Australian Government

Nation Building Program

Sydney Transport Infrastructure: Project Highlights

May 2012

ISBN: 978-1-921769-66-5
May 2012 / INFRA1375

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Minister's Foreword

Sydney is Australia's largest capital city with over 4.6 million residents. Sydney is our gateway to the nation and the world and needs effective and efficient transport infrastructure to ensure its significant contribution to Australia's ongoing prosperity into the future.

Australia is one of the most urbanised nations on earth—nearly two thirds of Australians live in our capital cities and over 85 per cent of Australians live in an urban area. For example, Sydney is set to grow to more than 5.5 million residents by 2030. In terms of urban population growth, Sydney is expected to experience a growth rate of around 25 per cent between 2006 and 2026.

Nationally, freight movements are set to double from 2006 to 2020 and, by 2030, it is projected that Sydney's ports will handle around one quarter of the national volume of containerised freight (imports, exports, coastal movements and empty container movement).

This is why the Labor Government is actively engaging with our 18 major cities. And that is why the Government released last year a comprehensive plan – *Our Cities, Our Future* – to make our cities, including Sydney, more productive, sustainable and liveable.

Recently, the Council of Australian Governments' (COAG) Reform Council (the Council) released an important report card on the state of our cities. This report card specifically analysed the planning systems that cities have in place for their futures. Subjecting the plans to this national scrutiny was something that all state and territory leaders had signed up to at the COAG table.

The Council found that in many areas, current planning systems are only partially consistent with the criteria set out by COAG. The report card paints a compelling case for ongoing collaboration between governments when dealing with our cities, with the Council seeing a clear role for the Commonwealth to help create better cities.

In Sydney, the Australian Government through its Nation Building Program has sought to make Sydney work better. We are tackling congestion, we are investing in public transport, we are investing to meet the growing freight task, and we are tackling the hard long term planning needed to meet the challenges of tomorrow.

The continuation of the Nation Building Program for another five years from 2014–15 reaffirms the Australian Government's policy commitment to nation building. Nation Building 2 (NB2) will provide investment in land transport infrastructure across every state and territory.

NB2 will focus the Australian Government's investment on nationally significant infrastructure with the greatest productivity returns, through four cornerstone themes: Moving Freight; Connecting People; Safety; and Innovation.

Through the 2012–13 Budget the Australian Government has committed further significant investment for Sydney.

The Australian Government will continue to work with the NSW Government to deliver the outcomes that Sydney and the rest of the nation rightly expects.

Anthony Albanese
Minister for Infrastructure and Transport

Introduction

On coming to office in 2007, the Australian Government set itself an ambitious Nation Building task. One of the first pieces of legislation passed by the new Parliament was to establish Infrastructure Australia. This new body has been key to achieving a more coordinated long term approach to planning and investing in our national infrastructure.

Planning for the Future

The Australian Government's commitment to better infrastructure planning can be seen through the suite of policies and strategies in our Nation Building program. These include:

- the National Infrastructure Construction Schedule;
- the National Ports Strategy;
- the forthcoming National Land Freight Strategy; and
- the National Urban Policy, which addresses the challenges posed by the growth of our cities.

In Sydney we have been tackling long term issues, such as:

- Sydney's aviation capacity through the Sydney Aviation Capacity Study;
- container rail freight capacity through developing an intermodal terminal at Moorebank, upgrading rail links to Port Botany and upgrading the Northern Sydney Freight Corridor;
- upgrades to the M5, M4 and F3 to M2; and
- an investigation into the viability of high speed rail.

The Australian Government is investing in major improvements to streamline Sydney's road and rail connectivity to regional NSW and other major cities.

- To the south of Sydney we are completing full duplication of the Hume Highway between Melbourne and Sydney and are continuing a raft of works to improve the speed and capacity of the rail line between the two cities. We are undertaking detailed planning works for the Maldon to Dombarton rail link.
- To the north of Sydney, a widened F3 Freeway is improving the flow of traffic to and from the Central Coast and Newcastle, the $1.7 billion Hunter Expressway is expected to be completed in late 2013 and our record investment in the Pacific Highway, if matched by NSW, will enable full duplication between Sydney and Brisbane by 2016.
- To the west of Sydney we have invested in a number of projects to upgrade the Great Western Highway and improve access to the Central West of NSW.

Benefits of Investing in Infrastructure

The transport sector contributes $42.6 billion per annum (or around five per cent) to Australia's total gross domestic product (GDP). This makes the efficient movement of people and goods around the nation critical to productivity growth. The key challenges facing Australia's transport system are a growing and increasingly urbanised population, an increasing freight task, urban congestion and growing vehicle emissions.

Sound infrastructure investment is vital in lifting productivity. Through the Nation Building Program, the Australian Government is investing some $36 billion over the six years to 2013–14, with $11.8 billion of that being invested in NSW.

The Australian Government's Nation Building Program specifically targets projects that will deliver the highest benefits to the nation. Recent Bureau of Infrastructure, Transport and Regional Economics analysis reveals that our investments are delivering real economic benefits. The Bureau analysed nearly 130 Nation Building projects and found that every dollar invested created on average between $2.50 and $3.00 in benefits to the national economy.

Despite the record investment by the Australian Government, much more needs to be done to provide a solid foundation to build the transport networks of the future.

Why Cities are so Important

Australian cities account for 80 per cent of our economic activity and are our international gateways to the world. They are therefore critical infrastructure and transport hubs. With 90 per cent of air passengers and 80 per cent of imports passing through our cities, increases in city productivity inevitably benefit the whole of Australia.

Australia is one of the most urbanised nations on earth. Two thirds of us live in a capital city and more than three-quarters of us live in an urban area. A further 4.5 million people will live in an urban area by 2030. Cities will come under increasing pressure if this growth is not managed effectively.

For most of us, travelling through an urban area is a daily reality. Public transport is therefore essential to Australia's productivity. That is why the Australian Government has committed more to urban public transport than all former Federal governments combined since Federation. It is seen as a direct way of relieving congestion, improving air quality and improving productivity.

Congestion is a growing problem with the cost to the nation projected to rise to around $20.4 billion by 2020 if no action is taken.

Population growth and environmental concerns are also likely to increase our reliance on public transport, further emphasising the need for significant investment to keep people moving.

This publication outlines the achievements to date and proposed investments in Sydney under the Australian Government's Nation Building Program.

Why Sydney is Important

Between 2009–10 and 2010–11, Sydney contributed almost 17 per cent of the growth in Australia's GDP.

Sydney's ports and airport are international gateways and critical to the productivity of NSW and Australia. Sydney airport, and the road and rail networks serving it, are reaching capacity and will soon be unable to meet the expected growth in passenger numbers. Ongoing collaboration with the NSW Government is necessary to resolve this situation. A joint NSW and Federal Government study on aviation capacity in the Sydney region found that a second airport would net Australia $6 billion in GDP (NSW $2.3 billion) by 2035.

