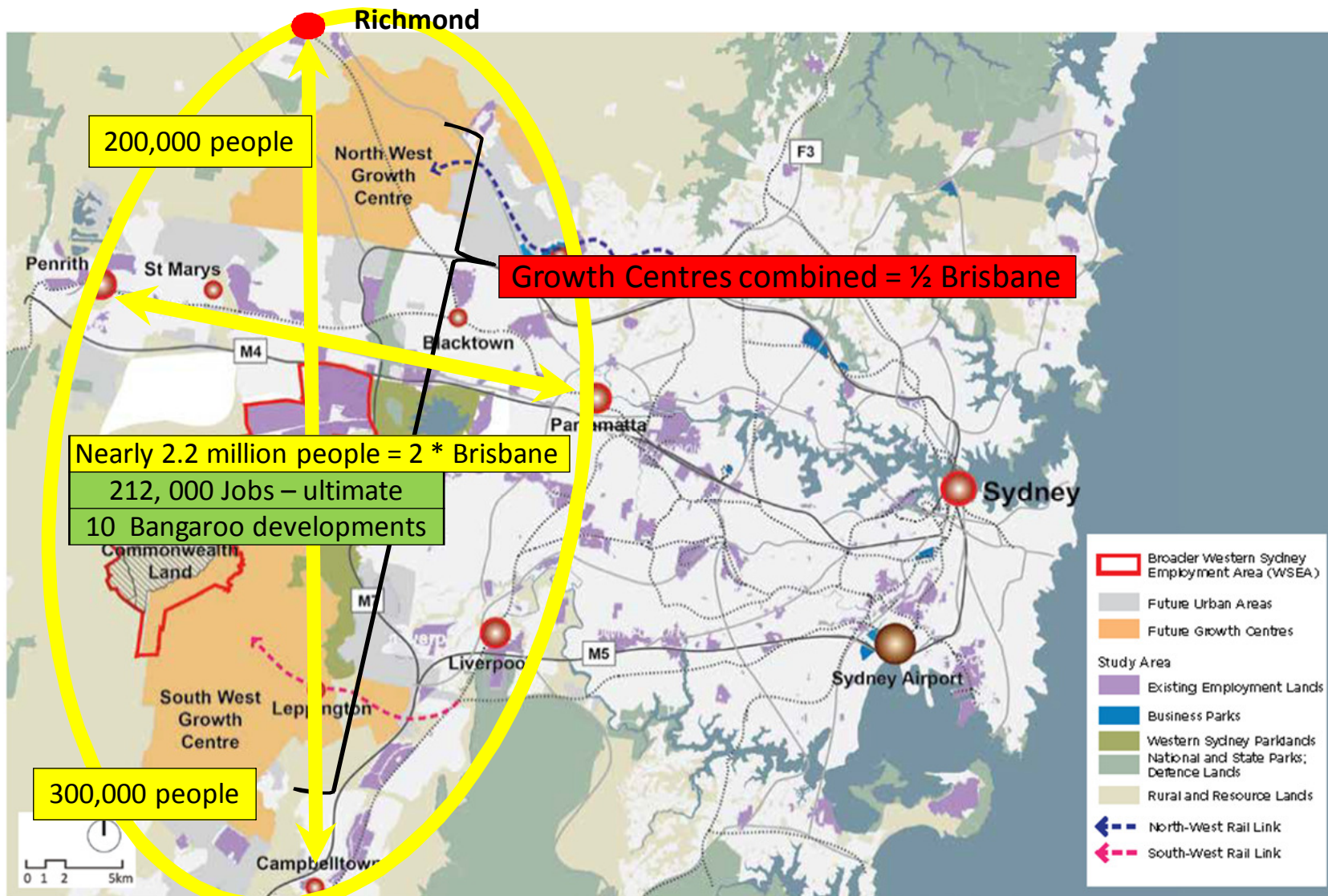
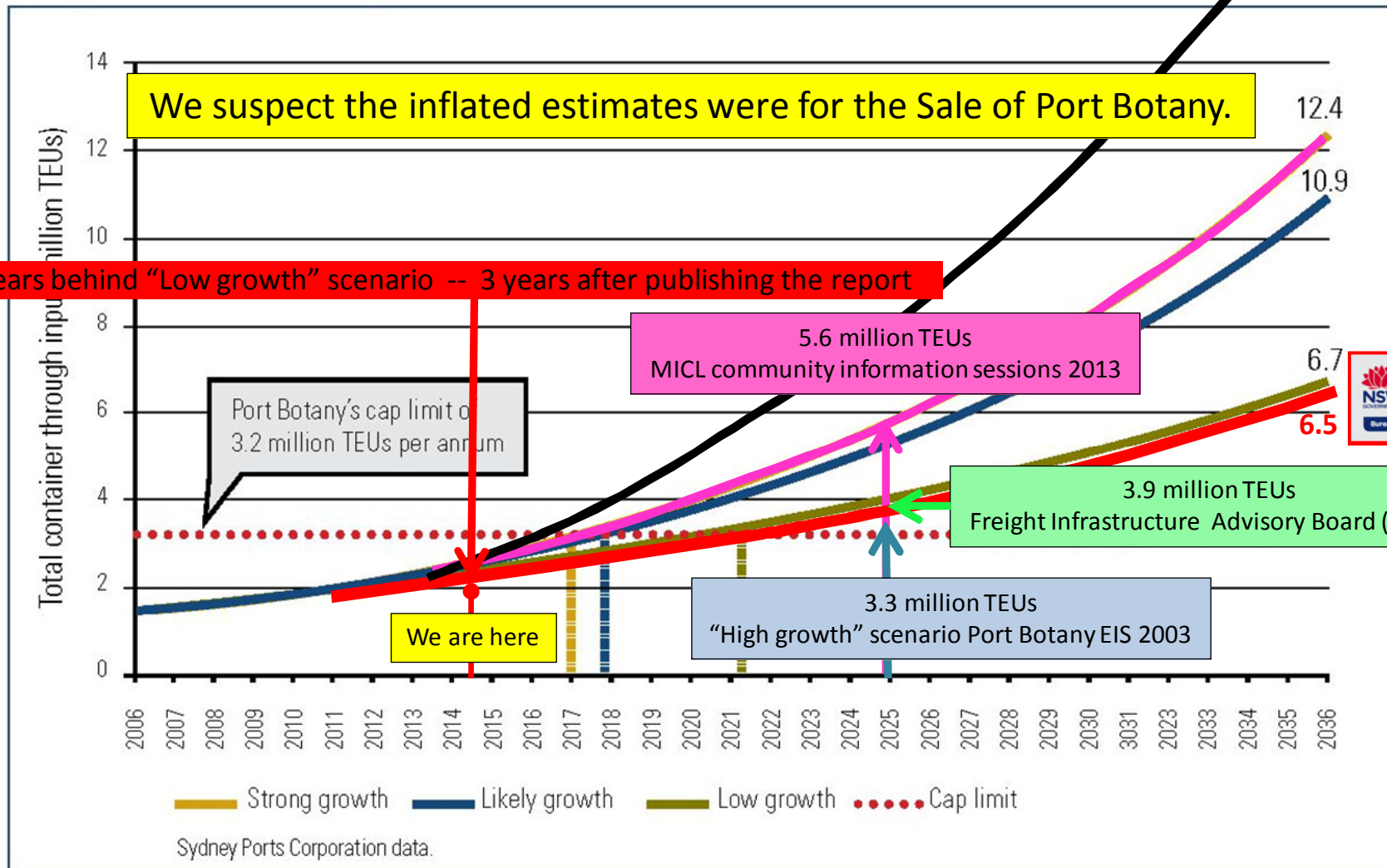



Figure 1 Study Area

- Sydney is growing
- **Growth in Port Botany TEUs**
- Existing freight market
- Future freight market
- Alternative view
- Why Moorebank is a bad idea

Graph 1 - Port Botany's forecast container demand

19.7 million TEUs extrapolated from SIMTA EIS

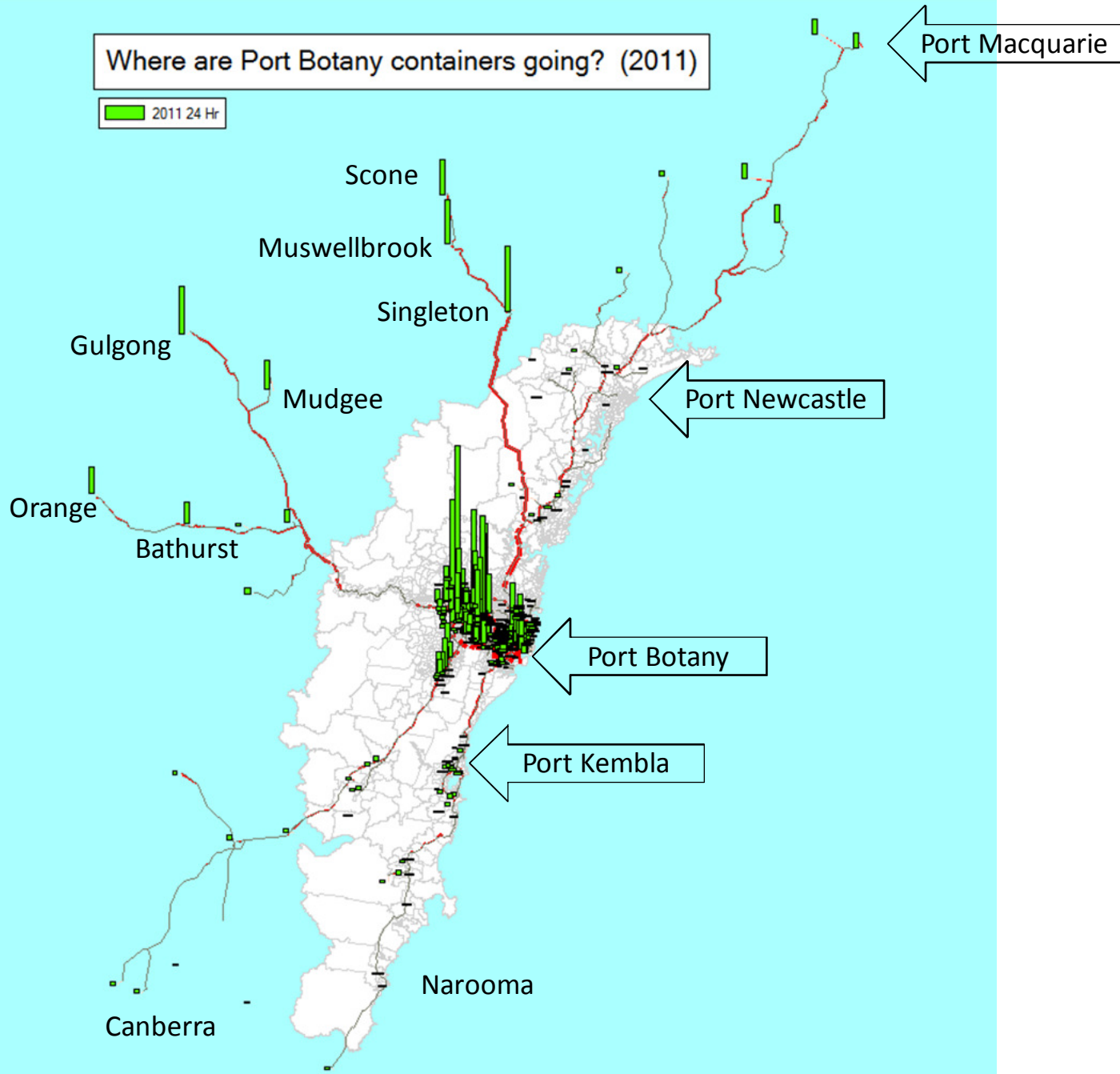


MIC is now using the  predictions but has forgotten to tell the government that the growth rate is actually much lower!!!!!!

- Sydney is growing
- Growth in Port Botany TEUs
- **Existing freight market**
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Where are Port Botany containers going? (2011)

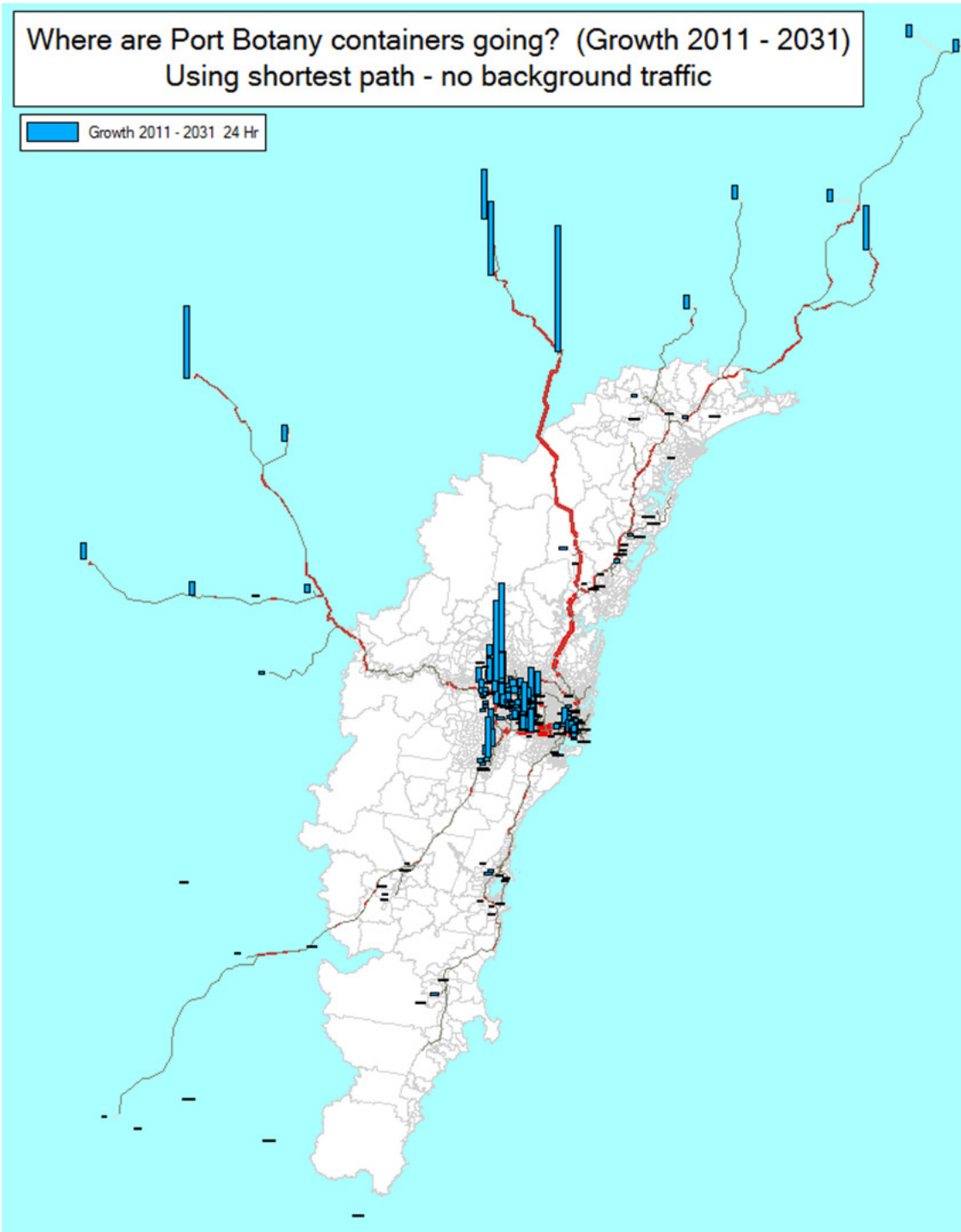
2011 24 Hr



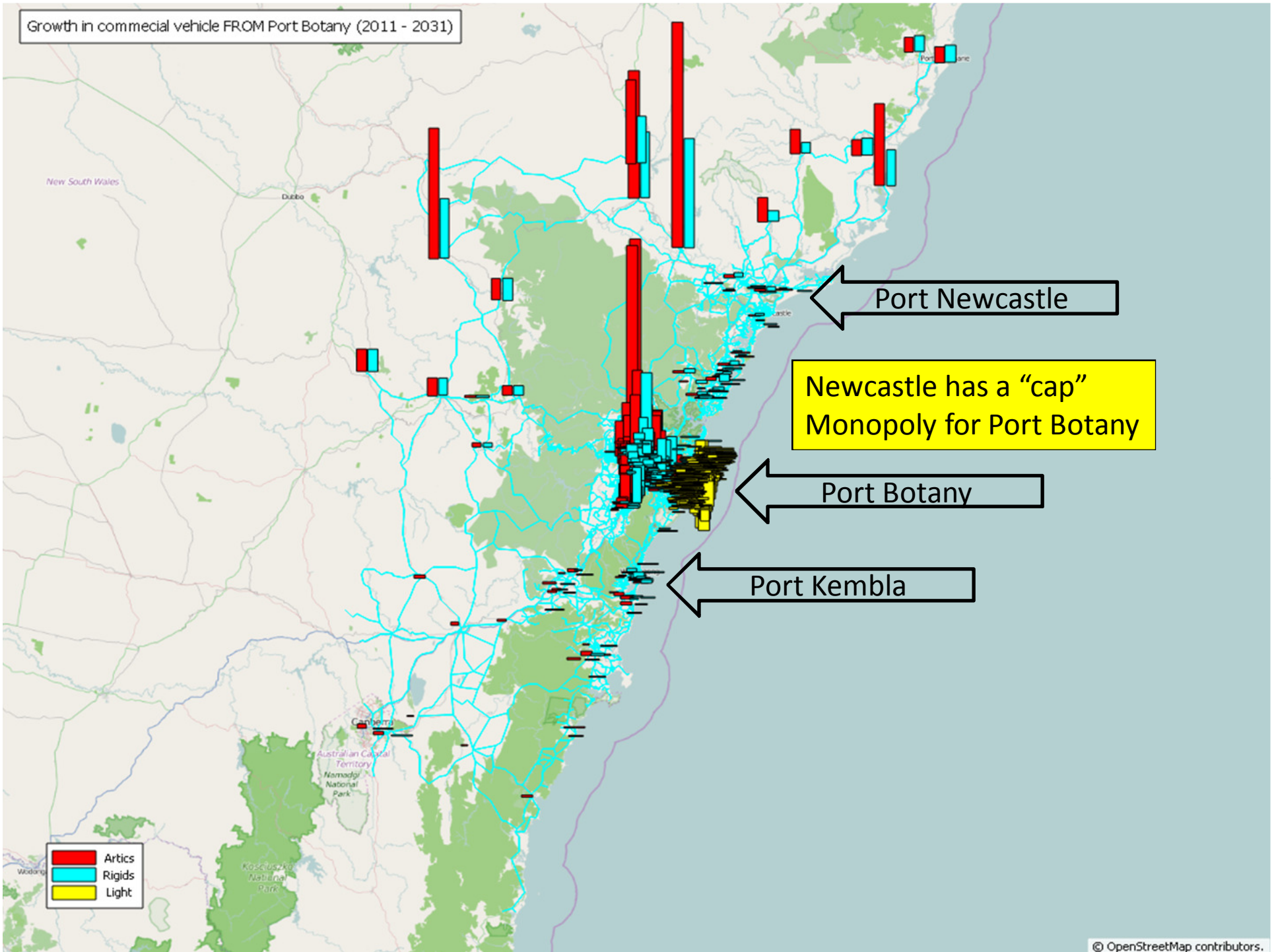
- Sydney is growing
- Growth in Port Botany TEUs
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- **Future freight market**
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Where are Port Botany containers going? (Growth 2011 - 2031)
Using shortest path - no background traffic

