



North West Rail Link




Transport
for NSW

Delivering the North West Rail Link

23 October 2012

northwestrailink

Outline of briefing

- 
- A blurred high-speed train is stopped at a station platform. The train has a white upper body and a blue lower body with yellow accents. Through the windows, several passengers are visible, some sitting and some standing. On the platform, a woman with her back to the camera is waiting. She is wearing a dark jacket, dark pants, and a red bag. The platform floor has a blue and white checkered pattern.
- 1. Project status and context**
 - 2. Financing and delivery**
 - 3. Industry engagement**
 - 4. Tunnels and stations civils**
 - 5. Surface and viaduct civils**
 - 6. Questions**

The starting point

“the **customer**
is at the **centre**
of everything we do in
transport”

Project overview

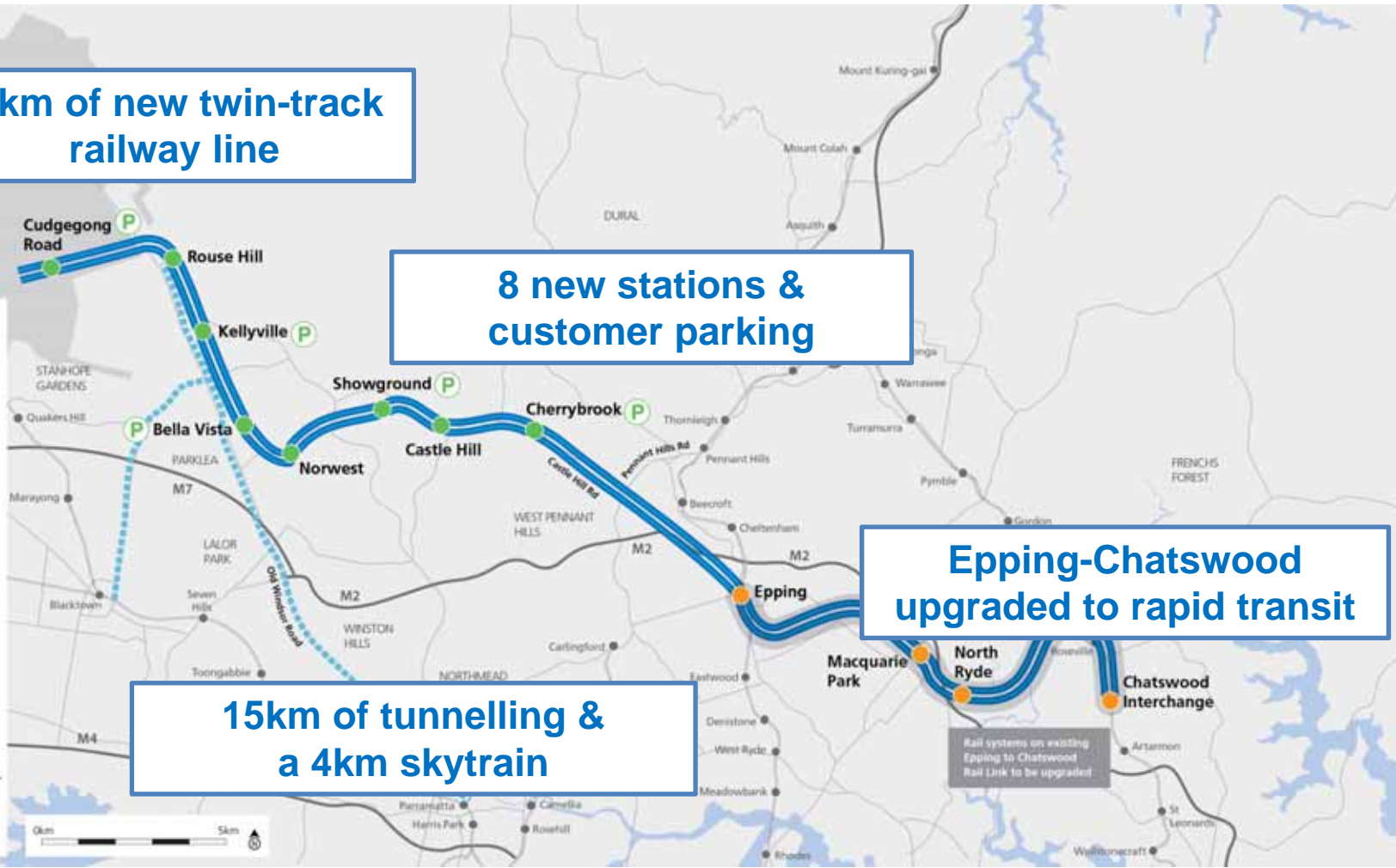
23km of new twin-track railway line

8 new stations & customer parking

Epping-Chatswood upgraded to rapid transit

15km of tunnelling & a 4km skytrain

- Legend**
- Project**
- New railway stations
 - Existing railway stations
 - Commuter car parking facilities
- Facilities at all new stations**
- Bus interchange
 - Taxi
 - Cycle
 - Kiss and ride
 - Easy access
- Other**
- Existing railway
 - Strategic road network
 - Road network
 - Bus T-ways



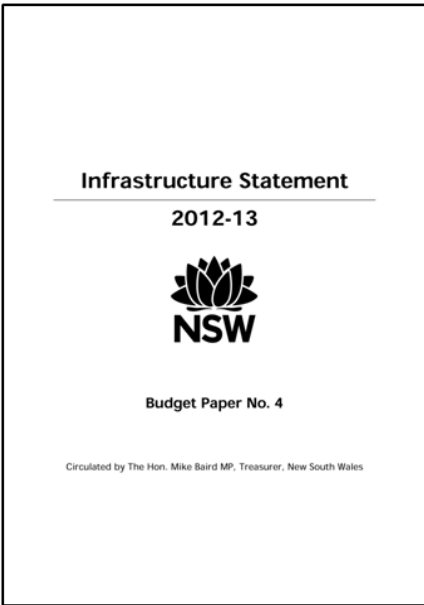
Key achievements so far

• Complete initial geotechnical investigations (boreholes, survey)	✓
• Complete & exhibit EIS1 document – April to May 2012	✓
• Exhibit corridor options for future extension – April to May 2012	✓
• Hold major community information sessions over April – May 2012	✓
• Positive industry engagement process over last 12 months	✓
• State budget allocation for project funding – June 2012	✓
• Overall delivery strategy confirmed – formal procurement underway	✓
• Early construction works managing contractor appointed – August 2012	✓
• Short list of three consortia for tunnelling contract announced – Sept 2012	✓
• Environmental Impact Statement 1 approved by Minister for Planning	✓
• On program for TBMs in ground by end 2014	✓