Sydney is located at the heart of Australia's freight activity with Sydney's ports handling more than a quarter of the national volume of containerised freight. About half of all road freight and three quarters of all interstate road freight in Australia move through NSW for at least part of it's journey, reflecting the significance of NSW to the Australian economy and the nation's reliance on NSW roads.

By 2030, Sydney's population is expected to grow to more than 5.5 million people (65 per cent of the NSW population). In 2009–10, Sydney was second only to Melbourne of the State capitals in its population growth, increasing by about 1400 people every week.

M4 East

Work on the planning of an M4 East Extension to the Central Business District (CBD) and integration into the Sydney road network has been recommended by government and industry experts.

Above: Photograph courtesy of Roads and Maritime Services, NSW.

The M4 East Motorway

Improving connections between Western Sydney and the CBD is becoming increasingly important in light of the decentralisation of the Sydney CBD and the investment in the growth and employment centres in North West and South West Sydney.

The key to the success of these developments will be in ensuring that employment and population growth can be integrated with housing, transport networks and job creation. Connecting the growth and employment centres to other major centres will be crucial to the continuing economic development of Sydney.

It is imperative that future infrastructure investment in the Sydney motorway network is integrated with strategic land use, economic and infrastructure plans. In addition, due to the fiscal constraints facing all governments, prioritisation and sequencing of infrastructure projects, particularly those with a high capital cost, will be required to ensure that funding is spent where it is needed most.

The M4 East Extension project arose out of a NSW Government commitment to examine the needs of the wider network to improve connectivity between the western part of Sydney, Parramatta and the Sydney CBD. This project will also enable a reduction in traffic intrusion into local residential areas.

The M4 East Extension would assist with reducing congestion on the motorway network and improve connections through a reduction in travel time and an increase in accessibility.

The proposal for an M4 connection to the CBD has not yet been finalised and detailed designs have yet to be developed. Broad route options have been examined which could include widening/upgrading of the M4 Motorway and tunnelling or surface options for extension.

The Australian Government has committed $30 million for planning for a M4 East Extension.

National Smart Managed Motorway Program – M4 Western Motorway

The Australian Government has committed $60 million over four years to 2014–15 to fund Managed Motorway smart infrastructure technologies. These help reduce congestion and improve traffic flows, reducing the need for further expensive upgrades.

Managed Motorways

Managed Motorways is a term used to describe urban motorways that have intelligent information, communications and control systems incorporated in and alongside the road.

Managed Motorways have the capacity to synchronise the flow of vehicles entering a motorway to match its capacity. Managed Motorway projects in Australia have delivered considerable improvements in performance and safety and typically have high benefit cost ratios.

In recognition of these benefits, the Australian Government established a National Smart Managed Motorways Program to retrofit smart technology to improve traffic flows along congested motorways and outer city roads.

The Australian Government has committed $60 million over four years to 2014-15 to fund managed motorway projects under this program. In Sydney, the M4 Western Motorway has been identified as a project for funding.

M4 Western Motorway – Concept Development Study

The Australian Government has committed $8.5 million under its Managed Motorways program, to be matched by the NSW Government, for planning work and environmental assessments for a system on the M4 between Concord Road, Strathfield and Lapstone (46 kilometres).

Planning will commence in mid 2012 and be completed by late 2013/early 2014. This will progress the M4 Managed Motorways project to the stage where it is ready for implementation.

NSW has undertaken some preliminary traffic modelling of a managed motorway system on the M4 and the results indicate that, when constructed, motorists could expect travel time savings during peak times of up to 16 per cent in the peak direction, and up to 12 per cent in the counter-peak direction.

The preliminary benefit cost ratio for the project (construction) is 1.6. This means that for every dollar spent on this project, the public can expect $1.60 of benefits to be returned to the community.

Variable Message Sign Gantry being installed on the M4 west bound near Kingswood road. These signs are for travel times.
Photograph courtesy of Roads and Maritime Services, NSW.

F3 to M2 and M5 East

High volumes of traffic use the corridors, with both the M5 and the F3 to M2 increasingly operating at or near capacity during peak periods. The Bureau of Infrastructure, Transport and Regional Economics estimates the cost of avoidable congestion in Sydney at $5.2 billion in 2011, rising to $7.8 billion in 2020.

Upgrading the M5 and F3-M2 corridors in Sydney

The Sydney Orbital Motorway network is approximately 160 kilometres in length, comprising the M2, M5, M7, Eastern Distributor, Lane Cove Tunnel and the Sydney Harbour crossings. The motorway network in Sydney plays a key role in the metropolitan transport system and is integral to Sydney's economic productivity. It provides key connections for freight, commercial and commuter traffic, including access to Port Botany and Sydney Airport, servicing local, regional, national and international travel demands.

Factors such as growth in population and travel demand will continue to place pressure on the Sydney motorway network. Without improvements, the motorway network will become increasingly congested. An extension to the M5 would provide greater connectivity between growth centres in western Sydney, Port Botany, Sydney Airport and the CBD. Connecting the Sydney Orbital Motorway network to the F3 would provide an efficient and effective national network connection through Sydney.

Given the significant capital cost of both projects, the Australian Government tasked Infrastructure Australia to work with the NSW Government to explore private financing options for expansion of the M5 East and the F3 to M2. Infrastructure Australia's analysis highlights the potential for both projects to be privately financed and that exploration of private financing options to complete capital-intensive infrastructure projects must be an accepted and essential component of future infrastructure funding.