Growth 2011 - 2031 24 Hr



Growth in commercial vehicle FROM Port Botany (2011 - 2031)



Newcastle has a "cap" Monopoly for Port Botany

Port Newcastle

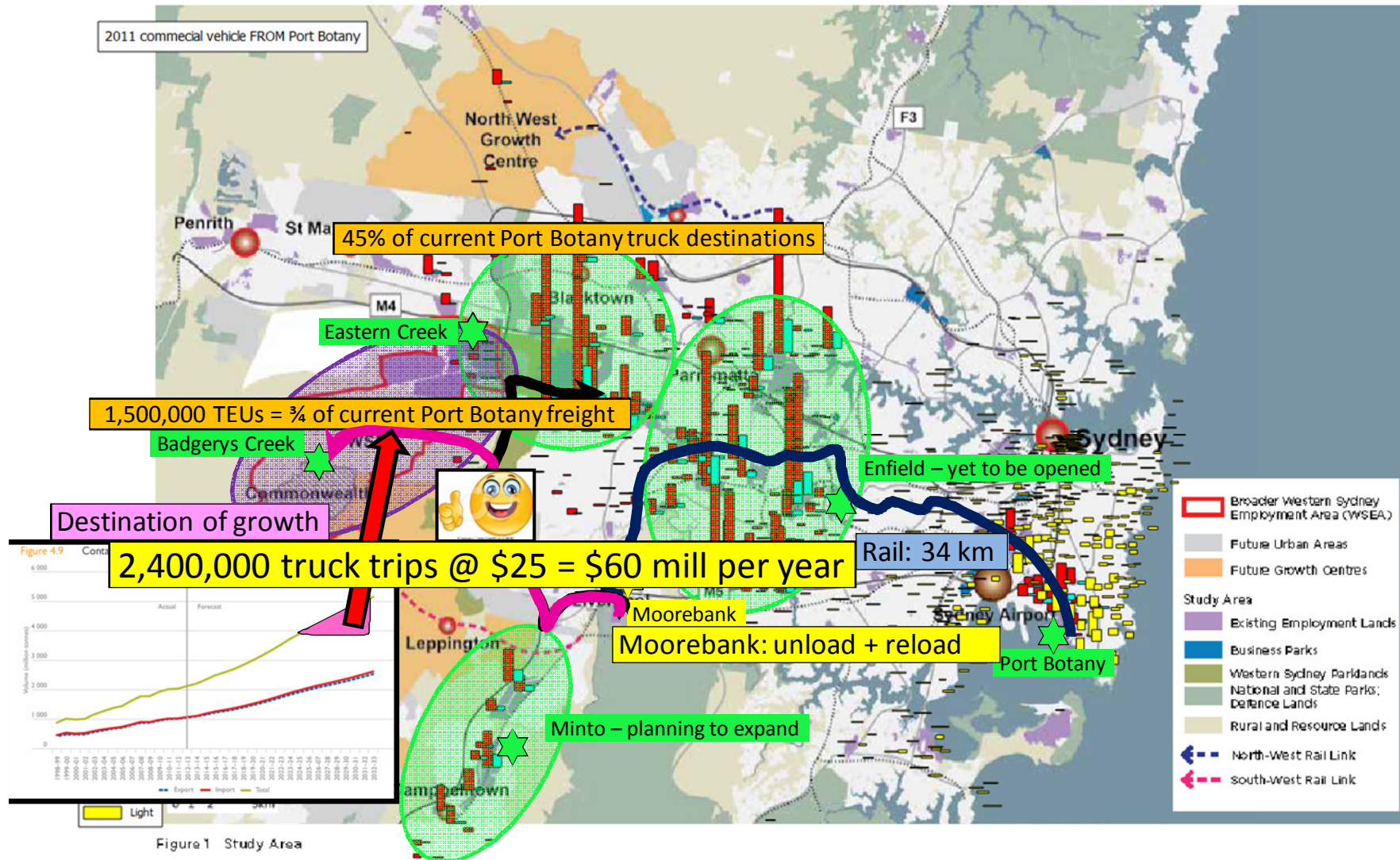
Port Botany

Port Kembla

- Artics
- Rigids
- Light

Moorebank does not serve the freight market

Existing truck movements for Import Customers (from Port Botany) overlaid on the Draft Broader Sydney Employment Area Structure Plan



- Sydney is growing
- Growth in Port Botany TEUs
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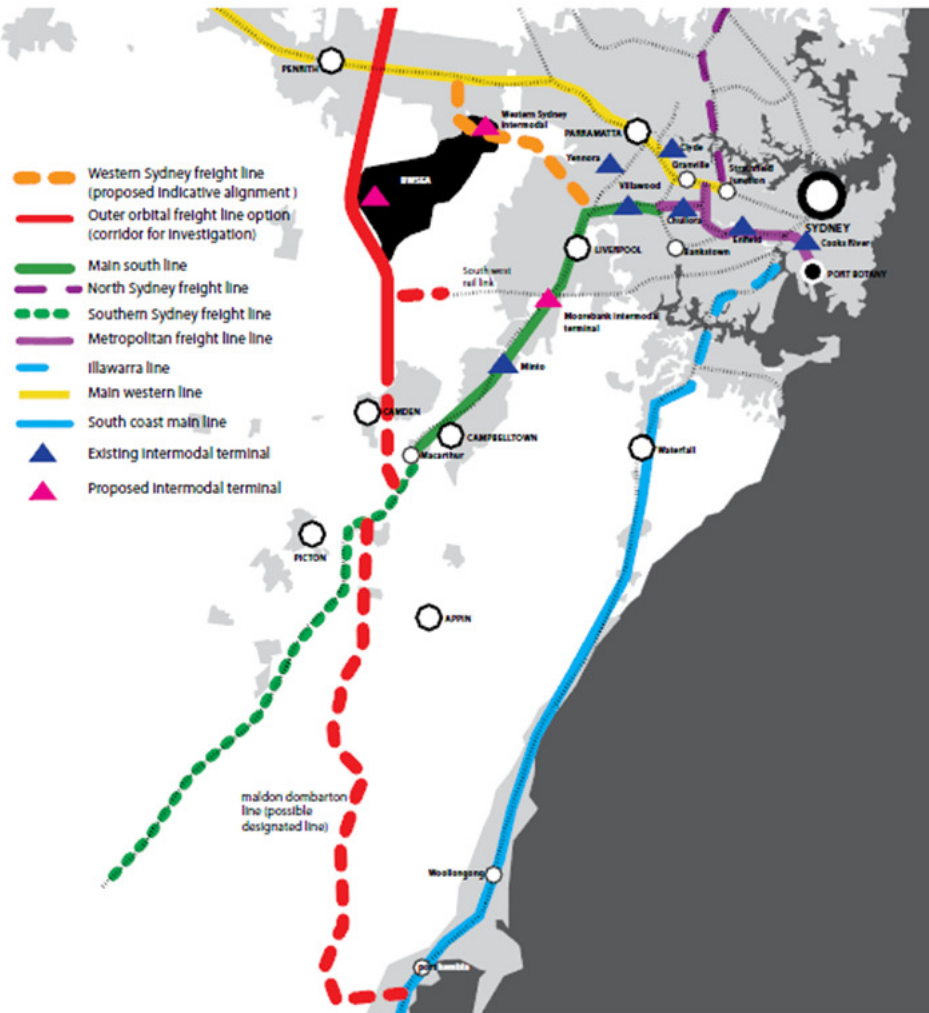
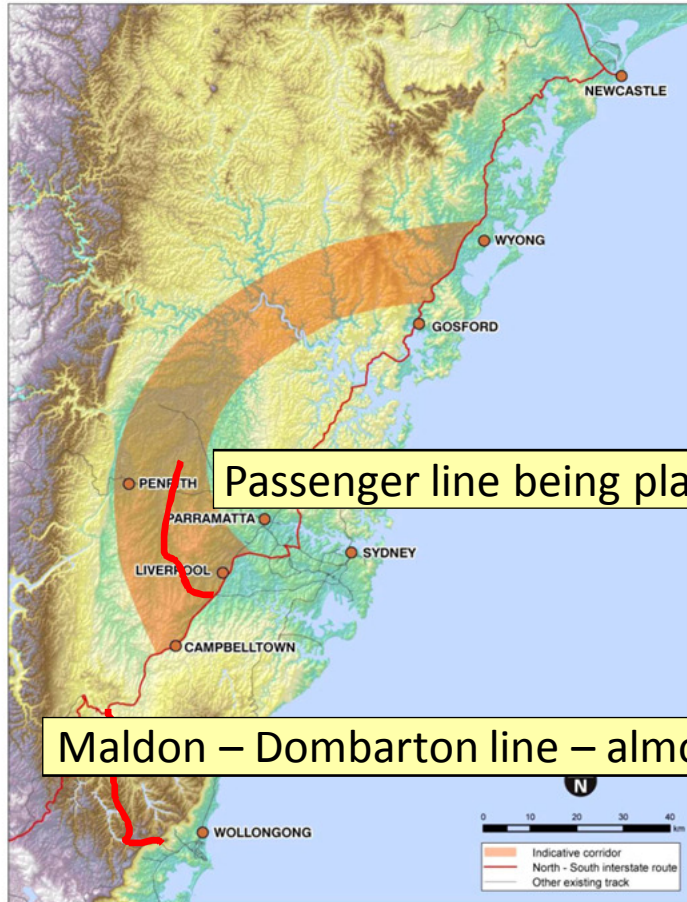


Figure 28 Potential freight and passenger rail network (source: GHD)

Port Kembla

Figure 10: Indicative corridor for a Sydney rail bypass



Passenger line being planned

Maldon – Dombarton line – almost completd – stopped – now starting again

The concept of constructing a rail bypass around Sydney is therefore a long-term proposition. It needs to include a link to the metropolitan freight network and would require detailed alignment analysis, environmental impact assessment and route acquisition prior to commencement of construction. In order to be of benefit the entire project would have to be completed in one stage and would need to have a dedicated connection to an extended metropolitan freight network. Whilst it is premature to estimate the possible cost, it could be expected to run into many

2011 commercial vehicle FROM Port Botany

Badgerys Creek (Southern Intermodal)

Eastern Creek

Passenger line being planned

Airport

Transport, movement and access

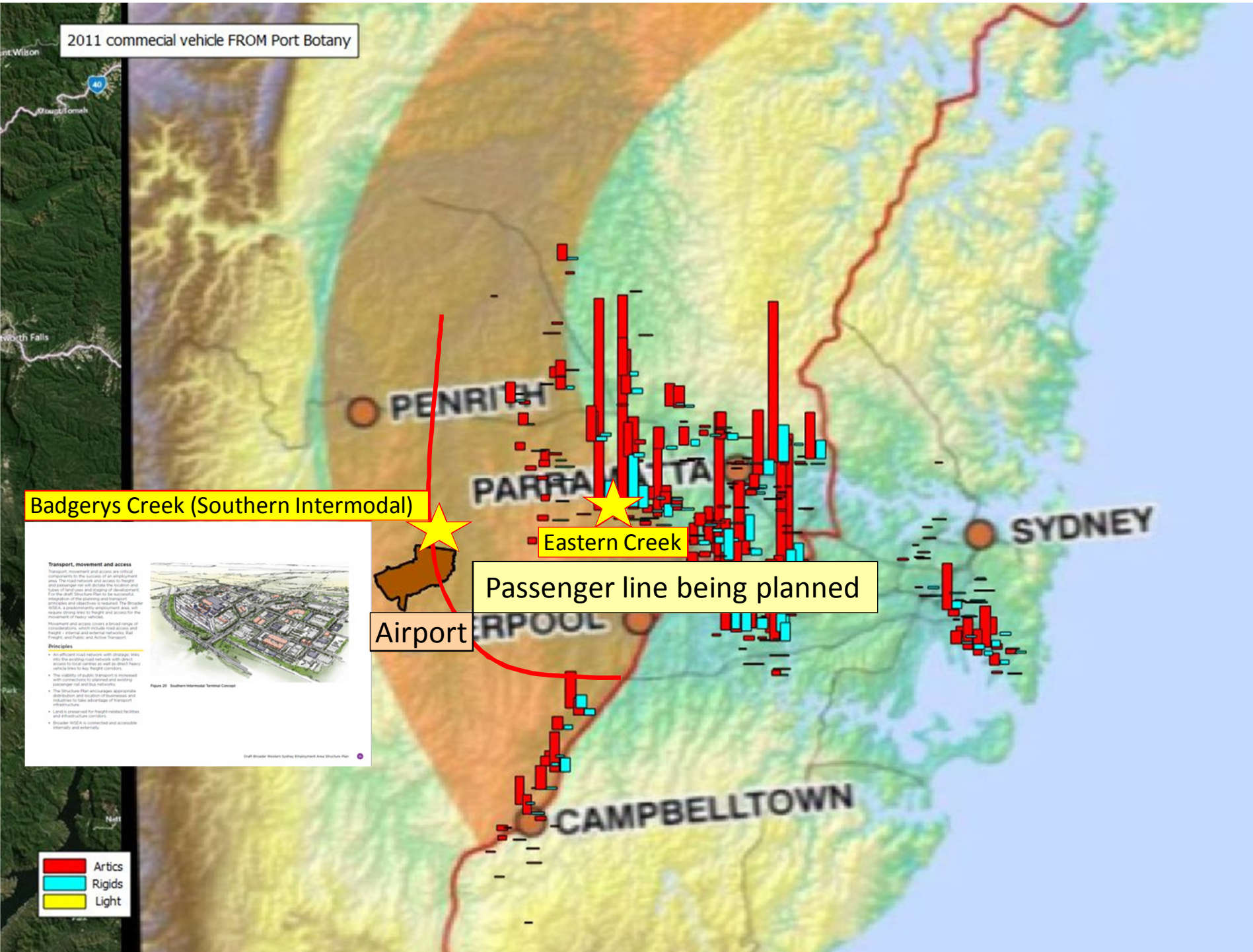
Transport, movement and access are critical components to the success of an employment area. The road network and access to freight and passenger rail will dictate the location and types of land uses and capacity of development. It is the responsibility of the planning and transport agencies and objectives to be met. The Greater WSE is a development area, which will require strong links to freight and access for the movement of heavy vehicles.

- Principles**
- An efficient road network with strategic links into the existing road network, with direct access to local centres as well as direct heavy vehicle links to key freight corridors.
 - The quality of public transport is improved with connections to planned and existing passenger rail and bus networks.
 - The Structure Plan encourages appropriate distribution and location of business and industries to take advantage of transport infrastructure.
 - Land is prepared for freight-related facilities and infrastructure corridors.
 - Greater WSE is connected and accessible internally and externally.