Project alignment with State strategies



State Plan 



Budget 



Planning 



Transport 



Rail 



SYDNEY'S RAIL FUTURE

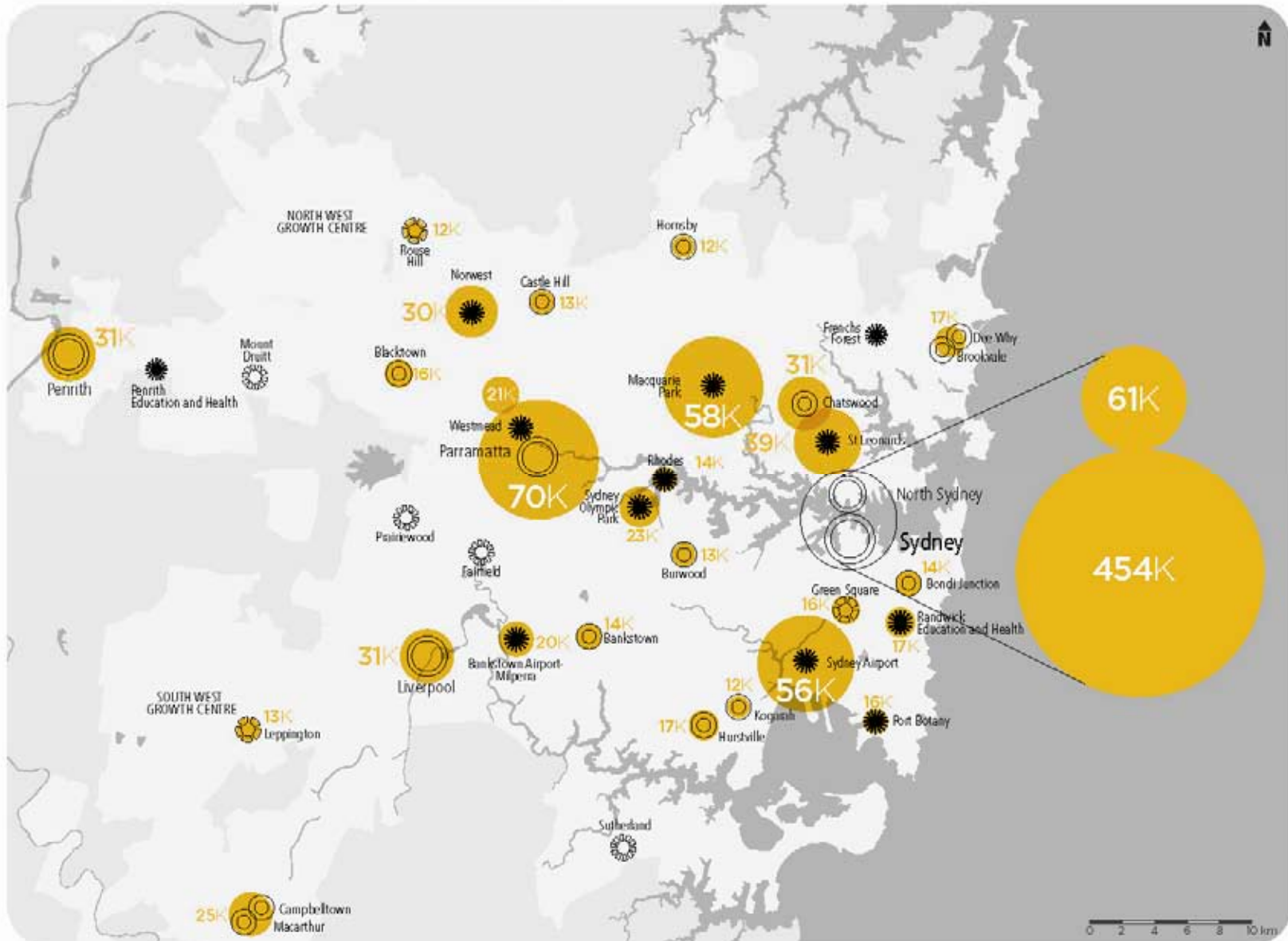
Modernising Sydney's Trains

June 2012



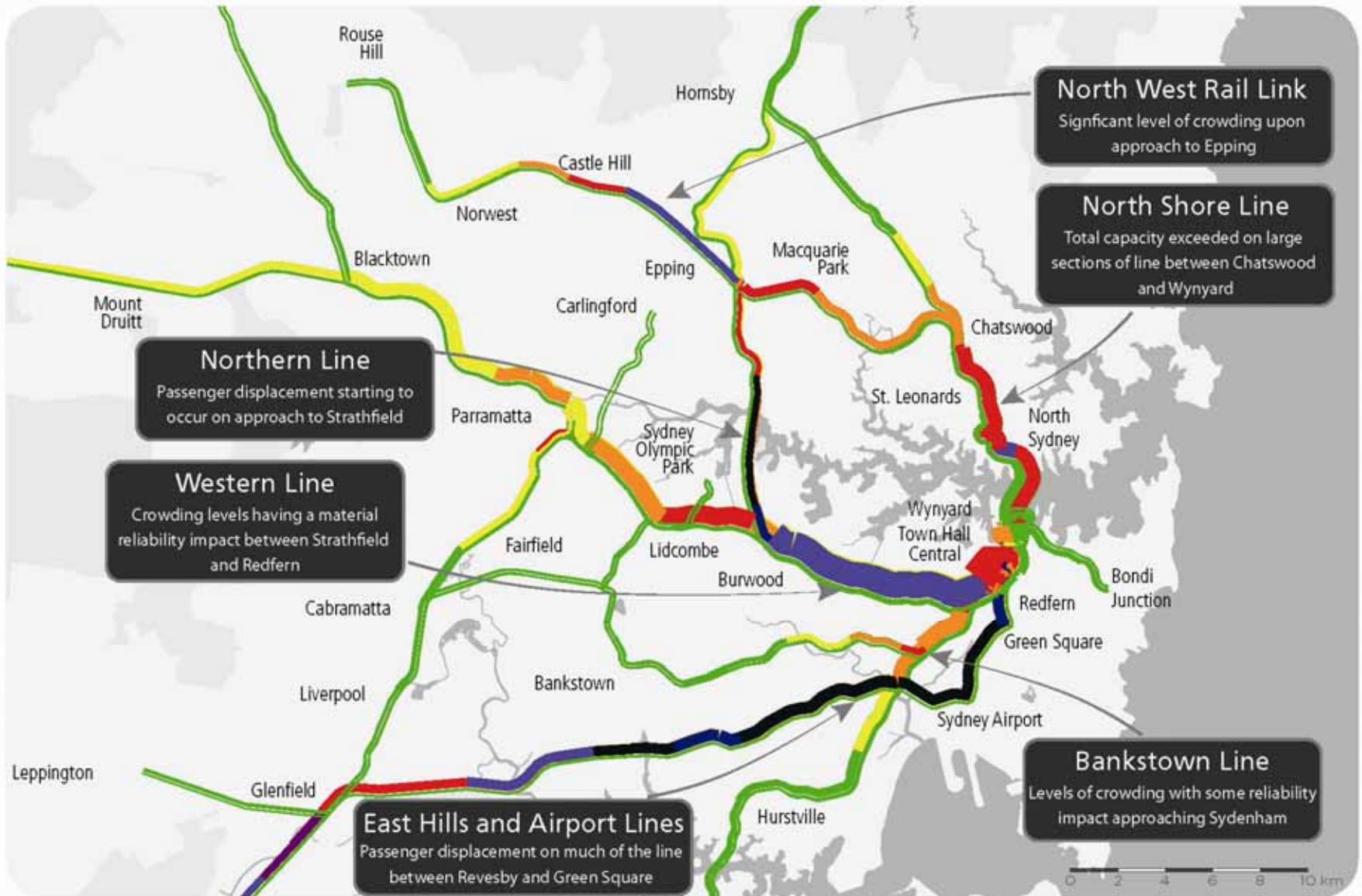


The challenges: A growing city





The challenges: more capacity



Services tailored to customer needs

In line with the approach of focusing specifically on the different needs of customers, Sydney's Rail Future will deliver a three-tiered system to respond to changing customer needs.

TIER 1: Rapid Transit

- Frequent 'turn up and go' services without the need for consulting a timetable
- Fast single deck trains, with plenty of seats, more doors, designed for easy boarding and alighting.




TIER 2: Suburban

- Timetabled services
- Double deck trains with more seats per train.

TIER 3: Intercity

- Timetabled services
- Double deck trains for Central Coast, Newcastle, Wollongong and Blue Mountains services
- Comfortable services for long distance commute and leisure travel with on-board facilities for improved customer convenience.

Sydney's Rail Future

-  Rapid Transit Network (Single Deck)
-  Suburban Network (Double Deck)
-  InterCity (Double Deck) and Regional Diesel





Transport
for NSW

FIVE STAGES

OF

Sydney's Rail Future

1

Operational efficiencies

- Timetable overhaul to introduce standardised and regular 'clockface' stopping patterns, more express services
- Significantly improved dwell management, with better management of door closure
- Platform de-cluttering to allow clear passenger entrance and exit
- Better incident recovery management through improved operational processes.

2

Network efficiencies

- Completion of South West Rail Link, station upgrades and Rail Clearways projects
- Introduction of even simpler timetables across the network
- Introduction of Automatic Train Operations
- Transition to dedicated fleet types for some lines
- Track infrastructure enhancement
- Platform re-design.

3

New rapid transit system

- Rapid transit trains are used to offer a comfortable, frequent, fast and high capacity link to busy inner areas
- Completion of the North West Rail Link and procurement of rolling stock for the new rapid transit single deck train system initially operating between the North West and Chatswood, with a cross-platform interchange to suburban services for those customers travelling to the CBD
- There will be a train from Chatswood to the CBD every three minutes in peak periods
- In line with the North West Rail link, upgrade of the Epping to Chatswood Rail Link to a high capacity rapid transit system.