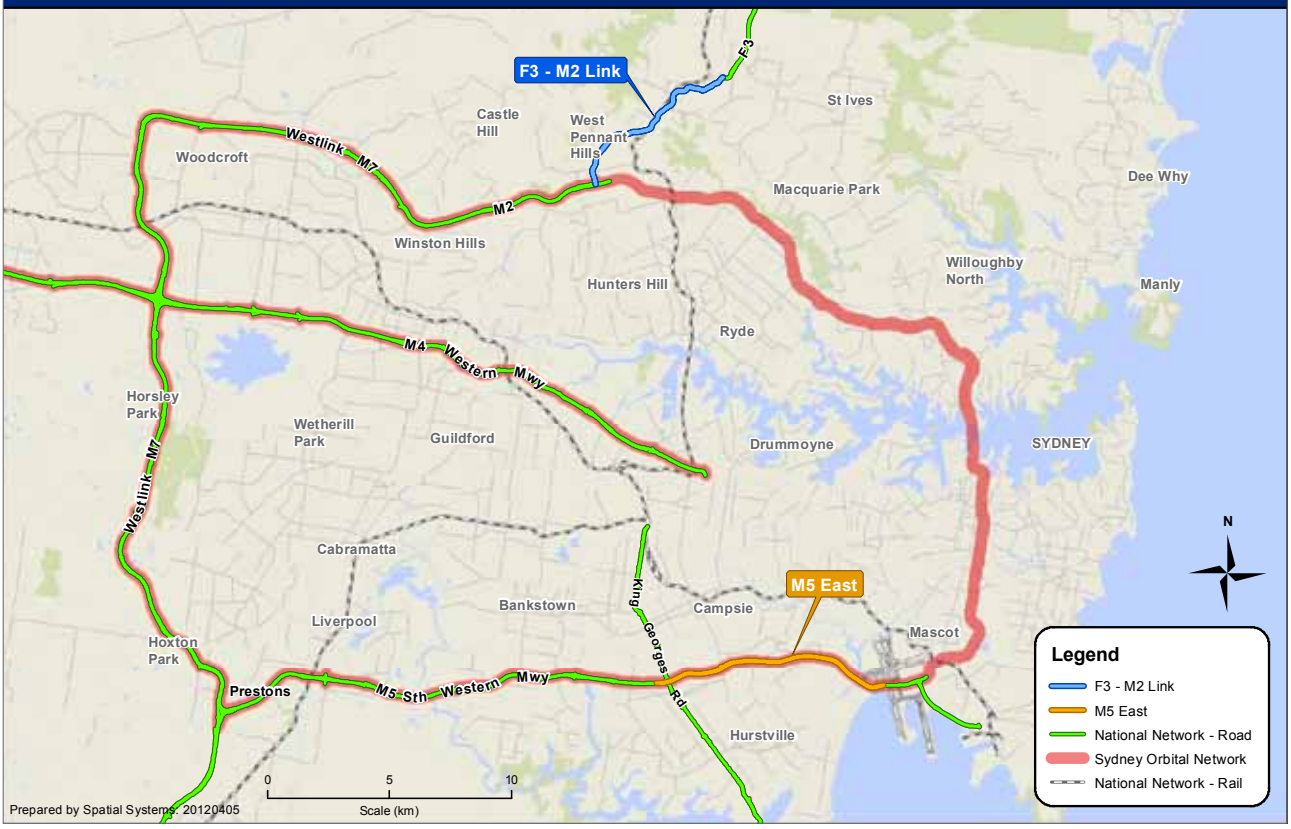
The report recommends that a Special Purpose Vehicle be established to develop options to bring these vital transport projects to market. The Australian Government is willing to provide up to $25 million to the NSW Government, subject to a matching funding commitment by the NSW Government, for it to establish this Special Purpose Vehicle. The NSW Government should leverage the work by Infrastructure Australia to engage and work with the freight sector (and their customers) to develop financing and funding proposals, including through improved sharing of patronage risk with the private sector.

Photograph courtesy of Roads and Maritime Services, NSW.

F3 to M2 and M5 East

Photograph courtesy of Roads and Maritime Services, NSW.

F3 TO M2 AND M5 EAST



The F5 Freeway Widening Project

Photograph courtesy of Roads and Maritime Services, NSW.

The F5 Freeway is one of Sydney's busiest roads servicing more than 80,000 vehicles a day. An upgraded F5 Freeway will help ensure that the F5 Freeway is able to accommodate the expected growth in traffic over the coming decades.

The F5 Freeway is a section of the Hume Highway between Liverpool and Mittagong, forming part of the National Land Transport Network between Sydney and Melbourne. It is an important link for local communities, commuters and freight transport. It is also a key feeder route into the Sydney orbital which provides links to the Sydney airport (via the M5), the CBD (via the Eastern Distributor) and the North Coast (via the M7 and M2 motorways).

Expansion of Sydney's south-western suburbs has contributed to traffic growth on the F5 Freeway. The significant and continuing growth in traffic using the F5 Freeway has led to slower travel times during peak periods through increased congestion, which in turn hampers productivity and increases the risk of road crashes. Given the economic importance of Sydney to the Australian and NSW economies, it is vital that the main transport corridors into Sydney have the capacity to handle increasing freight and passenger demands now and into the future.

The Australian and NSW governments funded the final stage of the F5 Freeway widening which opened to traffic in March 2012. The project involved widening the section of the Freeway between Brooks Road, Ingleburn and Raby Road, St Andrews, from two lanes to four lanes in each direction, and the section between Raby Road and Narellan Road, Campbelltown, from two lanes to three lanes in each direction. As part of construction, pavement detector loops and communication cabling have been installed to facilitate construction of intelligent transport systems in the future.

The upgrade of this section of the F5 Freeway provides significant benefits to the local community and the freight industry, as well as long distance travellers on the National Land Transport Network. The primary objective of the project was to ensure the F5 Freeway can meet current and future growth in traffic demand. The project has also improved the capacity for this section of the F5 Freeway to provide a consistent travel speed, is expected to reduce the severity and incidences of road crashes, and has provided improvements in pavement integrity, which will ensure a more efficient and effective freight and commuter network.

The Australian Government has committed $92.8 million to this $116 million project.

Port Botany Road and Rail Upgrades

Road and rail access improvements to Port Botany are a key priority with over $175 million being provided to speed up the movement of freight into and out of Australia's second largest container port.

The Australian Government is providing over $175 million to improving the Port Botany road and rail access arrangements to Port Botany, with Stage 1 of the Port Botany Rail Line Upgrade complete and work now well underway on Stage 2.

Need for the Port Botany road and rail improvements

A key investment priority for the Australian Government is tackling road and rail congestion around the Port Botany precinct. This complements the Government's investment in the $1.1 billion Northern Sydney Freight Corridor project, the Australian Rail Track Corporation's (ARTC's) $1 billion investment in the Southern Sydney Freight Line and the new intermodal terminal development at Moorebank.

With the third terminal at Port Botany due to come on line during 2013, Port capacity will increase from its current cap of 3.2 million containers per annum to be able to meet expected demand of around 7.3 million containers by 2030–31. As a result, rail will need to take a much larger share of the freight task if Sydney is to avoid the inevitable gridlock that would eventuate if this task was largely left to the road sector to handle.

Solutions

The recently completed Stage 1 of the Australian Government's Port Botany Rail Line Upgrade involved an upgrade of the Port Botany Rail Yard to remove a significant bottleneck between the Yard and port terminals and improved safety and operating arrangements within the Yard.

Stage 2 of the Port Botany Rail Upgrade is currently underway with commencement of the upgrade of the Enfield Rail Yard to provide train staging capacity to hold and re-sequence trains away from the congested Port Botany area. Stage 2 will also upgrade and provide additional signalling to increase track capacity and enable remote control of signals from ARTC's train control facility at Junee.

Productivity Benefits

The rail upgrades will effectively lift the capacity of the Port Botany rail line by more than 30 per cent, with the increased capacity on the line enabling increased movement of containers to and from the Port from around 700,000 containers per annum to around 1,000,000 containers per annum. The rail upgrades also mean that there will be fewer truck movements on the road network in and around Port Botany when the works are completed in 2014.

Reconfigured track layout and upgrade works at Port Botany Rail Yard.
Photograph courtesy of Australian Rail Track Corporation.