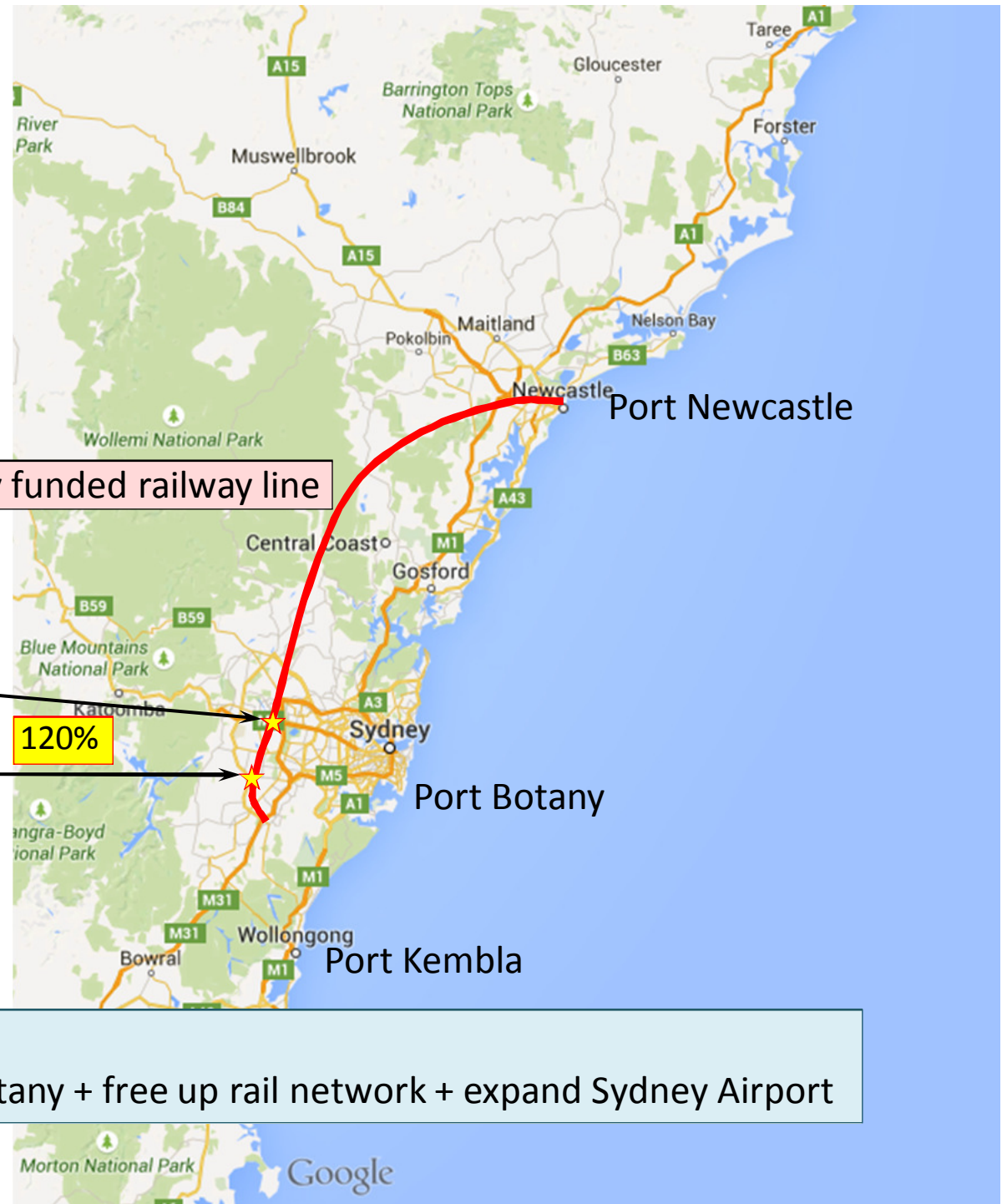


Figure 20 Southern Intermodal Terminal Complex

Draft Greater Western Sydney Employment Area Structure Plan



Greg Cameron



Privately funded railway line

Eastern Creek
45% of current Port Botany freight

Badgerys Creek (Southern Intermodal)
75% of current Port Botany freight (expected)

120%

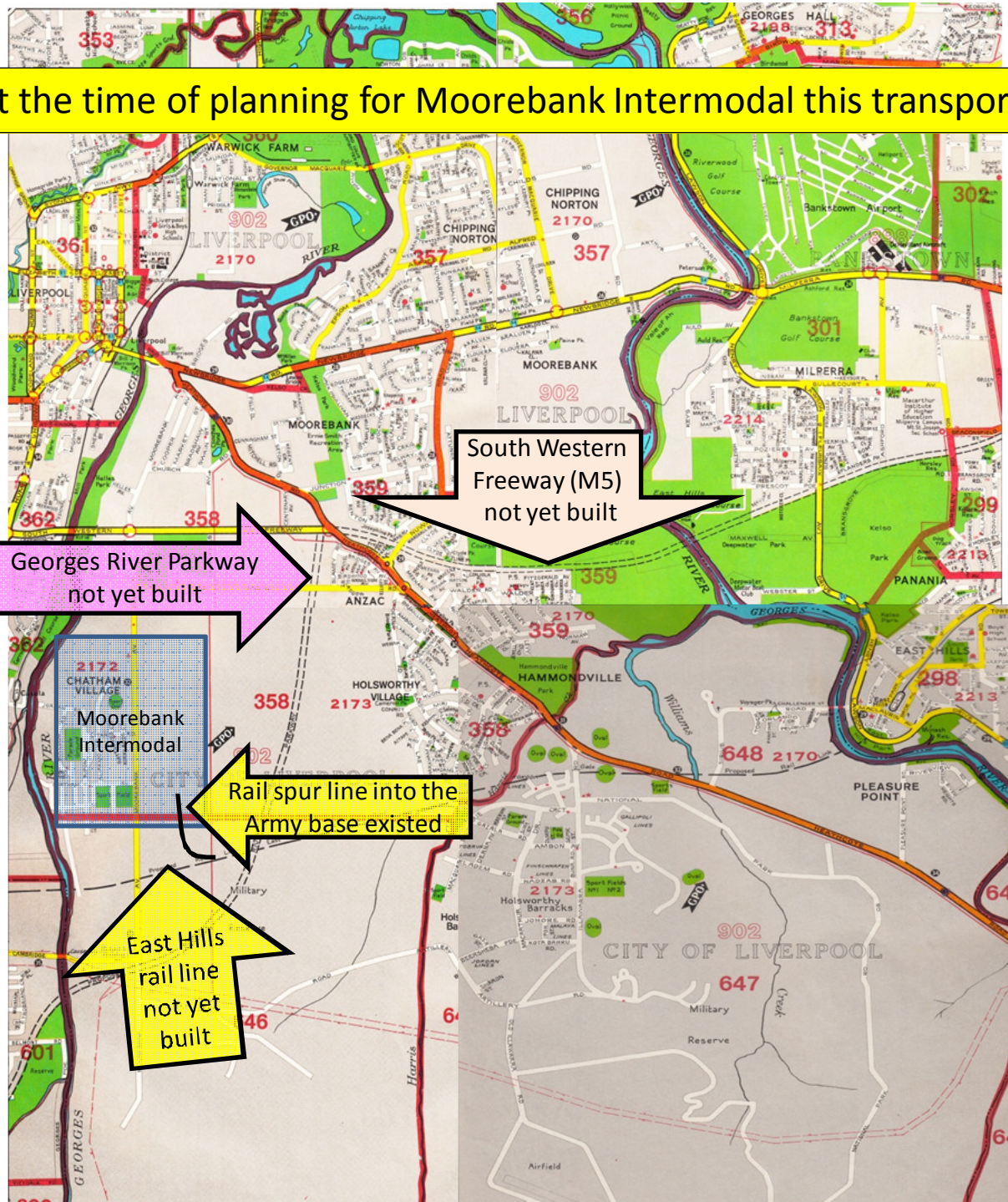
If rail infrastructure is in place

Do the next step: – close Port Botany + free up rail network + expand Sydney Airport

- Sydney is growing
- Growth in Port Botany TEUs
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- Future freight market
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- **Why Moorebank is a bad idea**

At the time of planning for Moorebank Intermodal this transport map was available

Late: 1970's



South Western Freeway (M5) not yet built

Georges River Parkway not yet built

Moorebank Intermodal

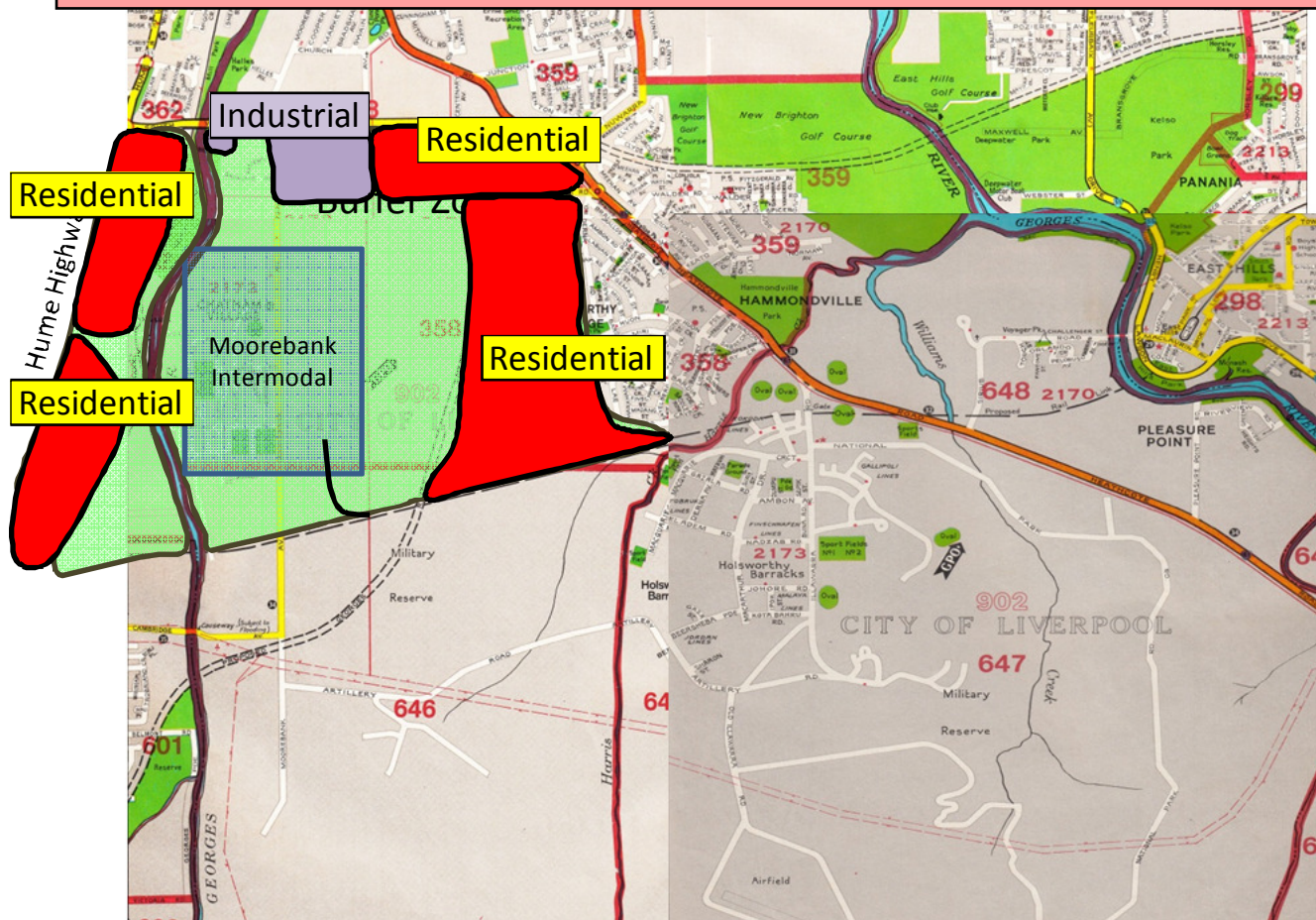
Rail spur line into the Army base existed

East Hills rail line not yet built

At the time of planning for Moorebank Intermodals this transport map was available

In the original plan, there was a large buffer zone surrounding the Intermodal on both sides of Georges River

In 2002 Federal Government sold part of this Army land for residential purposes. Now Wattle Grove has a shopping centre and a lake with many young families.





Liverpoolcitycouncil
creating our future together

LIVERPOOL CITY COUNCIL

DEVELOPMENT CONTROL PLAN NO. 49

AMIENS, YULONG and DNSDC sites
Moorebank International Technology Park
MOOREBANK AVENUE, MOOREBANK

June 6 2003

Moorebank International Technology Park

3.5 Building form and height



Objectives

- To allow for buildings for employment and industrial purposes which are suitable for their intended use;
- To promote a high standard of urban design;
- To encourage higher buildings fronting key roads, including Moorebank Avenue and Anzac Road;
- To ensure that the buildings make a positive visual contribution to the streetscape;
- To encourage buildings which incorporate vertical elements to achieve good visual exposure;
- To enable buildings which incorporate interesting and well-designed vertical elements including lift towers, structures to contain signage, roof forms, and integrated vents and plant rooms as part of the structure;
- To ensure compatibility with any adjoining residential areas.






Controls

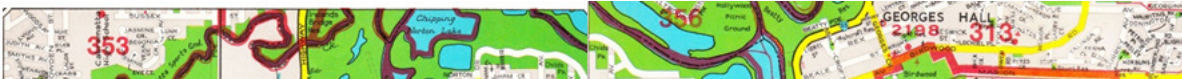
- Building heights in corner locations and gateway sites is generally limited to 30m, excluding external framework elements;
- In other locations the maximum permissible building height is generally limited to 15m.

BUILDING FORM

| | |
|---|--|
|  |  |
| <p>The form of buildings should express modern industrial character and quality of design and materials</p> | <p>The proximity of the Amiens, Yulong & DNSDC sites enables high levels of exposure of new buildings to the M5, emphasising the need for high quality design.</p> |

LANDSCAPING

| | |
|---|--|
|  |  |
| <p>Well-designed landscape providing a high quality entry statement</p> | <p>Example of feature lake providing a parklike setting</p> |
|  |  |
| <p>Example of threshold paving to identify entries</p> | <p>Access road incorporates tree planting, lighting and feature native grass understorey</p> |
|  | |
| <p>Example of a detailed entry treatment</p> | |

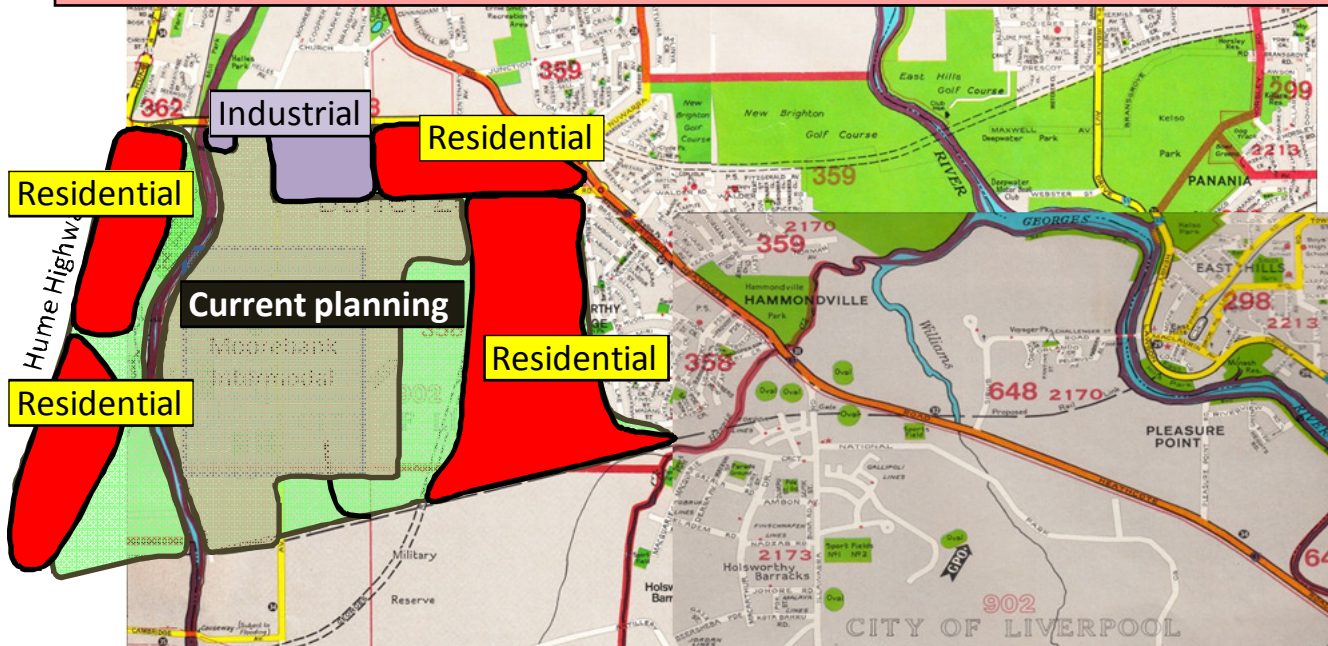


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In the original plan, there was a large buffer zone surrounding the Intermodal on both sides of Georges River

In 2002 Federal Government sold part of this Army land for residential purposes. Now Wattle Grove has a shopping centre and a lake with many young families.

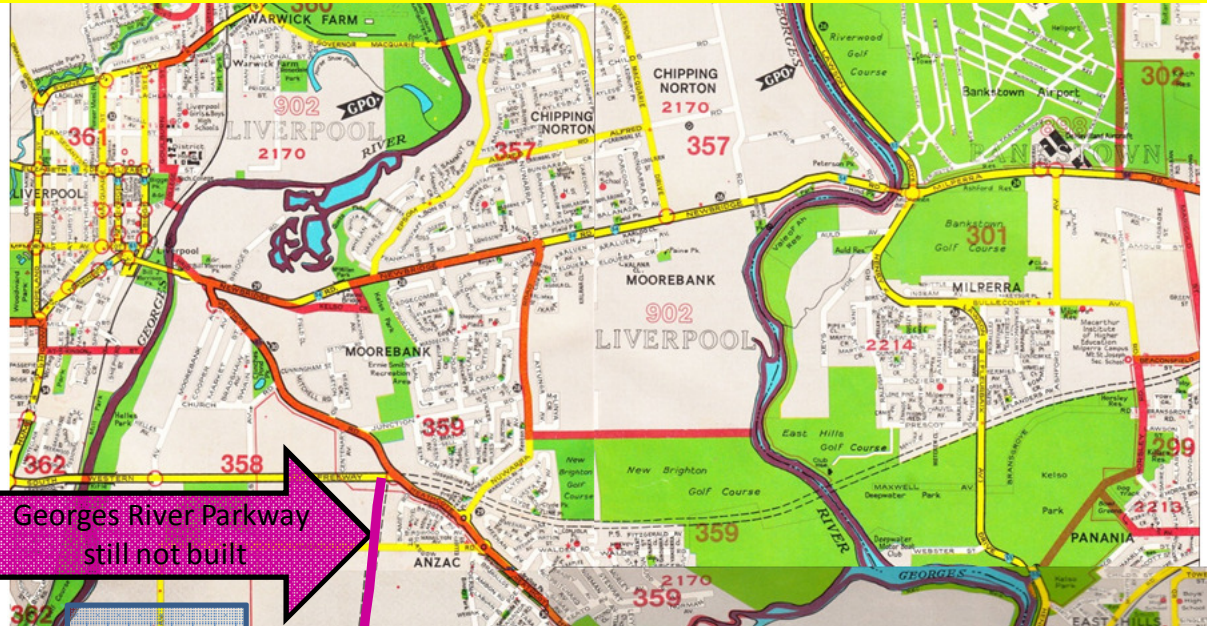


Nearest houses are close to the boundary: Wattle Grove: 230 m (Delfin Dr) Casula: 280 m (Rushton Pl, Buckland Rd, St Andrews Blvd, Lakewood Cres).