4

Second Harbour Crossing

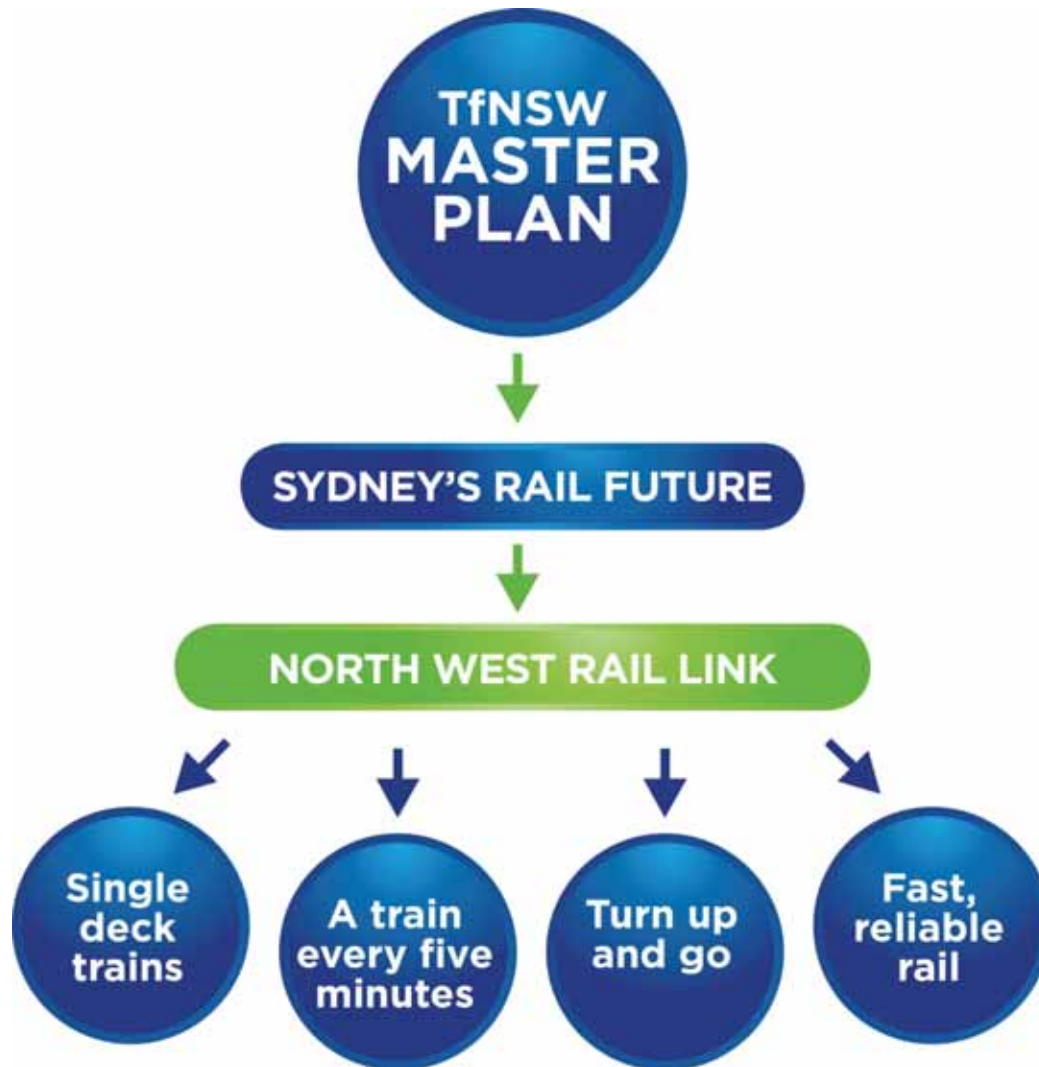
- Completion of a new tunnel under the Harbour and a new Sydney CBD line, allowing services from the North West Rail Link to extend directly to the Sydney CBD
- The second Harbour Crossing will create the largest increase in capacity to the Sydney rail network for 80 years
- Untangling the CBD enables major capacity increases on the Western line.

5

Southern sector conversion

- Extension of the new single deck service to Bankstown and Hurstville
- Continue major timetable changes to the existing suburban services to continue major capacity increases to the South West and Western Sydney
- Better express services introduced due to separation from rapid transit.