Moorebank Intermodal Terminal

The Moorebank Intermodal Terminal project will relieve the growing pressure on congested infrastructure around Port Botany and the M5 motorway, facilitate a modal shift from road to rail and boost productivity and economic activity.

The Australian Government is facilitating the delivery of a major intermodal facility at Moorebank to provide a rail 'port shuttle' between Port Botany and the south west of Sydney, as well as warehousing and a separate terminal for interstate freight.

The port shuttle terminal, expected to commence operations from 2017, will have capacity for 1.2 million containers, vastly improving efficiency and productivity while relieving congestion on Sydney's roads. Additional capacity for 500,000 containers will become available at a later stage when the interstate freight terminal commences operation.

The project will boost productivity and improve transport links in Australia's biggest city. It will enable freight travelling through Sydney to and from Port Botany to use rail instead of the road network, providing cheaper and more efficient freight and relief for commuters stuck in traffic. The project will also provide a jobs boost for south western Sydney.

The interstate terminal will take pressure off rural and regional roads and build on the Australian Government's $4.8 billion investment in the interstate rail network. Together these investments help make rail freight a real competitor to road freight and benefit everyone in the national supply chain who needs to move goods.

The Australian Government will fund the relocation of the Moorebank Defence Units to make available a 220 hectare site for the project – to provide for the intermodal terminal facilities required now and into the future.

A Government Business Enterprise will also be established to launch the project and optimise private sector involvement. The private sector will design, build and operate the site as an intermodal terminal. Private sector partners will be selected through competitive tender processes.

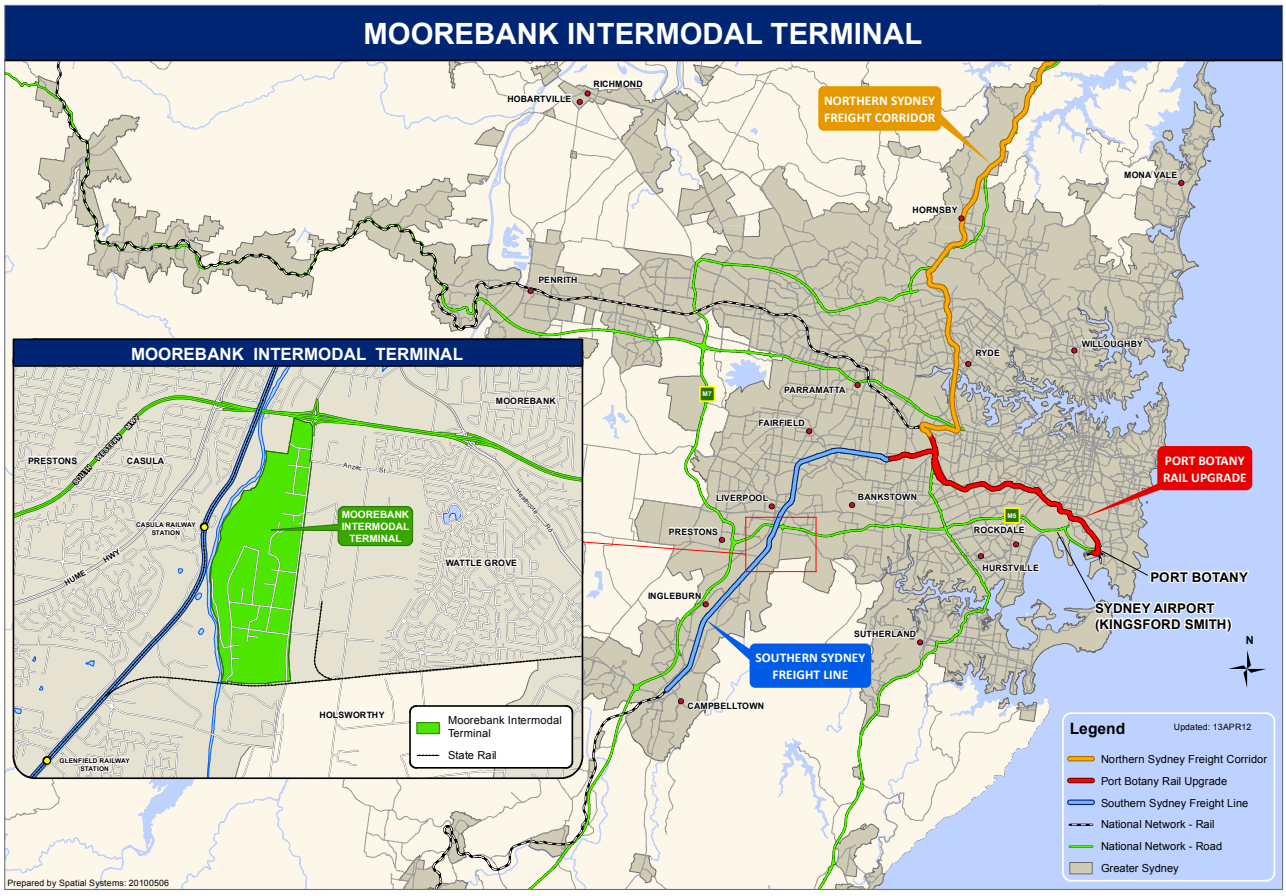
Key Benefits

The total benefits of the project have been estimated at $10 billion. These include:

- Taking 3300 trucks off Sydney's roads every day from 2020, relieving widespread traffic congestion associated with freight movements to and from Port Botany.
- Faster freight transport and reduced costs to business.
- Reduced fuel use and diesel emissions.
- 1650 full time jobs during construction of the port shuttle terminal and a further 975 jobs during construction of the interstate terminal, with 1700 ongoing jobs in the region once the facility and associated warehouses are open.

This investment demonstrates the Australian Government's determination to invest in strategic infrastructure. Projects like Moorebank link Australia's freight networks and our ports, drive productivity, improve our logistics industries, and create long term efficiencies that will benefit our cities and our economy into the future.

Moorebank Intermodal Terminal



Northern Sydney Freight Corridor

The Australian Government is investing $840 million towards the $1.1 billion Northern Sydney Freight Corridor program to reduce congestion and travel times and improve reliability in freight movements.

The 155 kilometre Northern Sydney Freight Corridor (NSFC) between Sydney and Newcastle is a major link on the east coast interstate rail network servicing Melbourne, Sydney and Brisbane. As a shared passenger and freight corridor, additional capacity is required to enable freight operations to operate more effectively without impeding peak passenger rail services. The NSFC program complements the ARTC's construction of the Southern Sydney Freight Line which is providing a dedicated freight line for the southern entry to Sydney between Macarthur and Sefton.

Need for the NSFC Program

Heavy use of passenger rail services on the Main North Line between Sydney and Newcastle restricts freight rail services to the period outside of the peak passenger times. This amounts to approximately 17 hours per day. Capacity for freight services is constrained by a lack of passing loops long enough to accommodate a 1500 metre freight train; junctions at critical locations such as North Strathfield, which are a major source of delay; and several steep inclines which slow freight trains and subsequently delay following passenger services.