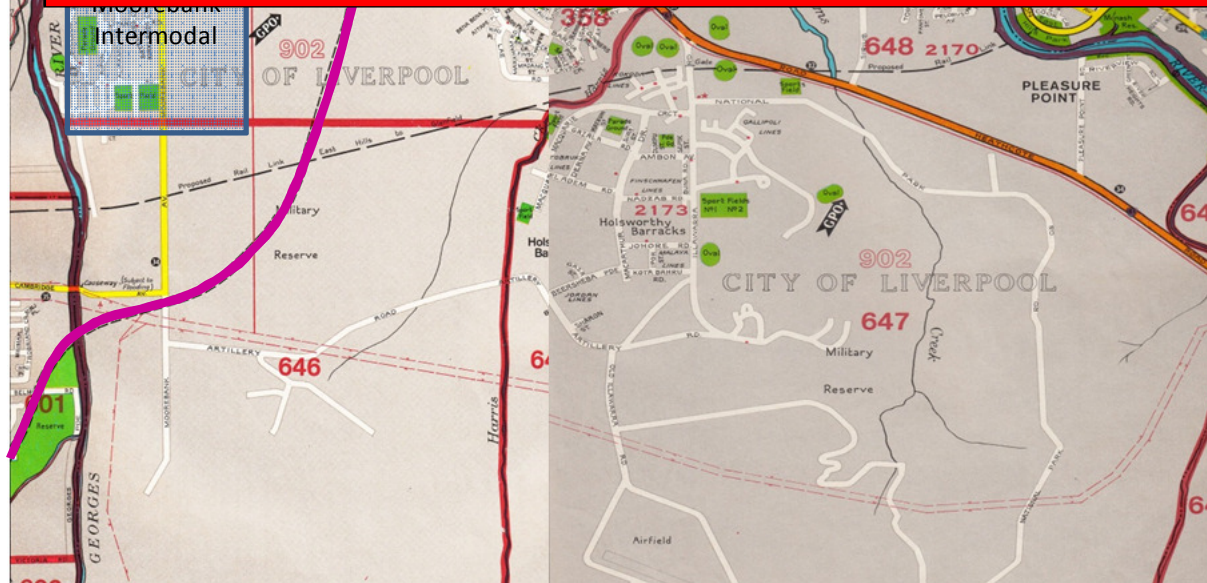
Trains squeal! Newspaper articles refer to noise 3km from Port Botany.

Almost 20 years ago, the Sydney Airport Noise Amelioration Program cost \$300 million

At the time of planning for Moorebank Intermodals this transport map was available



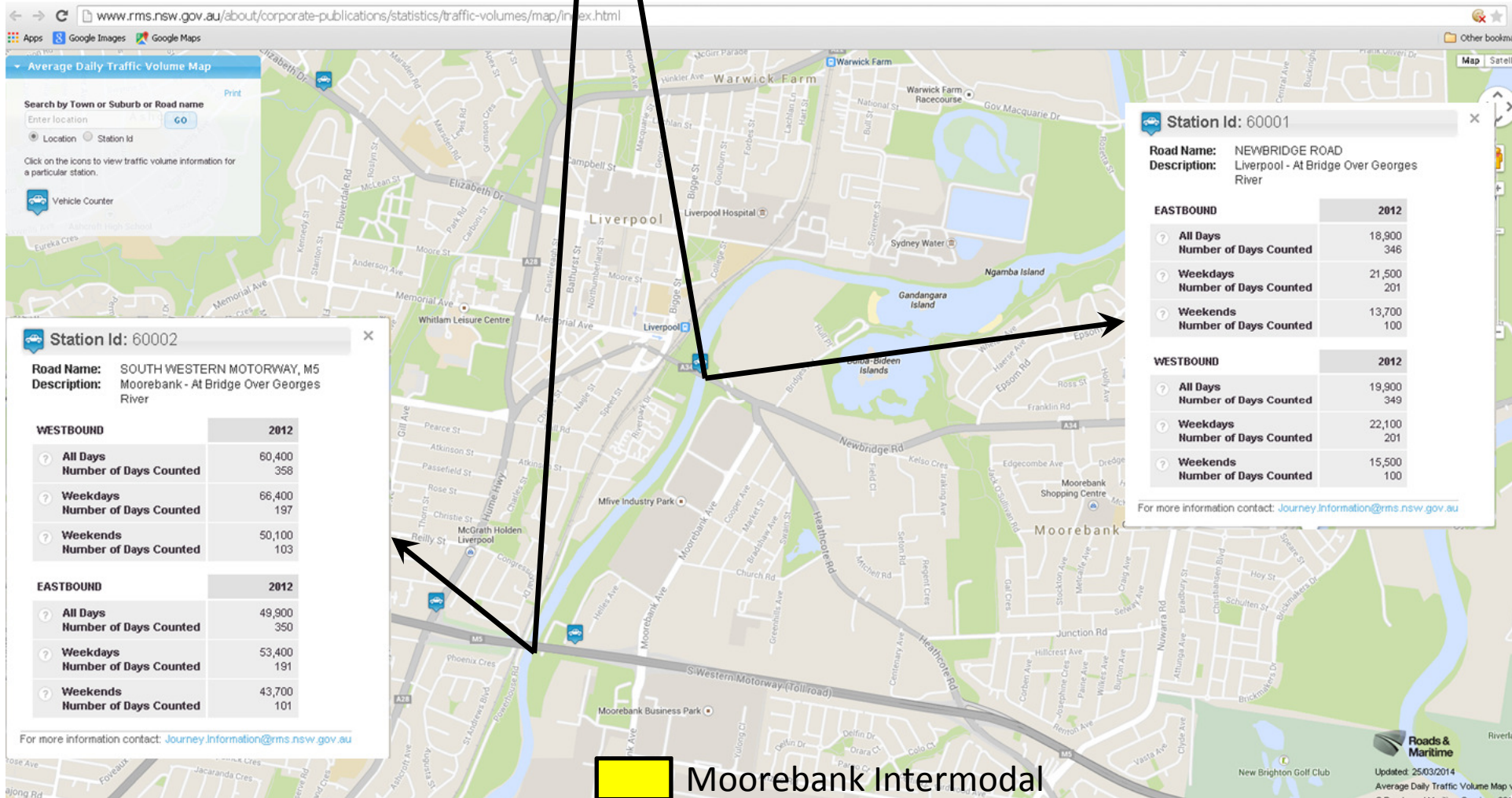
Because this link has not been built, Liverpool has serious traffic congestion issues





M5 Bridge: 110,300
 Light Horse Bridge: 38,800
Total: 149,100

Sydney Harbour Bridge: 160,000



CASE STUDY 13: SUPPORTING THE DEVELOPMENT OF THE MOOREBANK INTERMODAL PRECINCT

The Moorebank precinct has been identified by the Commonwealth and NSW Governments as a key strategic location to increase intermodal capacity. Two intermodal terminals are planned in the precinct; the Moorebank Intermodal Terminal (MIT) has been proposed by the Commonwealth Government for the western side of the precinct, and a privately funded Sydney Intermodal Terminal Alliance (SIMTA) has been proposed for the eastern side. Once complete, these two IMTs are expected to result in up to two million TEU of intermodal terminal capacity.

TfNSW expect the development of these two intermodal terminals in the Moorebank precinct to place significant strain on the surrounding local road network. While not all effects of terminal developments have been identified at this time, initial analysis suggests the following impacts to the local road network:

- Travel demand on the section of the M5 Motorway between the Hume Highway at Casula and Moorebank Ave is expected to exceed capacity as early as 2016.
- The absence of west facing ramps from the M5 to the Hume Highway results in a significant number of vehicles using Moorebank Avenue to access the Liverpool CBD.
- By 2026 growth in background traffic will result in peak spreading and traffic conditions similar to the existing peak period in the Liverpool area and on the M5, persisting for most of the day.
- Key intersections providing access to the Moorebank intermodal precinct will exceed capacity with volumes, especially of turning vehicles, resulting in extensive delays, with queuing sufficient to disrupt through movement.

To support the development of the Moorebank intermodal terminals and meet the challenges posed by impact on the local road network, TfNSW is seeking to provide road network upgrades. The specific goals of these upgrades include:

- Providing additional capacity and traffic reliability on key routes accessing the precinct.
- Ensuring full access to the precinct for High Productivity Vehicles (HPV), including Higher Mass Limit (HML) vehicles.
- Managing the needs of the precinct in terms of road access while addressing negative externalities for the surrounding community and environment.

TfNSW has prepared a Nation Building 2 submission to undertake modelling and economic analysis to determine the optimal road upgrade package to meet the needs of the developed Moorebank intermodal terminal precinct.

DRAFT NSW FREIGHT AND PORTS STRATEGY

November 2012



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DRAFT NSW FREIGHT AND PORTS STRATEGY

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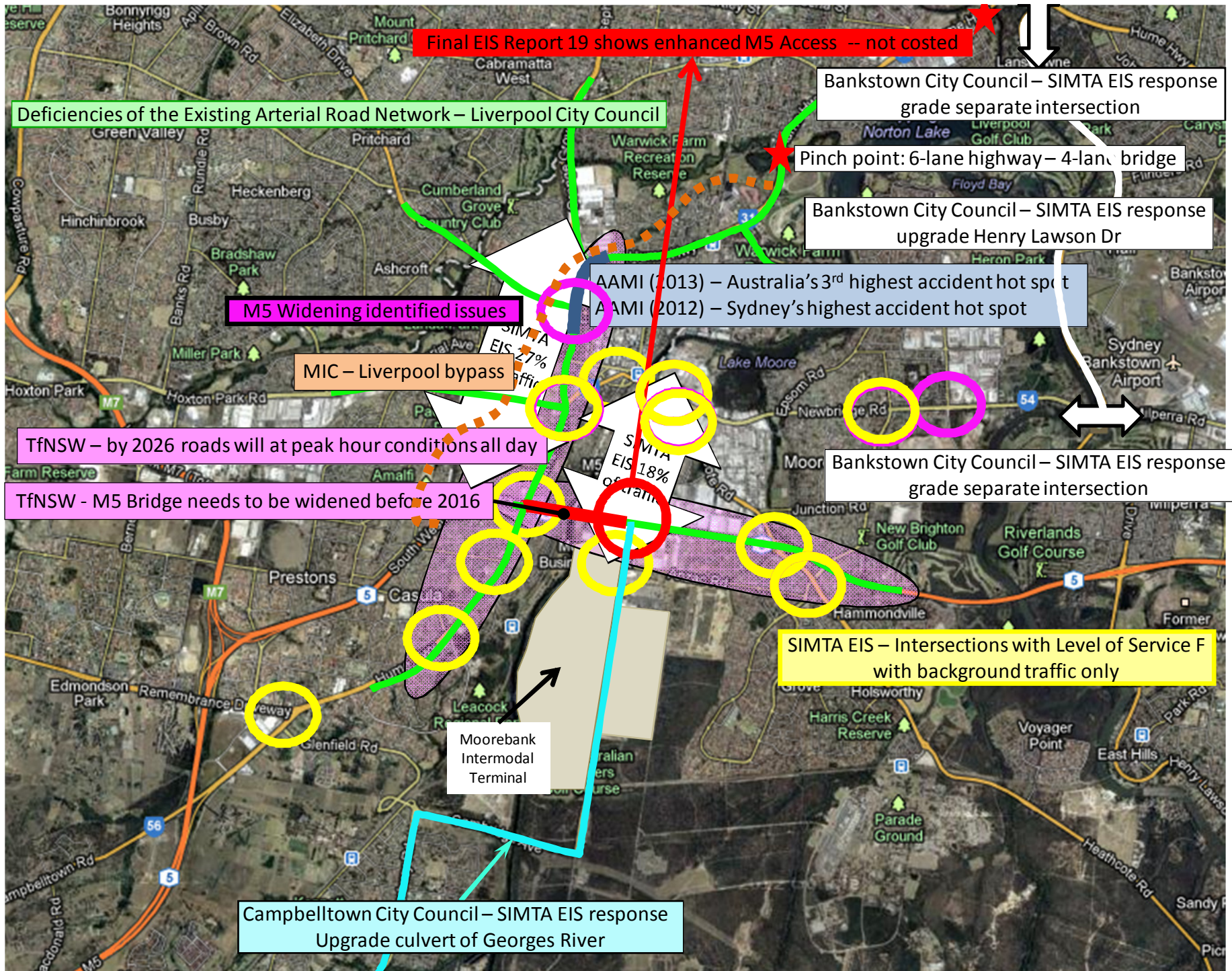


 Transport
for NSW

Liverpool Roads Require Updating

Necessary upgrades identified by

- Liverpool council
- Bankstown council
- Campbelltown council
- TfNSW
- M5 Widening
- SIMTA's report itself



From these organisations it can be seen that there are 34 locations which require attention. Many of these are updates on bridges.

Table ES1 Summary Table of Moorebank Intermodal Road Works Implementation Costs

| Sites Requiring Upgrade | Identifying agent | Cost |
|--|---|---|
| Bridges – not in any order | | |
| (1) Newbridge Rd Bridge over the Georges Rd needs to be upgraded by 2016 | TfNSW ⁽⁵⁾ | Unknown |
| (2) Cambridge Av Bridge over Georges River See Figure A4 1 in Appendix 4 | Campbelltown City Council ⁽⁸⁾ | \$29-\$39 million (2008) ⁽⁹⁾ |
| (3) Hume Highway Bridge over Cabramatta Creek: Hume Highway is a 6-lane highway and the bridge is 4-lanes. See Figure A4 12 in Appendix 4 | Google Maps | Unknown |
| (4) Hume Highway Bridge over Prospect Creek: Hume Highway is a 6-lane highway and the bridge is 4-lanes. See Figure A4 13 in Appendix 4 | Google Maps | Unknown |
| Road links – not in any order | | |
| (5) Moorebank Av upgrade to 4 lanes | Federal Government Department of Finance ⁽³⁾ | Cost brought forward 15 years |
| (6) Improved M5 access | SIMTA ⁽¹⁰⁾ - MIC ⁽¹¹⁾ | Unknown |
| (7) Weaving issue on M5 Georges River Bridge See Figure A4 14 in Appendix 4 | SIMTA ⁽¹⁰⁾ - MIC ⁽¹¹⁾ | Unknown |

| | | |
|---|---|----------------|
| <p>(8) New Glenfield Rd overpass See Figure A4 15 in Appendix 4</p> | <p>MIC ⁽¹¹⁾</p> | <p>Unknown</p> |
| <p>(9) New Liverpool CBD bypass See Figure A4 16 in Appendix 4</p> | <p>MIC ⁽¹¹⁾</p> | <p>Unknown</p> |
| <p>(10) Dealing with Australia's 3rd worst accident hot spot</p> | <p>AAMI ⁽¹²⁾</p> | <p>Unknown</p> |
| <p>(11) Dealing with Macquarie St (Terminus St) which carries the regional east-west traffic through the Liverpool CBD. Travel speed 18km/hr, sign-posted speed 60km/hr (Survey 2010) See Figure A4 17 in Appendix 4</p> | <p>M5 Widening ⁽¹³⁾</p> | <p>Unknown</p> |
| <p>(12) Dealing with Bigge St – Terminus St, which is likely to experience an increase of rat-running traffic because of the additional congestion on the Hume Highway (Copeland St). Other streets such as Bathurst St may similarly be impacted. See Figure A4 18 in Appendix 4</p> | <p>Authors of this report</p> | <p>Unknown</p> |
| <p>(13) Governor Macquarie Dr is likely to experience an increase of both truck and car traffic because of rat-running due to the congestion of the Hume Highway. See Figure A4 19 in Appendix 4</p> | <p>Authors of this report</p> | <p>Unknown</p> |
| <p>(14) Henry Lawson Dr between Milperra Rd and Hume Highway needs upgrading. See Figure A4 110 in Appendix 4</p> | <p>Bankstown City Council ⁽¹⁴⁾ - M5 Widening ⁽¹³⁾</p> | <p>Unknown</p> |