Sydney's Rail Future & North West Rail Link



Many project elements are the same

- Eight new stations
- Major bus interchange facilities at Rouse Hill and Castle Hill
- 4,000 car parking spaces across five stations
- Bus, pedestrian, car, cycling and accessible facilities at all stations
- 15.5km of new tunnels
- 4km of skytrain viaduct between Bella Vista and Rouse Hill

Some project elements are different



- First train line in Sydney to feature new single deck, rapid transit trains
- 12 trains per hour in peak – no need for timetable
- Ultimately capacity to cater for 20 trains per hour
- Railway systems on existing line between Epping and Chatswood upgraded to create an integrated line with NWRL
- Passengers going to CBD simply cross platform at Chatswood to change trains
- Train every 3 minutes from Chatswood to the city

Single deck trains

- Sydney's global economic corridor extending further to north west
- Key area for transit work trips
- 1/3 of people off the train before – or at – Chatswood
- 40% + off the train before the city
- More trains per hour
- Carry about 50% more people per hour than double deck trains

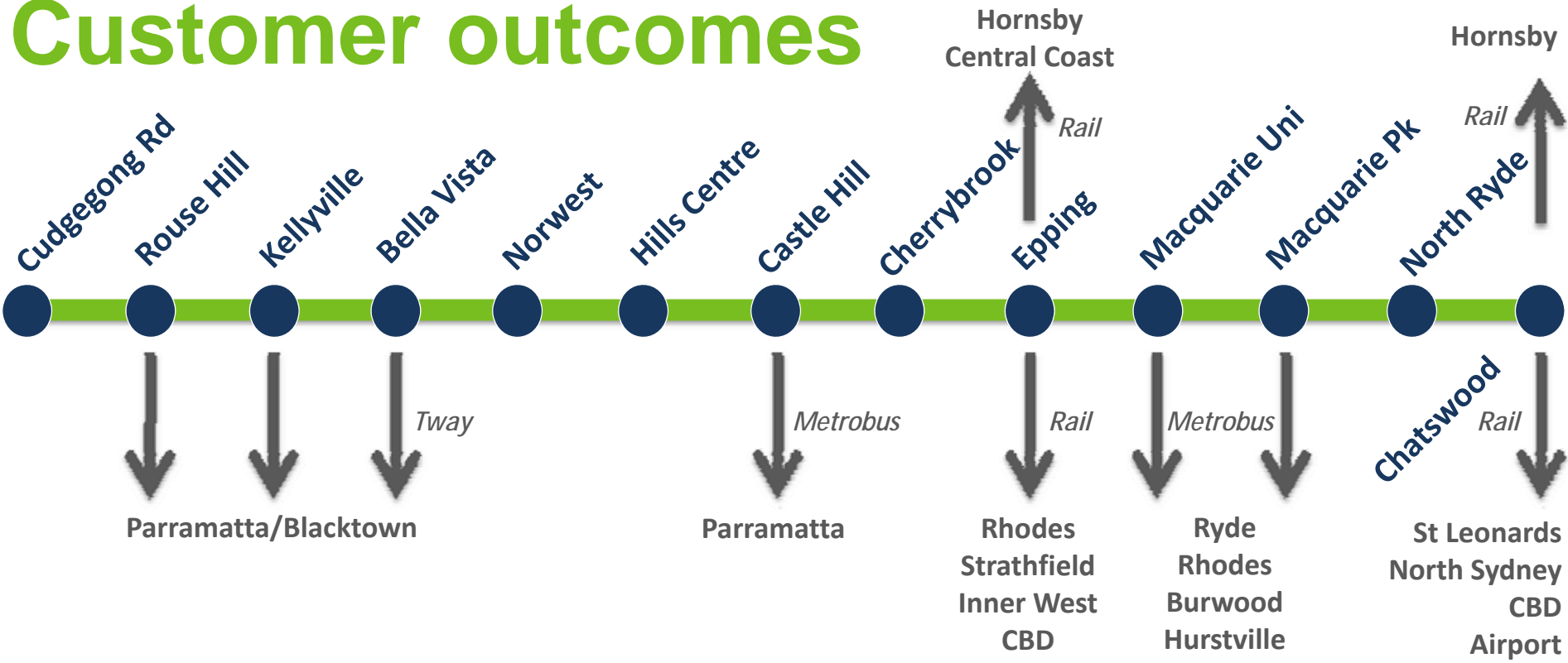


First look ... Northwest station

northwestraillink



Customer outcomes



- Better connections
- Better frequency and reliability
- Faster travel times (30-70%)
- More travel choices
- Reduced congestion
- Better housing and jobs