Solutions

On 7 December 2011, the Australian Government signed a Memorandum of Understanding with NSW to provide $840 million towards the first stage of works, a $1.1 billion program that will address the most pressing needs within the corridor. The Stage 1 program consists of the:

- North Strathfield Rail Underpass;
- Epping to Thornleigh Third Track;
- Gosford Passing Loops; and
- Hexham Passing Loop.

Productivity Benefits

The NSFC program will provide additional rail capacity, transit time savings and improved reliability. Other benefits include rail and road truck operating cost savings, road freight congestion cost savings and road freight crash cost savings.

Transporting freight by rail also makes roads safer and it is better for the environment by:

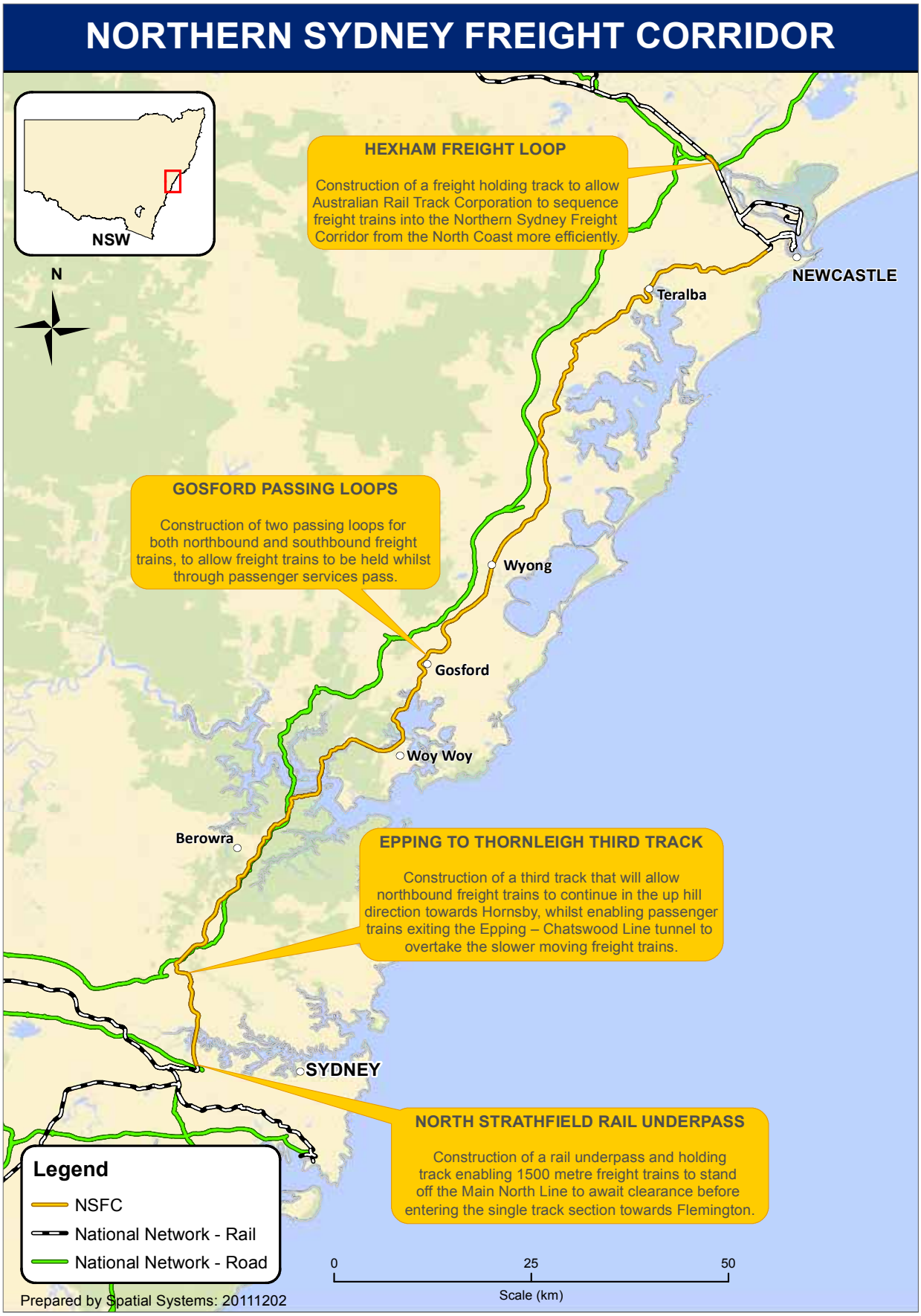
- taking more than 200,000 heavy vehicles off the road per year;
- reducing diesel use by almost 40 million litres per annum; and
- reducing annual greenhouse gas emissions by more than 100,000 tonnes.

Timeframe

The program commenced in September 2011 with commencement of the Hexham Freight Loop and is expected to be completed by September 2016.

Building freight rail capacity on the Northern Sydney Freight Corridor.
Photograph courtesy of Australian Rail Track Corporation

NORTHERN SYDNEY FREIGHT CORRIDOR



Southern Sydney Freight Line

Improving Sydney's rail system and national productivity – reducing bottlenecks for freight and passenger trains by building a 36 kilometre $1 billion dedicated freight line in southern Sydney.

A dedicated freight line in Sydney's south

As part of a long term vision for fast and reliable interstate rail freight, the ARTC is building a new dedicated freight line in southern Sydney. It is being built in the existing rail corridor between Sefton and Macarthur and is designed to remove a major bottleneck where freight trains share existing rail lines with metropolitan passenger services.

Compounded by restrictions for freight trains during morning and afternoon peak periods, where freight services are not permitted to run, the Southern Sydney Freight Line (SSFL) will improve efficiency and provide optimum departure and arrival times for freight services into the metropolitan network, with no impact on passenger services.

Solutions

The SSFL is a new 36 kilometre long non-electrified third track, specifically built for freight services, allowing passenger and freight services to operate independently. In building this track, six existing suburban rail stations at Leumeah, Minto, Casula, Warwick Farm, Cabramatta and Sefton will be modified and upgraded.

Construction will include a rail tunnel under Sefton junction, a rail bridge crossing over the passenger lines north of Glenfield to take the freight line onto the eastern side of the passenger rail network and upgrades of existing road bridges at Bareena Street, Miller Road and Chester Hill Road.

Productivity Benefits

Together with the extensive works underway and planned for the Northern Sydney Freight Corridor, these initiatives will realise important benefits for the Sydney metropolitan rail network and interstate freight to improve national productivity.

The construction of the SSFL is well advanced and is expected to be completed in early 2013. When completed the SSFL will:

- provide a dedicated freight line connecting Sydney freight terminals and ports;
- remove constraints between passenger and freight trains during peak periods; and
- improve reliability for interstate freight and contribute towards higher national productivity.