| | | |
|---|---|---------|
| (15) Nuwarra Rd – between Heathcote Rd and Newbridge Rd See Figure A4 111 in Appendix 4 | Community | Unknown |
| (16) Glenfield to M5 Motorway link - trucks may block this path. See Figure A4 112 in Appendix 4 | Campbelltown City Council ⁽¹⁵⁾ | Unknown |
| (17) Traffic on Anzac Pde has recently increased very significantly. It is a parallel path to the congested M5. See Figure A4 113 in Appendix 4 | Community | Unknown |
| Intersections – not in any order | | |
| (18) <u>Intersection: Hume Highway – Hoxton Park Rd – Macquarie St.</u> See Figure A4 14 in Appendix 4 | Liverpool ⁽¹⁷⁾ – M5 Widening ⁽¹³⁾ – SIMTA ⁽¹⁶⁾ | Unknown |
| (19) <u>Intersection: Hume Highway – Henry Lawson Dr – Woodville Rd.</u> See Figure A4 15 in Appendix 4 | Bankstown City Council ⁽¹⁴⁾ | Unknown |
| (20) Intersection: Newbridge Rd – Henry Lawson Dr See Figure A4 16 in Appendix 4 | Bankstown City Council ⁽¹⁴⁾ | Unknown |
| (21) Intersection: Newbridge Rd – Moorebank Av See Figure A4 17, and Figure A7 18 in Appendix 4 | Liverpool ⁽¹⁷⁾ – SIMTA ⁽¹⁶⁾ – M5 Widening ⁽¹³⁾ | Unknown |
| (22) Intersection: Moorebank Av – Heathcote Rd See Figure A4 17, and Figure A7 18 in Appendix 4 | Liverpool ⁽¹⁷⁾ – SIMTA ⁽¹⁶⁾ – M5 Widening ⁽¹³⁾ | Unknown |
| (23) Intersection: Newbridge Rd – Nuwarra Rd See Figure A4 18 in Appendix 4 | SIMTA ⁽¹⁶⁾ – M5 Widening ⁽¹³⁾ | Unknown |

| | | |
|---|---|---------|
| (24) Intersection: M5 access – Heathcote Rd | SIMTA ⁽¹⁶⁾ | Unknown |
| (25) Intersection: Hume Highway – Camden Valley Way | SIMTA ⁽¹⁶⁾ | Unknown |
| (26) Intersection: Hume Highway – Kurrajong Rd | SIMTA ⁽¹⁶⁾ | Unknown |
| (27) Intersection: Hume Highway – De Meyrick Av | SIMTA ⁽¹⁶⁾ | Unknown |
| (28) Intersection: Hume Highway – Elizabeth Dr | Liverpool ⁽¹⁷⁾ – M5 Widening ⁽¹³⁾ | Unknown |
| (29) Intersection: Hume Highway – Cumberland Highway | Liverpool ⁽¹⁷⁾ | Unknown |
| (30) Intersection: Hume Highway – Governor Macquarie Dr | Liverpool ⁽¹⁷⁾ | Unknown |
| (31) Intersection: Newbridge Rd – Speed St | SIMTA ⁽¹⁶⁾ | Unknown |
| (32) Intersection: Moorebank Av – Anzac Rd | SIMTA ⁽¹⁶⁾ | Unknown |
| (33) Intersection: Nuwarra Rd – Heathcote Rd | SIMTA ⁽¹⁶⁾ – M5 Widening ⁽¹³⁾ | Unknown |
| (34) Intersection: Newbridge Rd – Governor Macquarie Dr | M5 Widening ⁽¹³⁾ | Unknown |

Abbreviations:

Liverpool = Liverpool City Council

M5 Widening = M5 West Widening Traffic Report

MIC = Moorebank Intermodal Company – “under consideration”

SIMTA = SIMTA EIS

TfNSW = Transport for NSW – Freight and Ports Strategy

Communications with NSW Government
Regarding Moorebank

Communication with NSW Government

NSW Government Planning officials

We questioned why SIMTA was approved

1. Future growth in background traffic has been ignored
2. The US Highway Capacity Manual (HCM) 2000 has been used instead of the 2010 HCM
3. Vehicles unable to get onto the network
4. The Hume Highway is stated to have 30% less traffic than it does
5. Poor understanding of basic modelling principles
6. Limited modelling area
7. No warehouse modelling
8. No induced traffic modelling

Communication with NSW Government

NSW Government Planning officials

We questioned why SIMTA was approved

Agreed this was the case

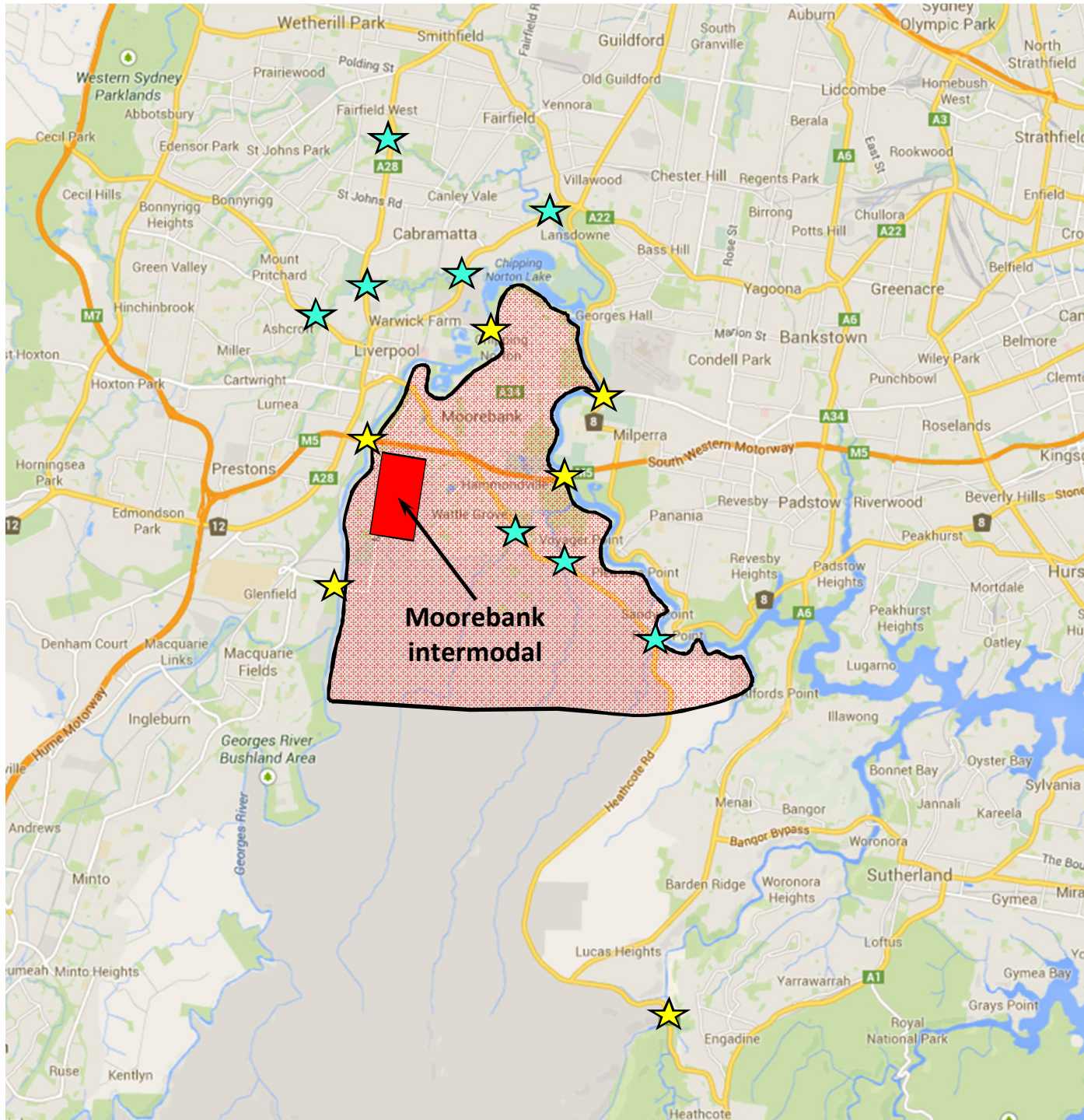
1. Future growth in background traffic has been ignored
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- Clarification of PAC decision:
 - 250,000 TEUs
 - 400,000 TEU warehousing
 - 250,000 TEUs after fixing up the roadsTotal 900,000 TEUs = 10% less than original plan

Communication with NSW Government

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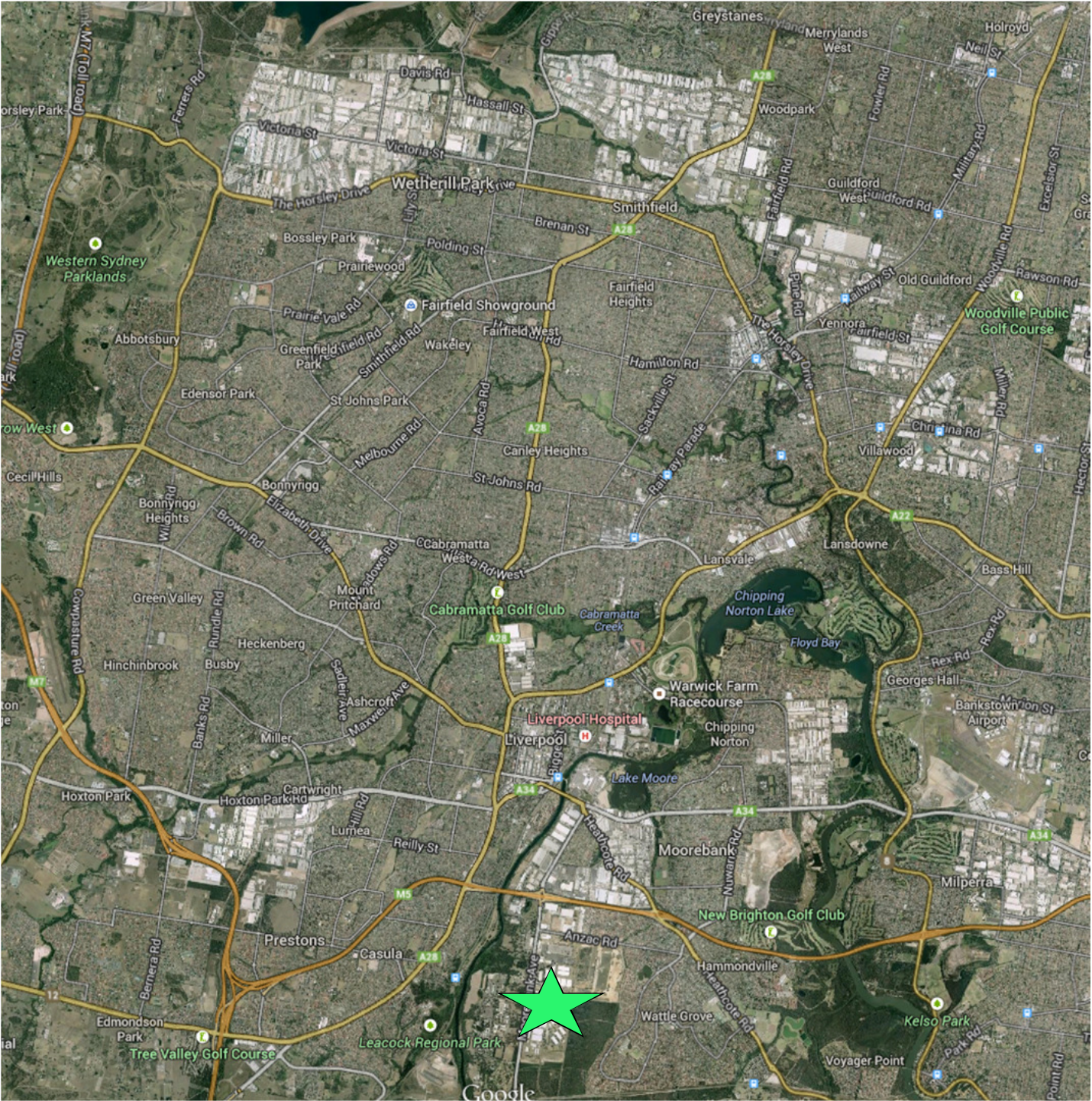
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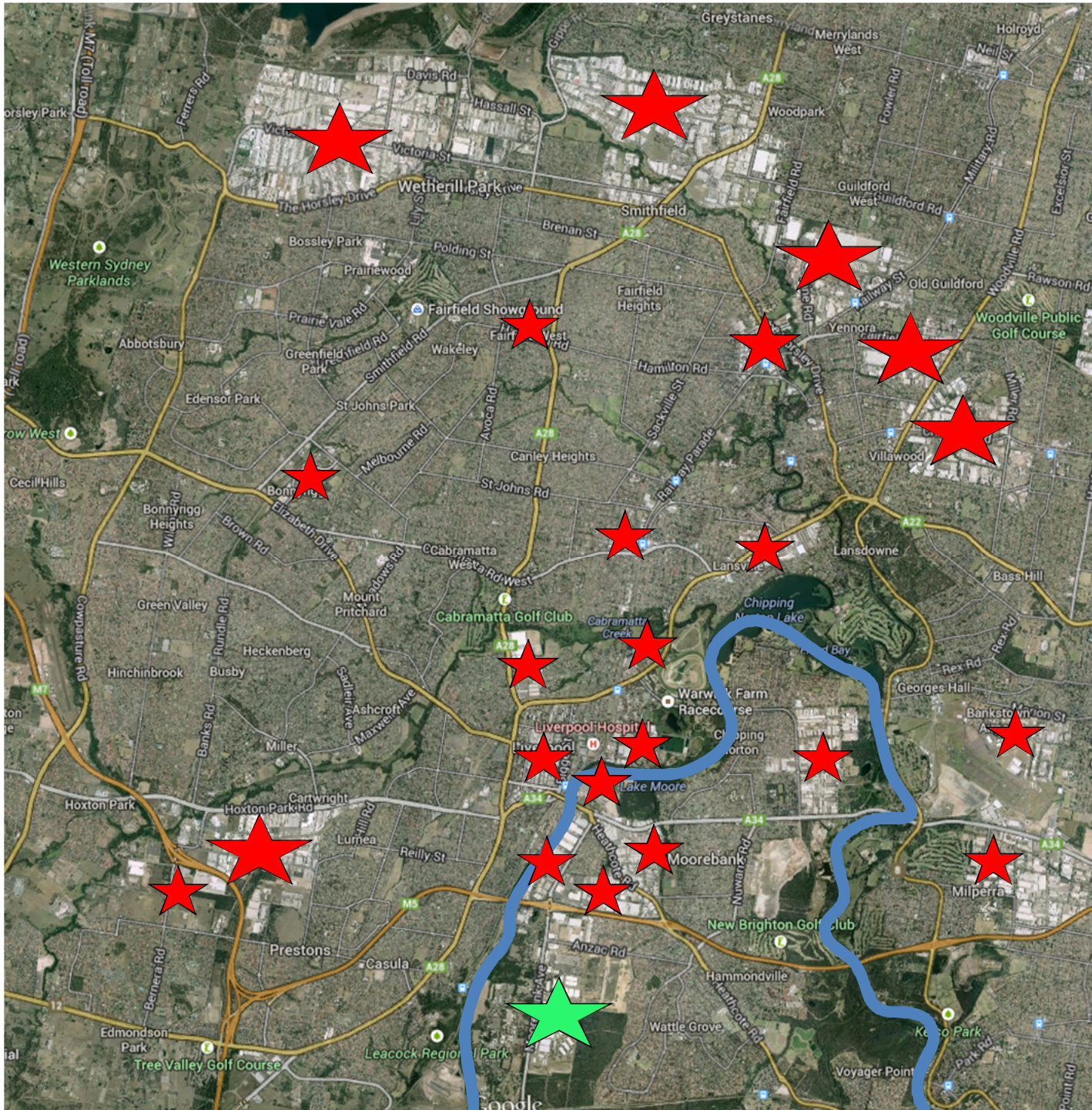


Having the intermodal on an island makes the infrastructure costs more expensive.

Can the government really afford to build the largest intermodal in the Southern Hemisphere on such a small island.

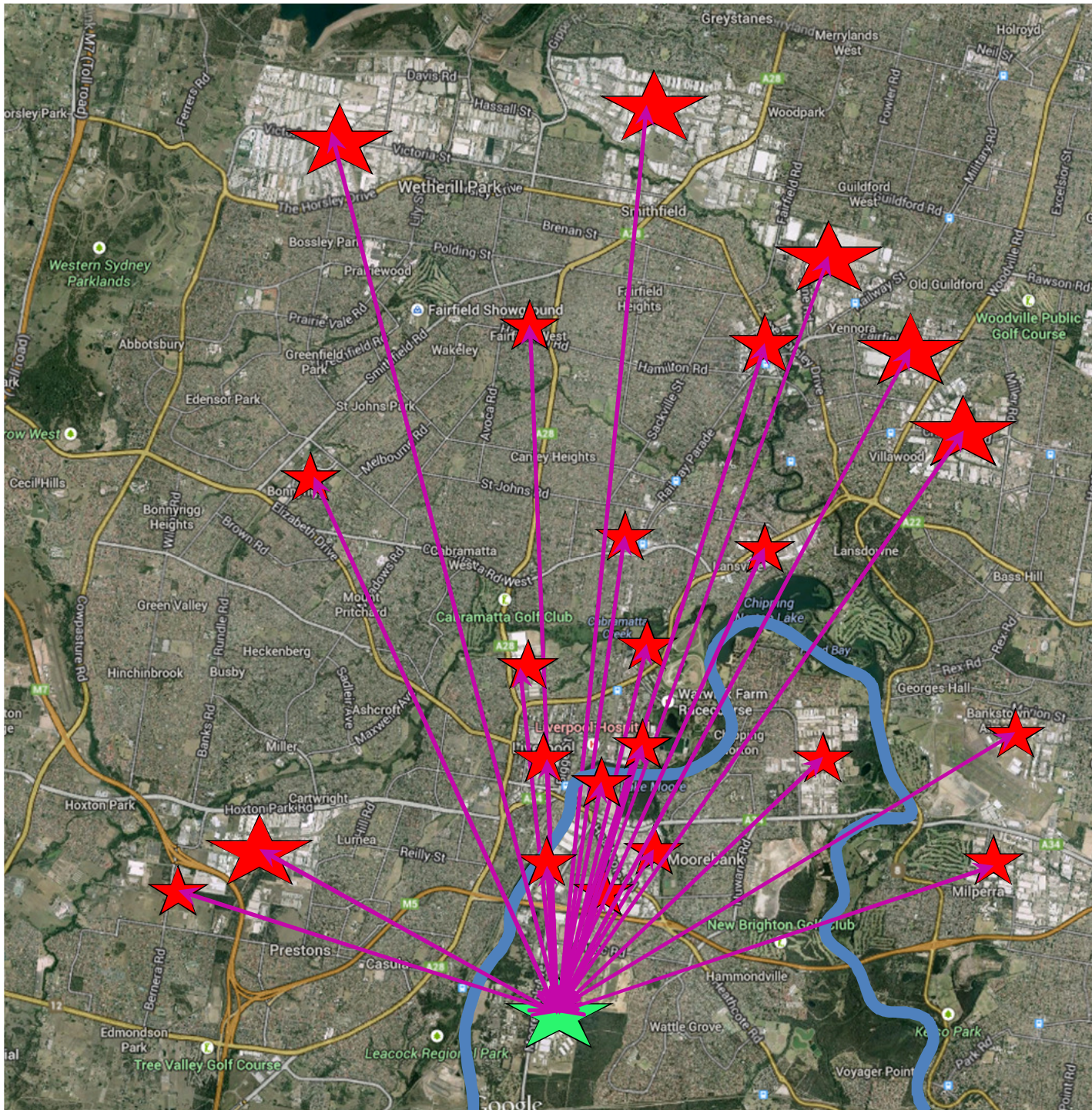
Moorebank Intermodal





A possible 1,250 Ha of industrial land that could be taken up for warehousing to feed the intermodal.