EIS 2 and precinct planning

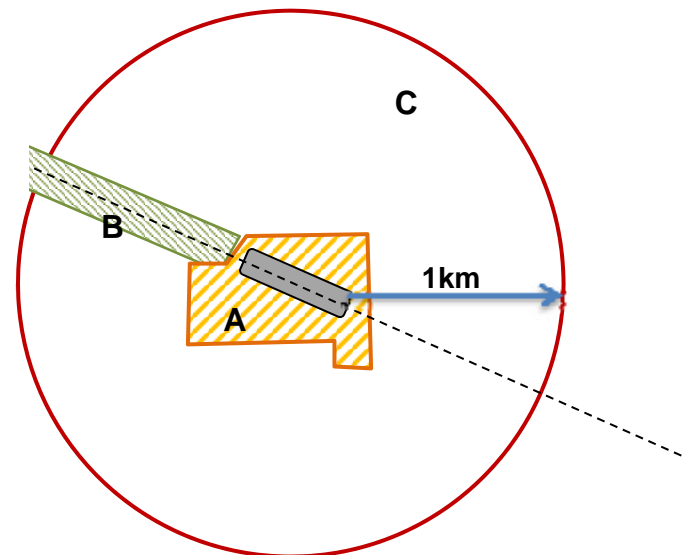
Joint Precinct Planning Working Group established with local councils and the Department of Planning & Infrastructure to:

- Establish a shared vision and inform future land use changes
- Ensure integration with station interchange designs