Earthworks for Southern Sydney Freight Line at Liverpool.
Photograph courtesy of Australian Rail Track Corporation.

Aviation Capacity in the Sydney Region

Action to Secure Sydney's Aviation Future

Aviation is Important to Sydney and Australia

Aviation is critical to Australia's economy. International experience shows airports create 1000 jobs for every one million passengers. For Sydney, access to efficient aviation services is vital to the city's vibrant financial, tourism and international trade industries.

Sydney (Kingsford-Smith) Airport is Australia's busiest airport and Sydney's only major passenger airport. Last year, more than 40 per cent of Australia's international airline passenger arrivals and departures and approximately 50 per cent of international air freight was transported through the airport. Passenger demand is forecast to more than double by 2035 to 77 million passengers, and nearly double again by 2060. Airfreight over the same time is expected to grow five-fold.

Cost of Doing Nothing

The 2012 *Joint Study on Aviation Capacity in the Sydney Region Report* shows that existing aviation infrastructure in Sydney will not cope with aviation demand. In just three years, demand for aircraft movements during the peak hour alone will exceed the legislated 80 movements cap per hour by 5 per cent. This will increase to 13 per cent by 2020.

Right now, on weekdays, there are no new landing and take-off slots available for new regional flights for eight of the 17 hours that the airport operates daily. In addition, road and rail access to Sydney Airport is already approaching gridlock. For example, morning peak trains will reach capacity by next year and the road network will be at capacity by 2015.

As the nation's aviation hub, disruptions and growing congestion at Sydney affect the entire national network. By 2020, a delay at Sydney Airport during the morning peak would have flow-on effects for around 500 flights nationally affecting every major capital airport.

Constraints at Sydney Airport are a handbrake on productivity and significantly impact on the NSW and national economies. The airport is one of the most important pieces of infrastructure in Australia. The economic and social consequences of inaction in the short to medium term are therefore significant. For example, Australia is forecast to forego $6 billion in GDP by 2035 and an estimated 4000 jobs in 2035.

Once all capacity at the airport is used, the impacts become severe. For example Australia is forecast to forego $34 billion in GDP in the period to 2060 and an estimated 77,900 jobs in 2060.

Strategy for Taking Action

To address the increasingly urgent aviation capacity requirements identified in the Joint Study report, the Australian Government will undertake a three part strategy. This is an integrated infrastructure strategy, aligning aviation with the broader strategic and transport planning of Sydney:

1. Optimising Sydney Airport, including land transport links, while ensuring bipartisan noise-sharing and regional aviation access arrangements remain in place;
2. Protecting and investigating use of other existing airports in the Sydney region; and
3. Establishing a second airport for Sydney.

These elements establish a framework for the Australian Government to tackle aviation capacity constraints on the economy. This includes focussing on:

- a detailed investigation into the suitability of the Wilton region, including analysis to identify a precise site as a basis for conducting preliminary economic, social and environmental studies;
- ensuring that the Sydney Airport Corporation Limited develops a strategy that ensures it invests in terminal, apron, taxiway and other improvements to operate Sydney Airport to maximum efficiency;
- working with the NSW Government to develop a long term investment plan that meets the projected demand associated with the road and rail networks servicing Sydney Airport; and
- assessing the scope and consequences of utilising RAAF Base Richmond for limited civil operations, including consideration of social, economic and environmental impacts.

The Australian Government is committed to implementing this plan of action in a mature, bipartisan manner to support economic growth, increased employment and access to aviation services for all Australians.

Parramatta to Epping Rail Link

The Australian Government has committed $2.1 billion towards a new 14 kilometre line connecting Parramatta CBD with the Epping to Chatswood Rail Line.

Often called Sydney's second CBD, Parramatta is at the heart of the rapidly expanding population and employment boom in Western Sydney. With NSW's largest concentration of employment outside Sydney's CBD and with a population expected to reach 200,000 by 2036, ensuring Parramatta has sustainable transport links to the Sydney network will be essential to the future prosperity of the city.

The Parramatta to Epping Rail Link (PERL)

On 21 February 2011, the Australian Government signed an Intergovernmental Agreement with the NSW Government, jointly announcing the Parramatta to Epping Rail Link – a new, 14 kilometre link connecting Parramatta CBD with the Epping to Chatswood Line.

Originally developed as a western expansion to the Epping to Chatswood Rail Line, PERL will involve duplicating a section of the Carlingford Line as well as constructing new links and a new station.

Work proposed includes:

- duplicating the existing Carlingford Line between Rose Hill and Carlingford;
- establishment of a new station at Rosehill-Camellia;
- putting in place new connections between the Parramatta and the new Rosehill-Camellia station, and between Carlingford and Epping; and
- upgrading existing stations along the corridor, including Parramatta, Rydalmere, Dundas, Telopea and Carlingford.

Benefits

PERL will directly connect Parramatta with the key employment centres at Macquarie Park, North Ryde, Chatswood and St Leonards. The line will also provide greater access to educational opportunities by facilitating more efficient transport links between Macquarie University and the Rydalmere and Westmead campuses of University of Western Sydney.