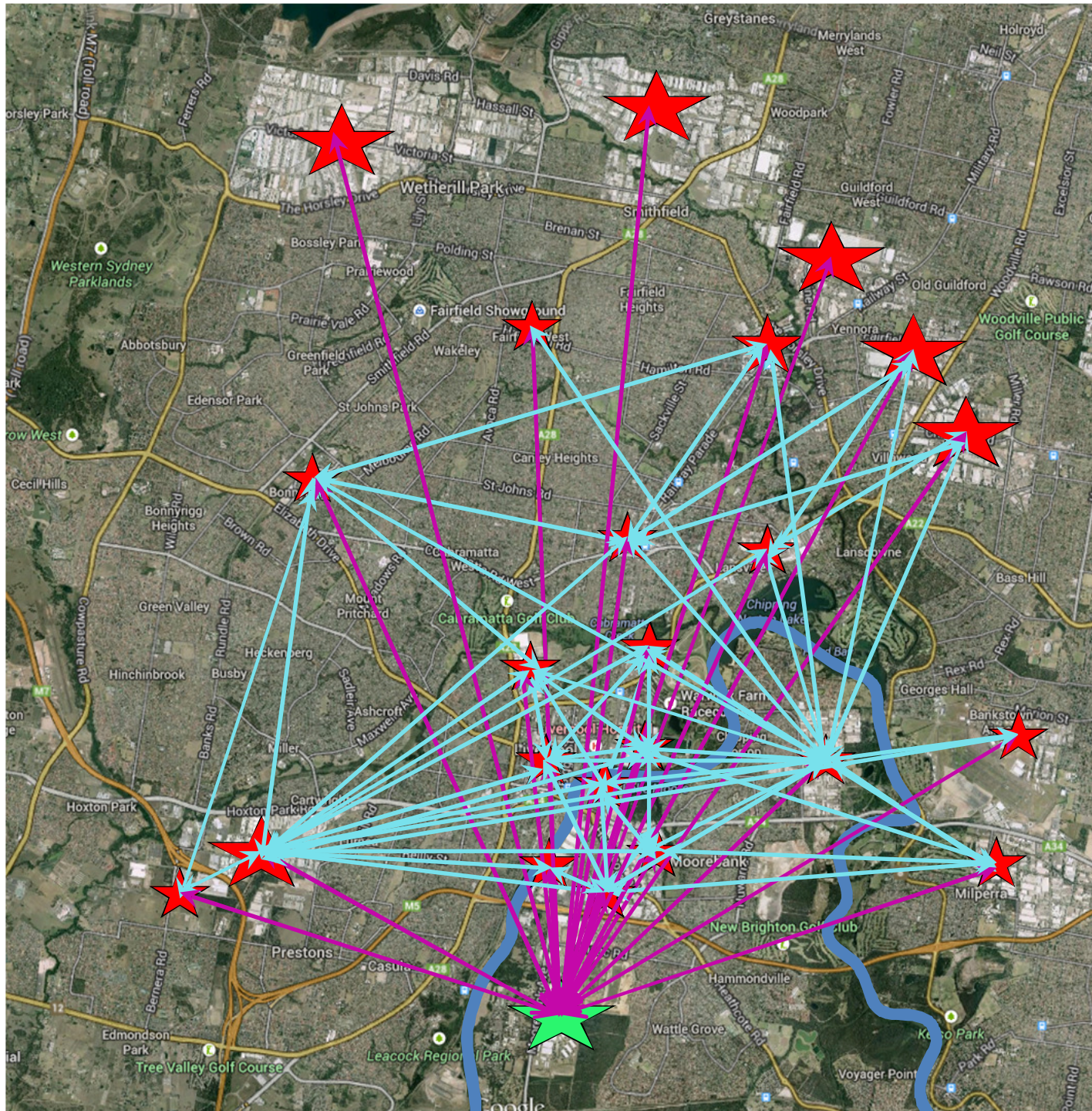
Most of this land is outside the island.



Traffic has not been studied reputedly.

The model used does not reflect what is happening on the ground.

The Director General Requirements implies that this traffic does not have to be studied.

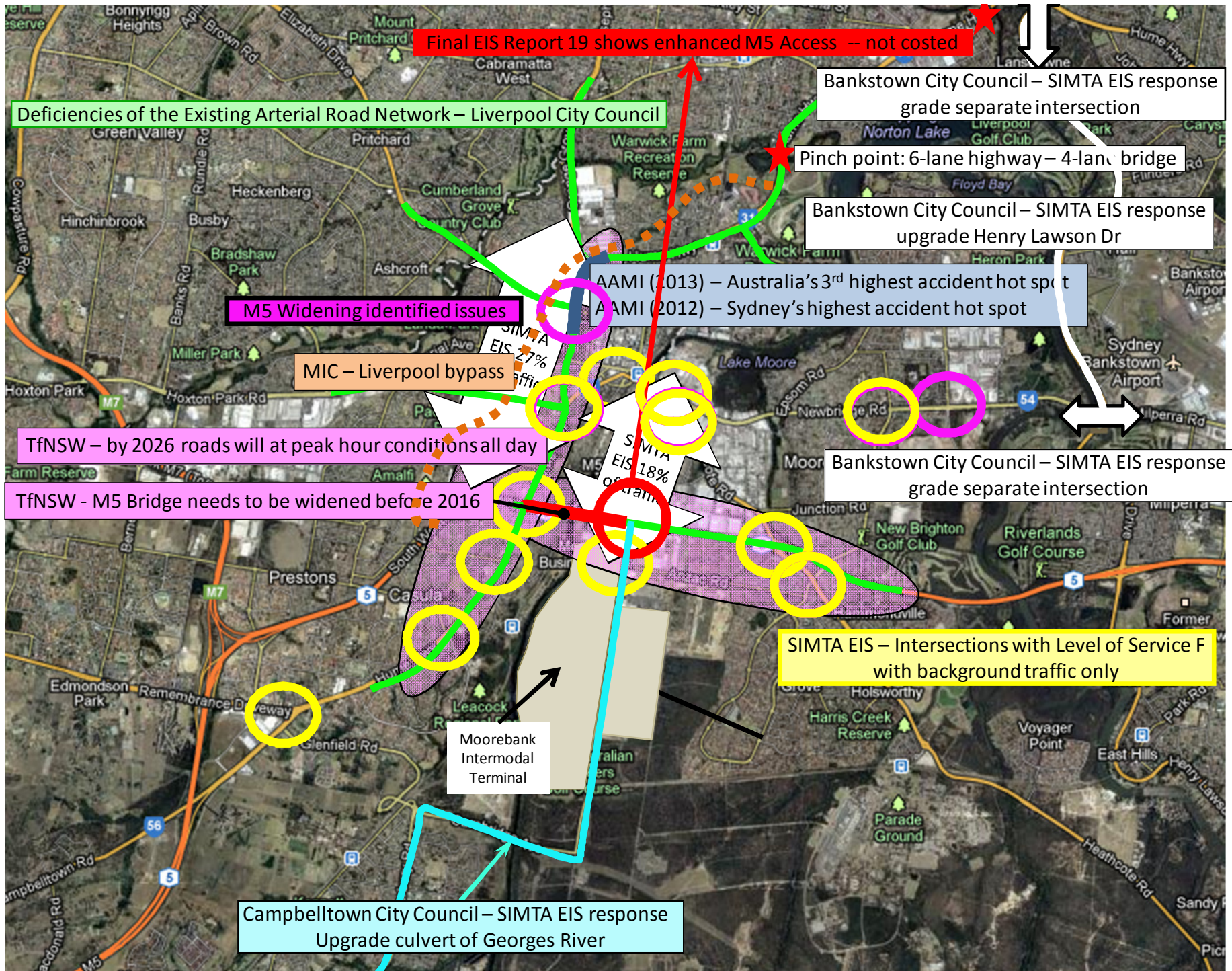


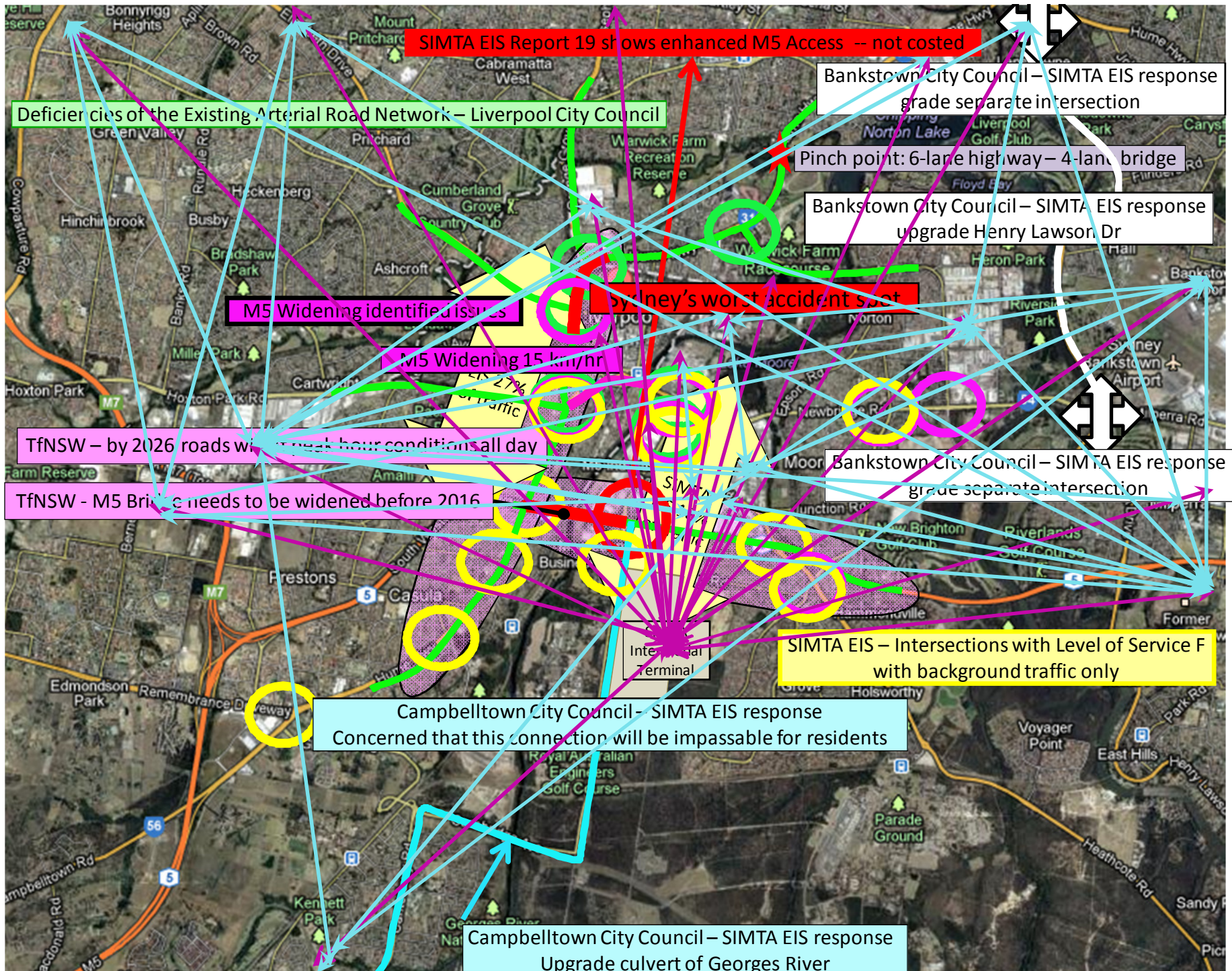
Induced traffic has been ignored in the response.

That is traffic that goes between the warehouses as a result of the intermodal.

A change in land use means a change in traffic.

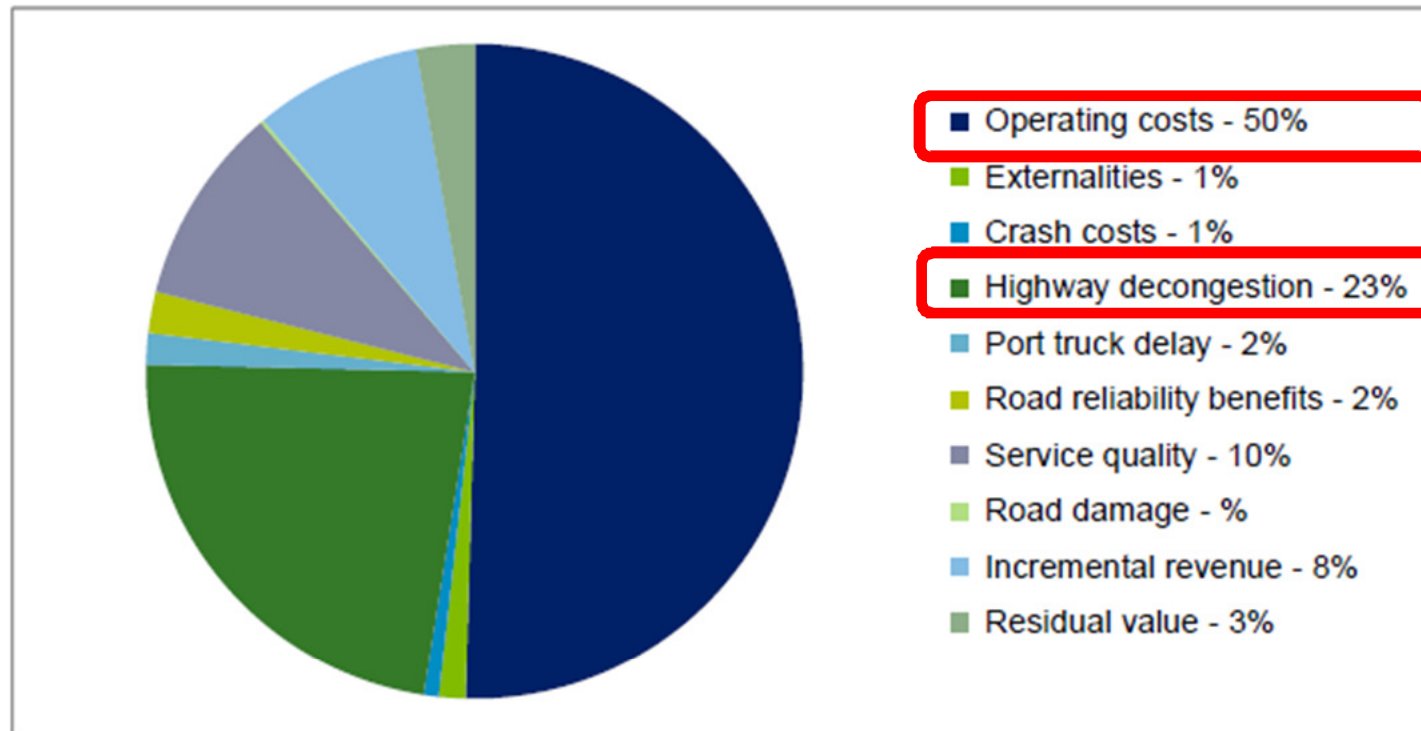
- same trucks used for different warehouses
- repair of trucks, plumbers, electricians etc.
- amenities