A. Interchange

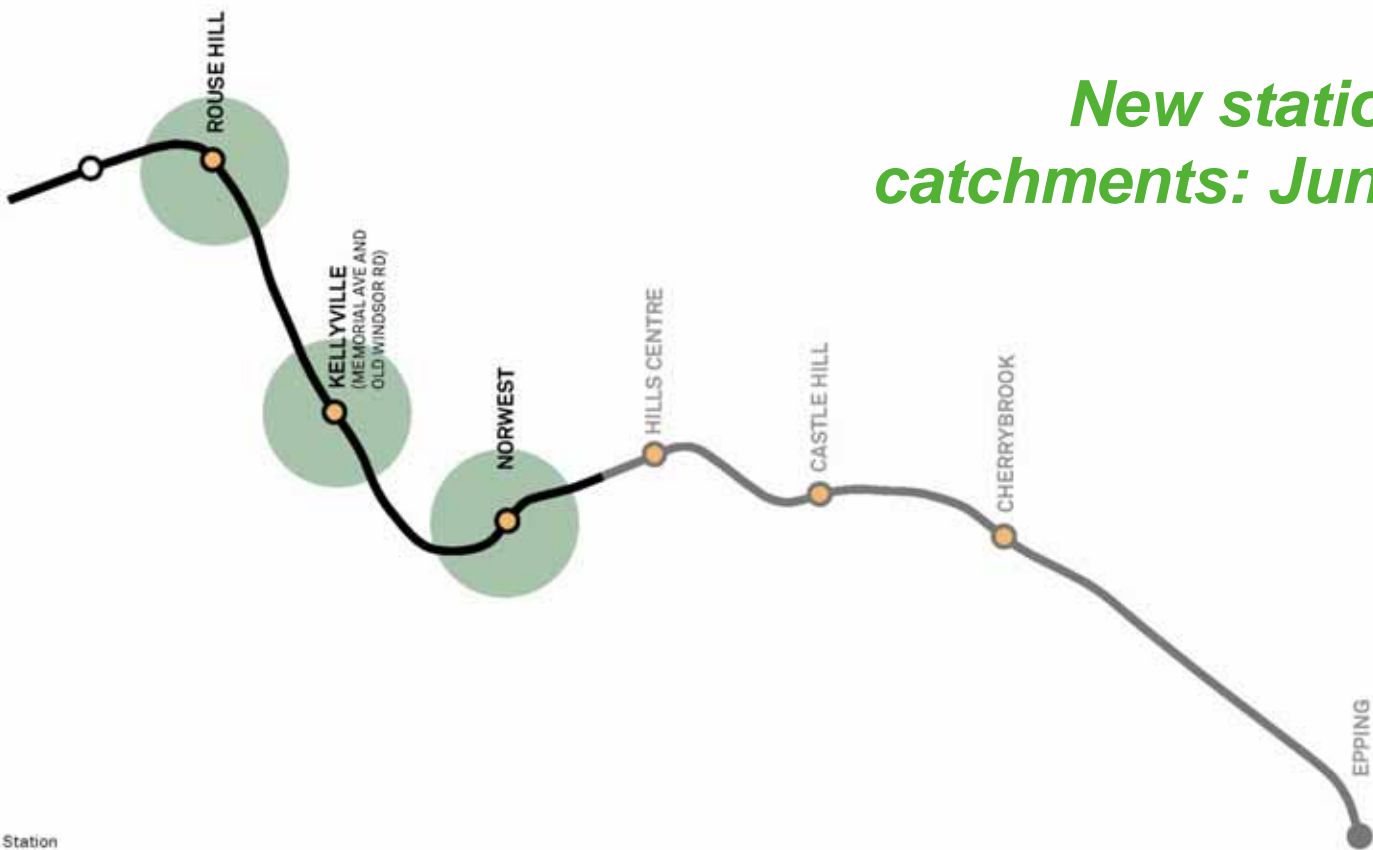
B. Corridor




C. Precinct



Precinct planning – project optimisation

New station 1km catchments: June 2011 scope



- KEY:**
-  NWRL Station
 -  NWRL Alignment
 -  Station catchment

Population and employment catchment within an indicative 1km walking distance of selected NWRL Station in 2021

CORE SCOPE

Precinct planning – project optimisation

New station 1km catchments: December 2011 scope



- KEY:**
- NWRL Station
 - NWRL Alignment
 - Station catchment

Population and employment catchment within an indicative 1km walking distance of selected NWRL Station in 2021