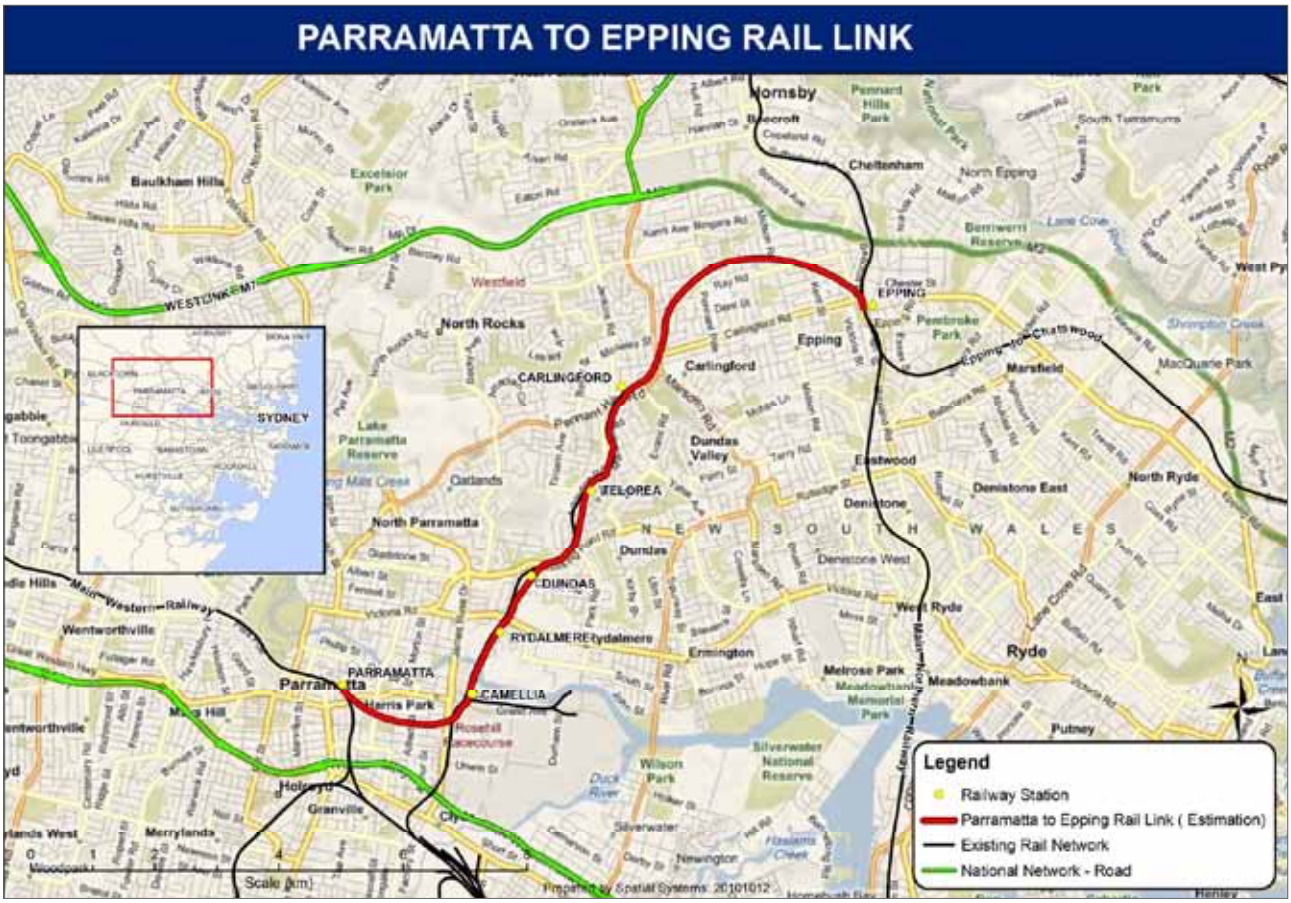
Critically, the line will have flow on benefits to the broader Sydney transport network and help alleviate growing pressure on some of Sydney's busiest road and rail corridors.

PERL will enhance the capacity of the Western Line, supporting the expansion of services between Western Sydney and the city CBD, and will provide commuters with a safe, reliable and effective alternative to getting into their car – helping reduce the growing social and financial burden of road congestion.

Supporting the Sydney of the future means putting in place future focused transport links now. PERL is about more than just moving people between Parramatta and Chatswood – it is a transformative project that will support the continued growth of Sydney's West.

Parramatta to Epping Rail Link

Parramatta arcade near Westfield shopping centre. *Hamilton Lund; Destination NSW.*



High Speed Rail

The population along the east coast between Brisbane and Melbourne continues to grow, requiring ongoing investment in modern transport infrastructure. High speed rail has the potential to cut travel times for people commuting between capital cities like Sydney and growing regional cities like Newcastle and Gosford.

Taking the Strategic View

The Australian Government is undertaking a $20 million study on the implementation of high speed rail on the east coast of Australia. This study takes a long term, strategic view of transport needs between Brisbane, Sydney, Canberra and Melbourne. It is taking into account issues such as population growth, regional development opportunities and the liveability and sustainability of our major cities.

The study forms a part of the Australian Government's long-term approach to transportation planning and will consider the role high speed rail has in meeting these needs. An important aspect of the study will be the integration of high speed rail with other existing and proposed transport networks for Sydney to maximise its contribution to the transport capacity of the nation and enhance productivity gains.

In the 2012–13 Budget, the Australian Government has committed an additional $20 million over four years for national transport planning, including further work on high speed rail.

By the middle of the century, long distance travel on the east coast is anticipated to be approximately two and a half times what it is today. This will put increasing pressure on existing transport networks and other infrastructure, which will impact on Australia's productivity and international competitiveness.

International experience demonstrates that high speed rail can move large volumes of people very quickly and efficiently, connect people with jobs and strengthen the linkages between capital cities and major regional centres.

The high speed rail study will help inform government decision-making on Australia's transportation future and will define the steps which would be required over the short, medium and long-term in developing a high speed rail network.

The first phase of the high speed rail study, completed in August 2011, presented interim findings for corridor and station options, cost, patronage and travel times. The study showed that in 25 years time we could have up to 54 million passengers using an east coast high speed rail service each year. It predicted that the Newcastle, Central Coast and Sydney trip could be seeing around 15 million passengers a year. Five million of these would be commuters.

When you look at the statistics here, it is worth noting that nearly 25 million domestic air trips were made within the study area during 2010. The Sydney-Melbourne air corridor and the Sydney-Brisbane air corridor are currently ranked fifth and sixteenth busiest in the world. If you could get city centre to city centre in the same, or less time with high speed rail, new possibilities open up and this will mean a lot for Sydney and its productivity.

High Speed Rail

Broad corridors and indicative station locations were shortlisted for further analysis in phase two.

- The coastal corridor between Brisbane and Newcastle, with potential variations around coastal cities and the Gold Coast.
- The Central Coast corridor between Newcastle and Sydney.
- The Hume and Princes Highway corridors between Sydney and Canberra, potentially via Wollongong.
- The Hume corridor between Canberra and Melbourne, via Riverina, Murray, and with a potential route option via the Goulburn Valley.

The second and final phase of the study will determine, in greater detail, the technical and engineering requirements of the system, alignment of the track and station locations, costs and patronage. It will also consider the economic viability of the network and recommend financing options along with possible governance arrangements.

The study is due for completion in late 2012. The final report will provide the basis for governments' consideration of the future of High Speed Rail in Australia.

Liveable Cities Program

Panoramic view of Sydney Harbour. *Hamilton Lund; Destination NSW.*

The Australian Government has committed $20 million to fund the Liveable Cities program to help state, territory and local governments meet the challenges of improving the quality of life in our cities.

Liveable Cities supports better urban planning and design in line with the Australian Government's National Urban Policy and COAG principles. Projects supported through the program will provide lessons in planning and urban design that can be transferred and applied across Australia's cities.

Two major *Liveable Cities* projects have been supported in Sydney.

Green Square Town Centre Trigeneration Project

The Australian Government is providing $3.75 million towards Australia's first large scale low carbon trigeneration network at Green Square in the City of Sydney. Trigeneration is a decentralised system for generating electricity which simultaneously provides heating and cooling. It is twice as energy efficient as coal-fired power production. The new network will service 3300 homes and 5500 residents and cut greenhouse gas emissions by around 40,000 tonnes per year.

This project is being undertaken in partnership with Origin Energy and Landcom and investors Mirvac, Leighton Properties and John Newell. This project will demonstrate an alternative way for urban Australia to sustain itself.