If we have time – the economic analysis

Graph 7.1 – Distribution of Project Benefits



Source: Deloitte

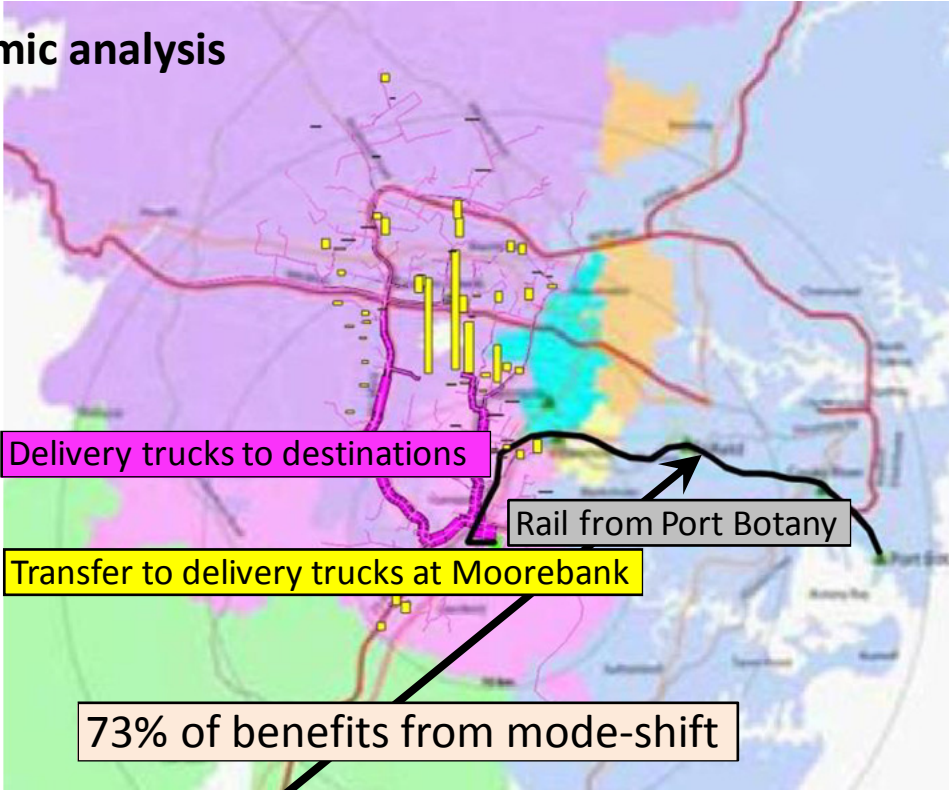
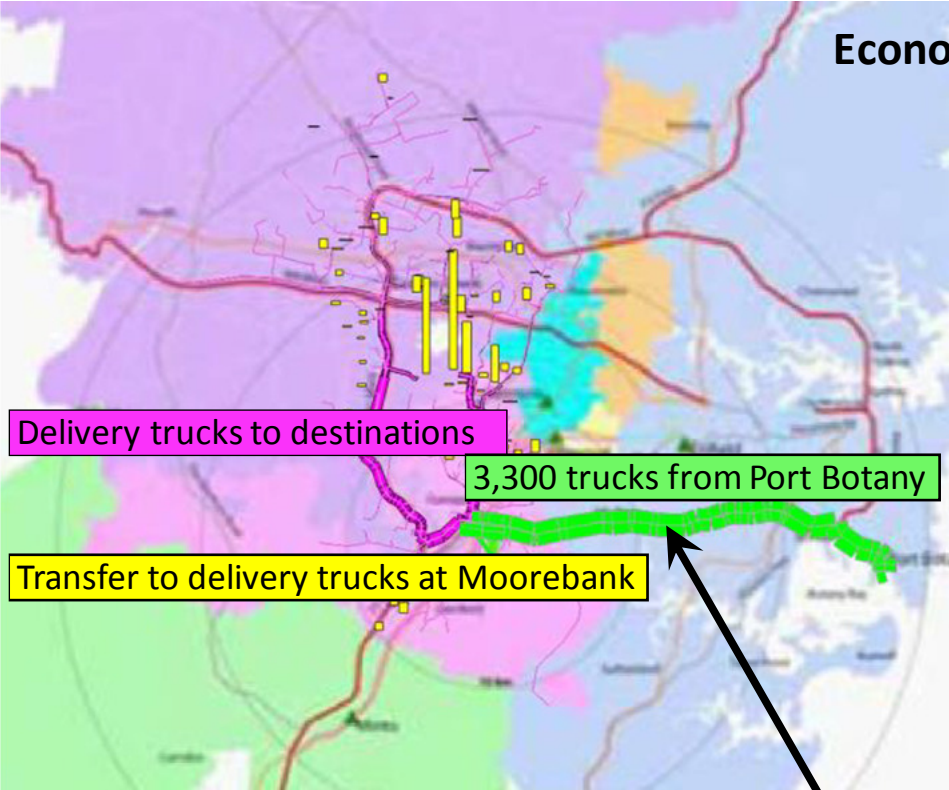
The project generates benefits in both the IMEX and interstate markets. Of the two markets, IMEX traffic generates a higher proportion of benefits than interstate. This reflects the significantly higher IMEX container volumes using rail in the project case compared to interstate.

The largest contributor to the benefit stream is operating cost savings resulting from a mode shift from road to rail. This benefit arises because the unit cost of rail is reduced in the project case as the Moorebank IMT provides more intermodal capacity in Sydney which removes an operating constraint which is apparent in the base case. Consequently, more containers can be transported from Port Botany to Moorebank by rail and this creates economies of scale of operation which reduce the price of rail freight. This makes it a more attractive option than road and results in a mode shift from road to rail. Given the higher utilisation and economies of scale of rail⁵², operating cost benefits resulting from the project are significant.

In the Base Case:
Trucks

In the Project Case:
Rail

Economic analysis



Base Case

3,300 trucks from Port Botany
 Transfer at Moorebank onto delivery trucks

Project Case

Rail from Port Botany
 Transfer at Moorebank onto delivery trucks

“Largest contributor to the benefit stream is operating cost savings resulting from the mode-shift.” (50%)
 Then there are the additional benefits from reduced traffic congestion (23%), reduced traffic accidents, etc.

Everything else at Moorebank remains the same

Transfer to delivery trucks at Moorebank

Delivery trucks from Moorebank

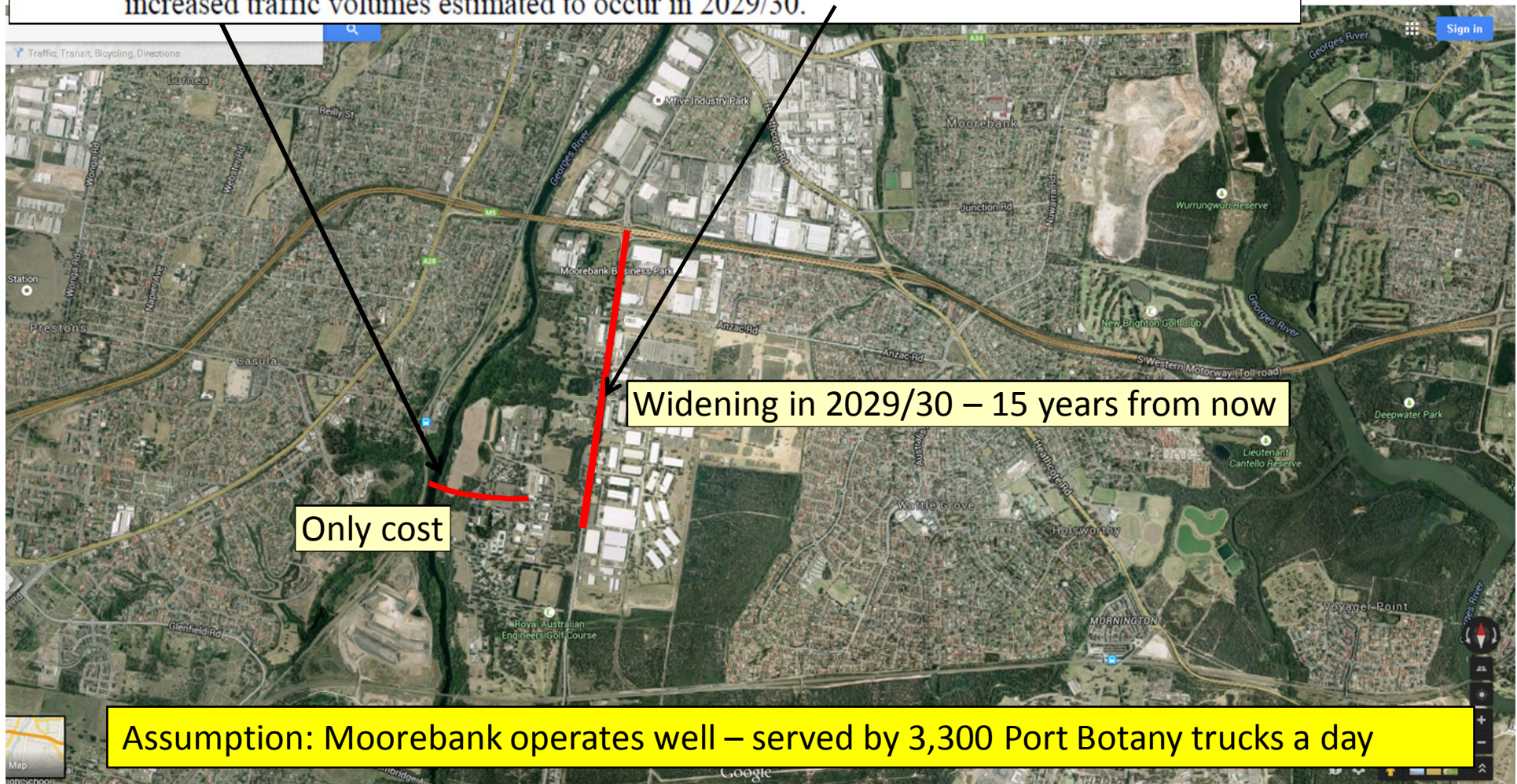
There are even local improvements, less pollution, as there will be no Port Botany trucks operating on Moorebank Avenue.

SIMTA EIS

- **Connection to the SSFL** – the rail connection into the site would cross the Georges River at the northern end of the site. The IMEX and Interstate trains would share this connection.

Page 19

- **Road access** – the Project is expected to require the widening of Moorebank Avenue to a four-lane carriageway. The design caters for additional turning lanes to accommodate the increased traffic volumes estimated to occur in 2029/30.



http://www.finance.gov.au/property/property/moorebank-intermodal-freight-termi... Moorebank Intermodal Ter...

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Moorebank Intermodal Terminal Project

In April 2012 the Australian Government committed to development of the Moorebank Intermodal Terminal (IMT) Project after reviewing the findings of a detailed business case for the facility. [You can read the executive summary](#) (1.9 MB).

The project involves the development of freight terminal facilities linked to Port Botany by rail, increasing Sydney's rail freight capacity and reducing road freight on Sydney's congested road network.

The detailed business case identified a number of major benefits of the Project including:

- 3,300 trucks a day taken off Sydney's roads between Port Botany and Moorebank by shifting freight to rail.
- Approximately \$10 billion in economic benefits including reduced freight costs, reduced traffic congestion, reduced traffic accidents and improved productivity.
- Improved environmental outcomes, with less fuel used and less emissions due to reduced road freight – trains generate fewer emissions and use less fuel than trucks for each container moved.
- An estimated total of 2,625 construction jobs for the port shuttle and interstate terminals and a further 1,700 jobs for the south western Sydney region.

The design, construction and operation of the terminal will be undertaken by the private sector through a competitive process, in which they will be provided with an opportunity to contribute to the overall funding of the Project. The Government will establish a Government Business Enterprise to manage the process from 2013.

Funding for the next year of preparatory work for the project will be released in the Federal Budget on 8 May, enabling further development of plans for a port shuttle terminal to open in mid-2017.

The project is subject to planning approval with a draft Environmental Impact Statement due to be displayed late in 2012 to enable public feedback. Both Federal and NSW planning approval is being sought.

Background

In May 2010 the Australian Government tasked the Department of Finance and Deregulation to conduct a Feasibility Study (the Study) into the potential development of an intermodal terminal (IMT) at Moorebank in south western Sydney. The Study, comprising the development of a detailed business case, concept plan and environmental planning approval process, has been assisted by a group of advisers led by KPMG. The Study includes a detailed examination of economic, financial, social, environmental and technical issues.

The corporate advisory firm, Greenhill Calburn Pty Ltd, confirmed that the recommendations of the detailed business case will optimise early private sector involvement and investment through an open and transparent process, whilst ensuring that the Commonwealth's objectives are met to the maximum extent possible, and the Commonwealth site is the better option than the adjacent private sector site due to its closer proximity to connecting infrastructure and capacity for full interstate service delivery.

- [Greenhill Calburn - Peer Review Phase 1 Report](#) (584 KB)
- [Greenhill Calburn - Peer Review Phase 1 Report](#) (1.34 MB)

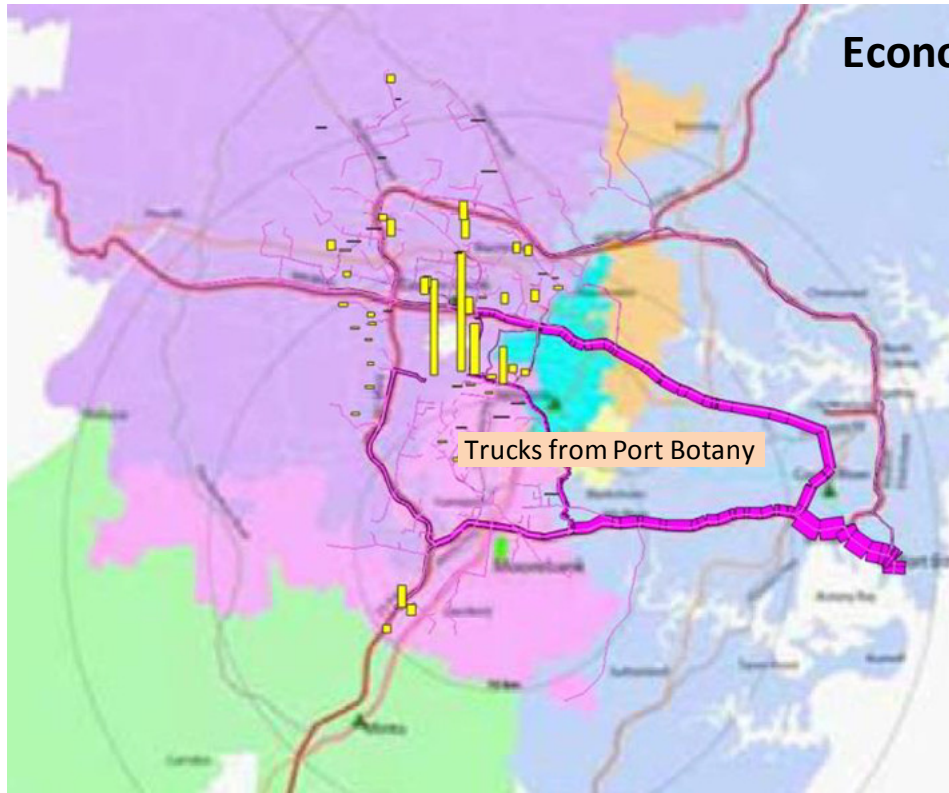
Other Languages

- العربية - Arabic
- 中文 - Chinese(Simplified)
- Hrvatski - Croatian
- Filipino - Filipino
- Ελληνικά - Greek
- हिन्दी - Hindi
- Italiano - Italian
- ខ្មែរ - Khmer
- Македонски - Macedonian
- Samoan - Samoan
- Српски - Serbian
- Español - Spanish
- Tiếng Việt - Vietnamese
- Türkçe - Turkish

125%

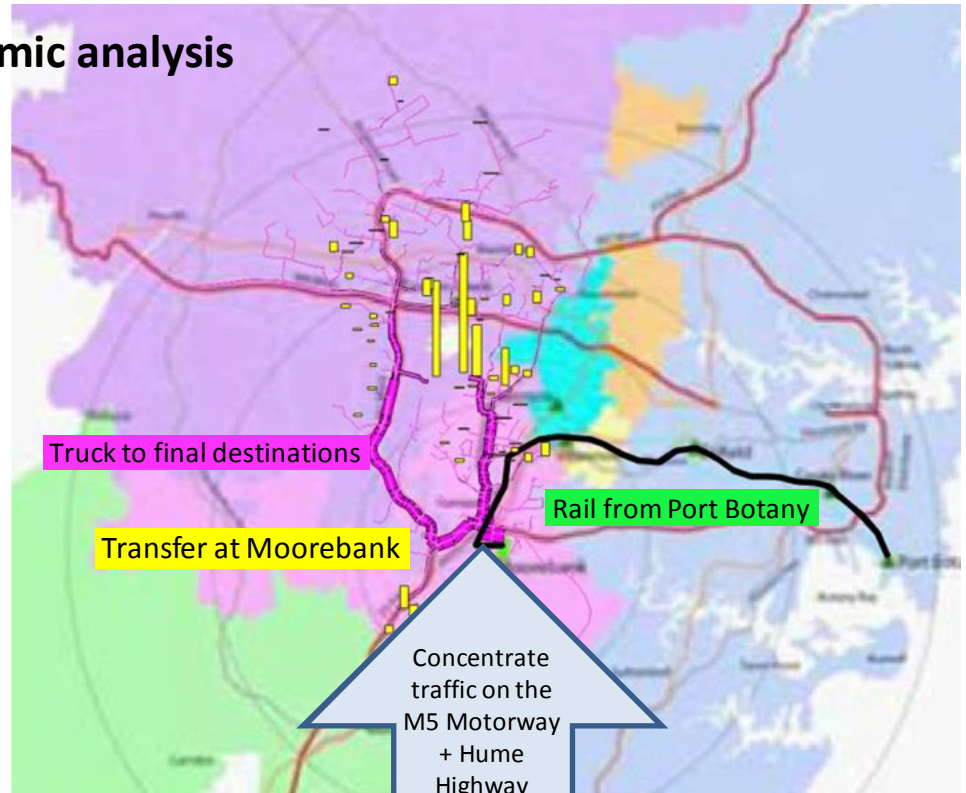
The economics has not been done properly
Moorebank Intermodal Terminal does not exist!

Economic analysis



Trucks from Port Botany

Base Case



Truck to final destinations

Rail from Port Botany

Transfer at Moorebank

Concentrate traffic on the M5 Motorway + Hume Highway through Sydney's worst accident hot spot

Project Case

If SIMTA's and TfNSW estimates are correct:
equivalent to 75% of current Port Botany truck traffic

Why was the economic analysis **NOT** done on these scenarios?

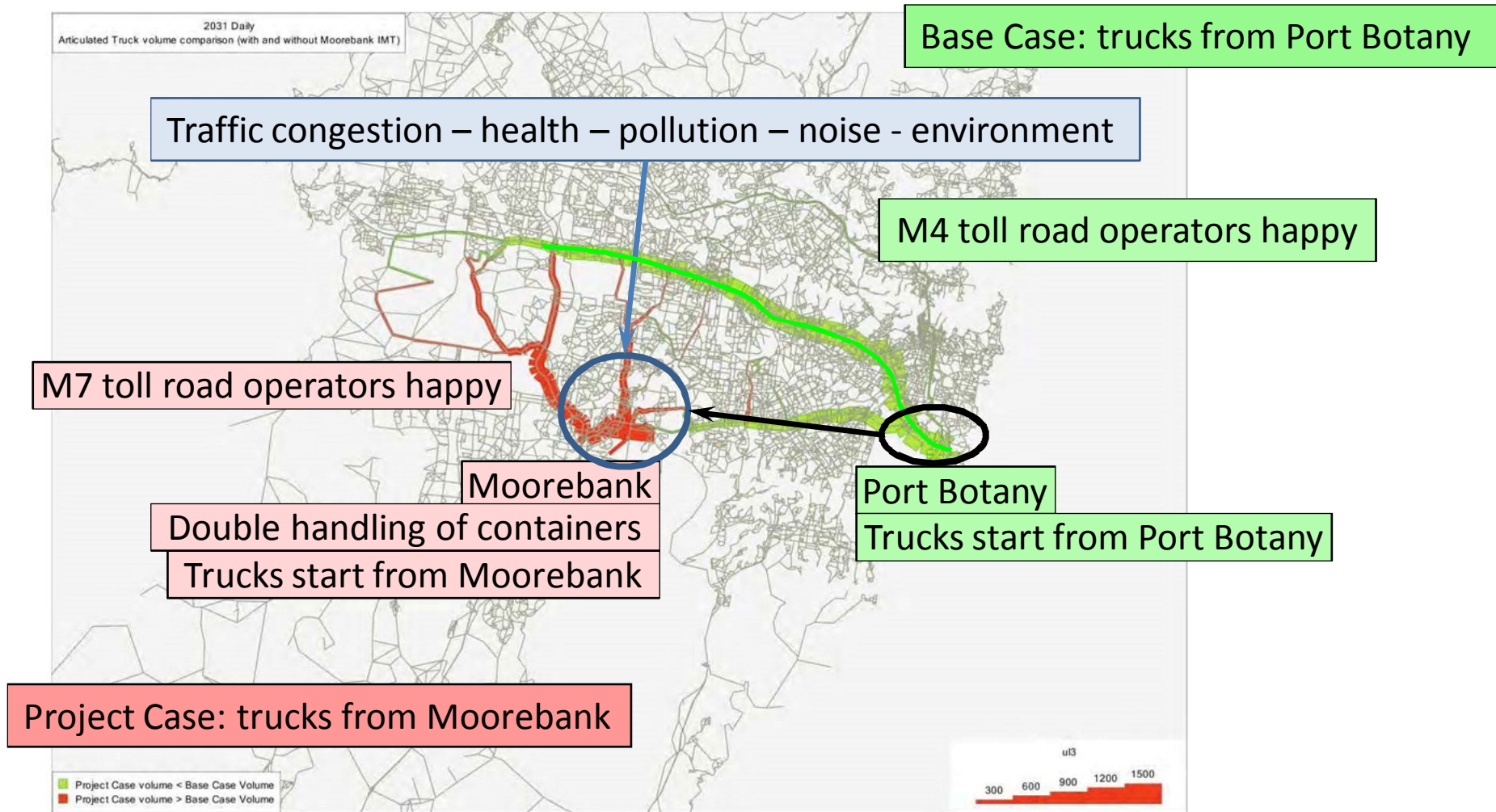


Figure 4.2: Comparison of articulated truck volumes ('Project Case' versus 'Base Case')

Word of caution from Infrastructure NSW

First things first

The State Infrastructure Strategy 2012 – 2032

we inform **in**sw
Infrastructure
New South Wales

In the medium and longer term, the principal road infrastructure solution for Sydney's Gateways is the construction of WestConnex as described in Section 6. By the early 2020s, this would provide motorway standard access from Port Botany to the industrial lands of Western and South-Western Sydney, and improve access by road to Sydney Airport from the South-West (where many airport employees live), Inner-West and Southern CBD.

9.5 Freight rail infrastructure around Port Botany

This section discusses infrastructure options to increase the proportion of container freight moved by rail, taking account of the dynamics of this market set out in Section 9.2.

The freight rail infrastructure network includes:

- rail marshalling yards at Port Botany
- dedicated freight rail lines in the metropolitan area through the Metropolitan Freight Network
- rail lines shared with passenger trains
- intermodal terminals and surrounding warehousing infrastructure.

9.5.1 The vision for Intermodal Terminals

The major infrastructure requirement identified to increase the proportion of container freight that moves by rail is investment in intermodal capacity.

The concept of intermodal terminals as inland ports has attracted a great deal of support in recent years.

The private sector and the Commonwealth Government have separate schemes for a major intermodal terminal at Moorebank in Sydney's South-West. Over the longer-term, Eastern Creek (at the junction of the M4 and M7 motorways) has been identified as another potential intermodal site²¹. Figure 9.2 summarises the current and potential intermodal terminal locations in Sydney.

9.5.2 Immediate rail infrastructure options

Infrastructure NSW is supportive of the intermodal concept. However, despite rail's theoretical cost advantages discussed in section 9.2, for some types of short-haul freight, this market is essentially unproven in Sydney. At present, most intermodal demand in Sydney is for longer-haul export freight, and there is significant capacity available at a number of existing intermodal sites²².

Sydney Ports and Hutchison are currently developing a 300,000 TEU per annum intermodal facility at Enfield²³, which will open in 2013²⁴. Enfield provides a test case for larger scale short haul intermodal freight in Sydney.

Recommendation Infrastructure NSW recommends that State public funding for additional intermodal terminal capacity in Sydney (including in relation to supporting infrastructure) be minimised until there is greater clarity on whether the short-haul rail freight market is viable.

²¹ Transport for NSW 2012, Draft Transport Master Plan.

²² Shipping Australia and Sydney Ports Corporation 2010, The Future of Sydney Ports: A 30 Year Horizon.

²³ 300,000 TEU is the maximum approved capacity for the Enfield International Terminal. Management's assessment is that maximum theoretical capacity for this facility is 500,000 TEUs per annum.

This approach does not contradict either of the proposed developments in the Moorebank Precinct, where project investors propose to fund immediate supporting infrastructure (for example rail lines and precinct roads). Until these facilities demonstrate commercial viability, it would be imprudent to commit significant State capital in wider infrastructure upgrades.

Infrastructure NSW assumes that (in line with proponents' estimates) Moorebank will be developed over the next five years. It is likely that major investment in supporting infrastructure around this precinct, given ramp up, will not be required until after 2017.

Infrastructure NSW supports other incremental reforms and investments designed to improve the reliability of Port Botany rail freight in the short and medium term. These include:

- the recent transfer of oversight of the Metropolitan Freight Network from Railcorp to the ARTC
- completion of the Southern Sydney Freight Line, which will deliver a dedicated freight rail network between Port Botany and Macarthur, in the South-West of the metropolitan area
- targeted investment to remove bottlenecks that impact rail performance, for example through clearing the Enfield staging facility.

9.5.3 Longer-term rail infrastructure options

Should the short haul import export intermodal market prove viable, either of the proposed investments in the Moorebank precinct, combined with Enfield and existing

Recommendation: Infrastructure NSW recommends that State public funding for additional Intermodal capacity in Sydney (including in relation to supporting infrastructure) be minimised until there is greater clarity on whether the short-haul freight market is viable.

Rail capacity



Australian Government

Department of Infrastructure and Transport

nbi

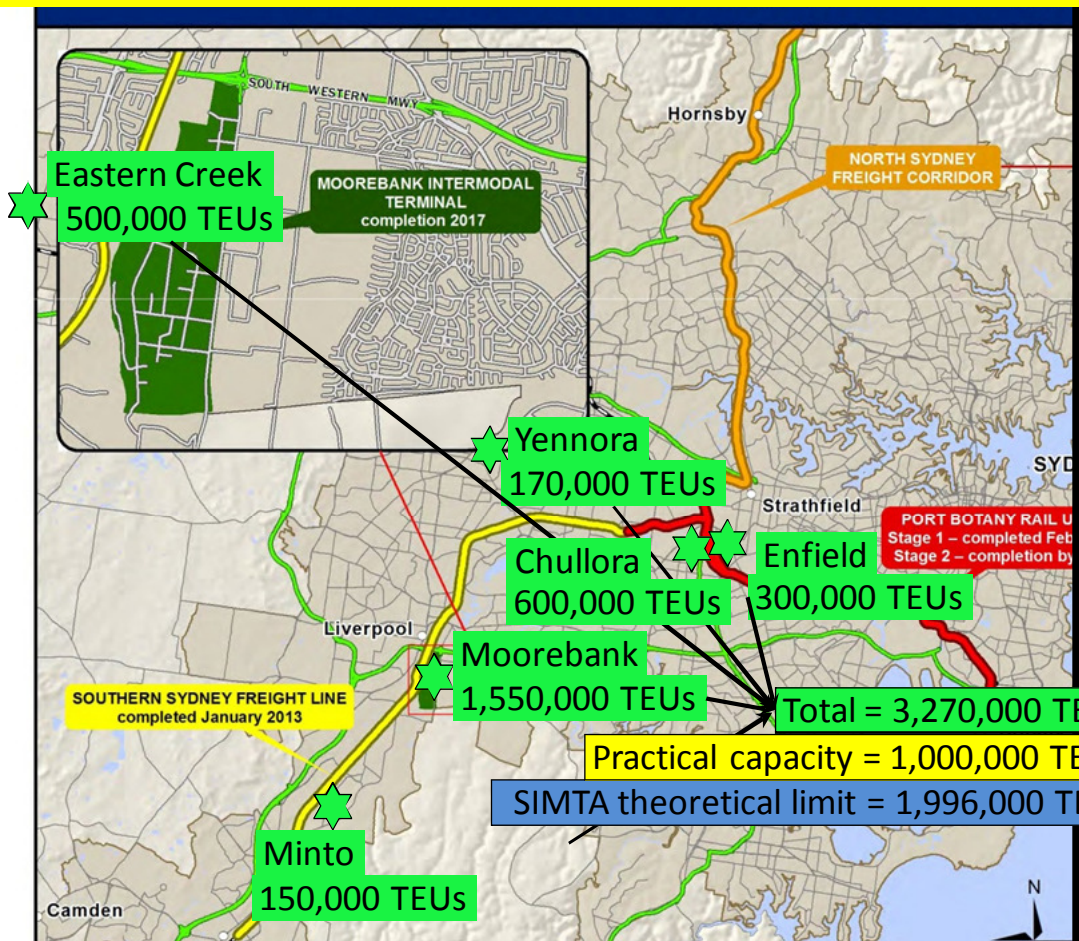


Southern Sydney Freight Line, Glenfield flyover and passing loop

Addressing Sydney's Freight Rail Bottleneck

With the SIMTA proposal requiring 21-22 paths at its peak, this may severely limit train paths to other users if no improvements were carried out by ARTC to alleviate this limitation in the next 10 years. This could also limit train paths available for containers bound for other intermodals

SIMTA EIS Report 21 Appendix H - Rail Access Report.pdf Page 6



Port Botany rail upgrades

The Australian Government is providing over \$175 million to improving the Port Botany rail access arrangements to Port Botany.

Stage 1 of the Port Botany Rail Line Upgrade, completed in February 2012, removed a significant bottleneck between the Port Botany Rail Yard and port terminals and improved safety and operating arrangements.

Stage 2 works are well underway and involve the upgrade of the Enfield Rail Yard to provide train staging capacity to hold trains away from the congested Port Botany area as well as additional signalling to increase track capacity and enable remote control of signals from ARTC's train control facility at Junee.

The rail upgrades will:

- lift capacity of the Port Botany rail line by more than 30 per cent, and

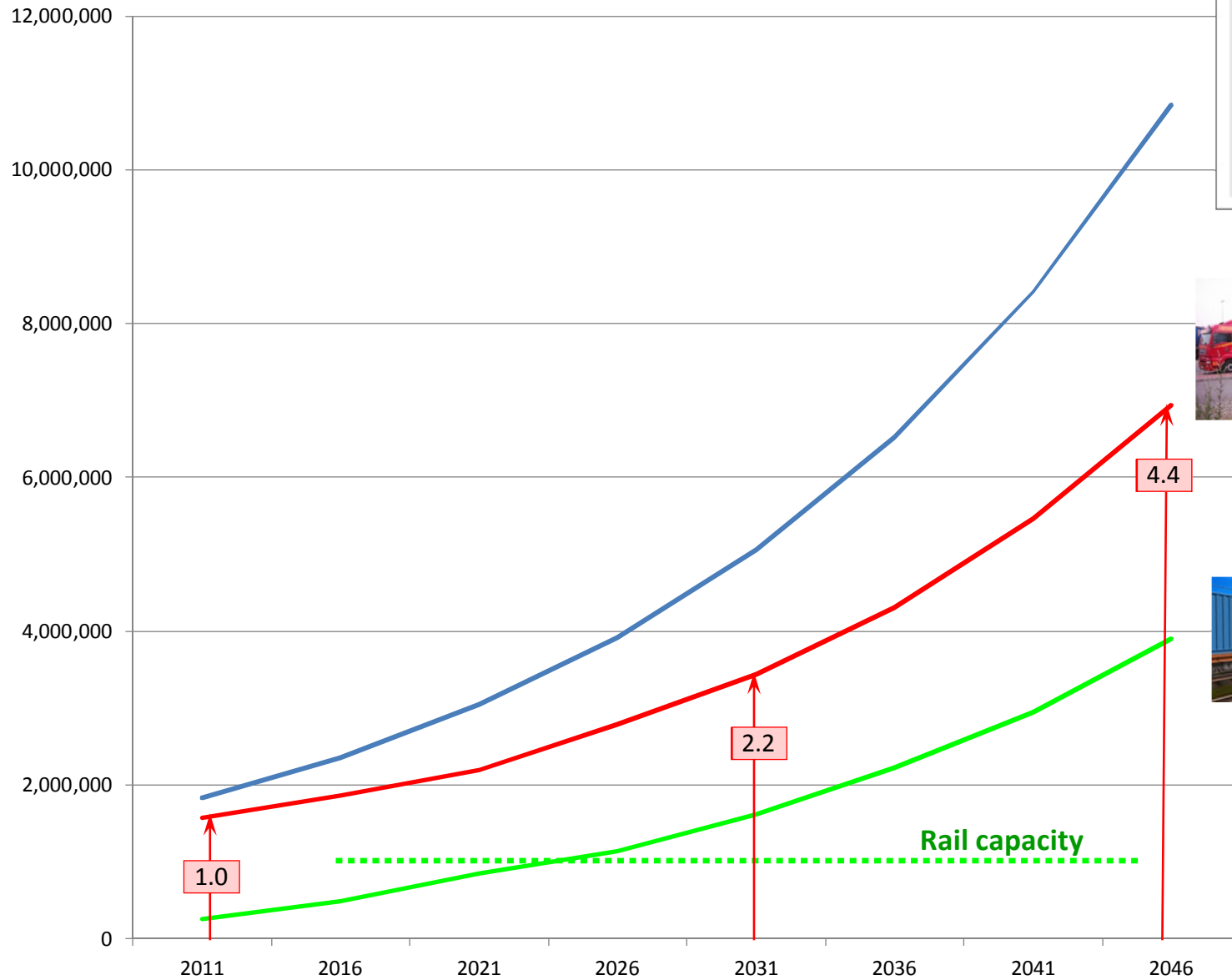
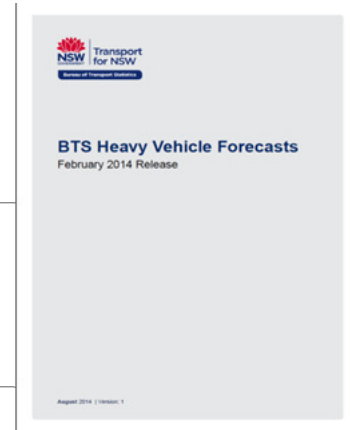
increase capacity for container movements to and from the Port from around 700,000 containers per annum to around 1,000,000 containers per annum.

The rail upgrades mean there will be 300,000 fewer truck movements per annum on the road network in and around Port Botany when the works are completed in 2014.

Rail does not have enough capacity to carry this much freight

By our estimates and knowledge of the Sydney Metropolitan Freight Network, 1.96 million TEUs is at the upper limit of rail capacity serving Port Botany – capacity not throughput, i.e. 48 train paths per day = 96 trains x 84 TEU train capacity, x 80% train utilisation x 364 days – 15% redundancy = 1.996 million

Road and Rail share of Port Botany Freight



- Total
- Road vol
- Rail vol



Rail capacity

Time to Plan

Consider:

- **Three-Port policy** – reduce long distance freight
- **Future freight market** – Broader Western Sydney Employment Area
 - Improve existing market (Enfield, Minto Yennora)
- **Rail and Road capacity**
- **Undertake proper planning**
 - Benefit-cost analyses
 - Social
 - Environmental