Parramatta River City Renewal Project

The Parramatta River City Renewal project will complete three critical missing links along the northern Parramatta River foreshore by providing a continuous east-west separated cycling/walking link between the University of Western Sydney, housing developments and key employment destinations in the Parramatta City Centre.

The Australian Government has committed $3.75 million towards the project which will demonstrate how improvements to infrastructure can improve accessibility, health outcomes and liveability of a populated urban area. The project will be completed by mid 2015.

The Liveable Cities Program is helping to make our 18 major cities more productive, sustainable and liveable.

Looking Forward

The Australian Government has made a number of commitments indicating its priorities under the Nation Building Program. These commitments are about investments to address national productivity objectives by helping to facilitate the efficient movement of goods in, around and through Sydney to take the pressure off Sydney's road network and alleviate urban congestion.

Next Steps

Investment in Sydney's infrastructure, indeed investment in any city's transport infrastructure, has a big impact on Australia's productivity bottom line. By making transport more efficient in a city like Sydney, we can reduce congestion and travel times, as well as maximising the infrastructure we already have in place.

Through important initiatives like the COAG Reform Council's work on strategic planning systems in our cities, improvements can be made to our ability to better plan for and invest in our future. Such initiatives require all levels of government to be engaged and working together. In addition, the Australian Government is also working through other reforms and programs to ensure that it does its part to guarantee Australia's future prosperity.

The Australian Government has set in train a range of initiatives aimed at improving long term planning for transport, with strong productivity benefits. There is scope for the Australian and state governments to build upon this work and collaborate even more effectively, including with Infrastructure Australia, and to further define national investment priorities.

Productivity and the Australian Government

The Australian Government's role in productivity is to create an environment that facilitates sounds decision-making by business and to build the capabilities that industry needs to improve productivity.

Infrastructure and transport are especially important in creating this environment; enabling productivity by safely and efficiently moving people and goods across our vast nation, and connecting our nation to the global economy.

Nation Building 2

As we move into NB2, we are renewing our focus on productivity through investment in our national road and rail networks. Under NB2, the Australian Government will continue to combine a national approach to planning with its productivity agenda, as good, long term planning is imperative in achieving sustainable productivity gains.

Decisions about infrastructure investment under NB2 will be closely linked with our strategic planning work and reform agendas to maximise the impacts of our investments.

Investment through NB2 will also be guided by the program's overarching objective of 'lifting Australia's productivity through nationally significant land transport infrastructure'. This will ensure that Australian Government funding is being directed at those projects of greatest national significance and with the greatest potential to improve productivity.

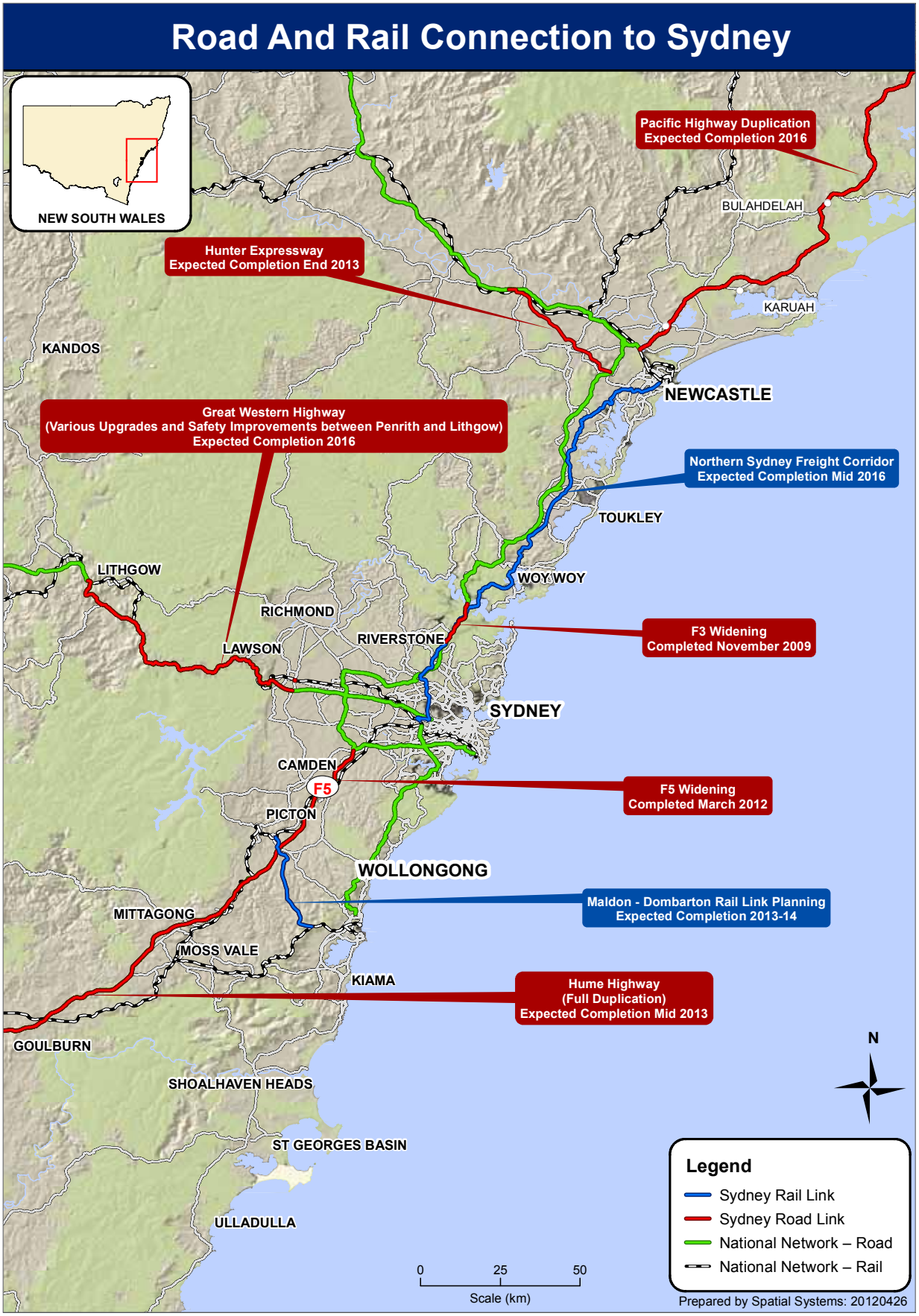
Microeconomic Reforms

The Australian Government is also driving a range of microeconomic reform initiatives that will help to boost national productivity by improving the way that our infrastructure is planned, managed, funded and delivered.

These reforms include:

- the streamlining of approval processes to cut bureaucracy and to allow projects to start more quickly;
- simplifying contracting rules through the National Prequalification System; and
- developing and reviewing the National Public Private Partnership Guidelines—helping to encourage greater private sector involvement in delivering key infrastructure projects.

Road And Rail Connection to Sydney



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