Enhanced scope provides walking access to stations for:

- + 16,000 extra people**
- + 12,700 extra jobs**
- + 1,000 extra parking spaces**

ENHANCED SCOPE

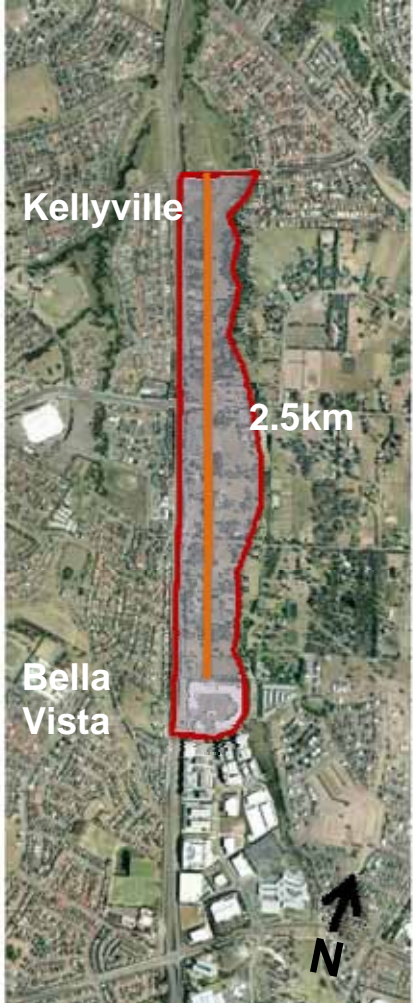
Precinct planning

Norwest to Cudgegong corridor includes:

- 5 new NWRL stations + 9 NW T-way stops
- Connections to CBD & Global Economic Corridor, Parramatta, Blacktown, Sydney Orbital
- Strategic centres: Rouse Hill and Norwest
- Release areas: Balmoral Road, Rouse Hill, Area 20, Riverstone East, Second Ponds Creek



Precinct planning



Bella Vista to Kellyville



Rhodes Peninsula



Macquarie Park

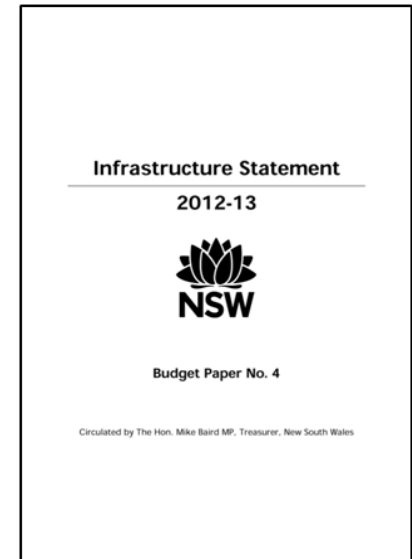


Sydney CBD

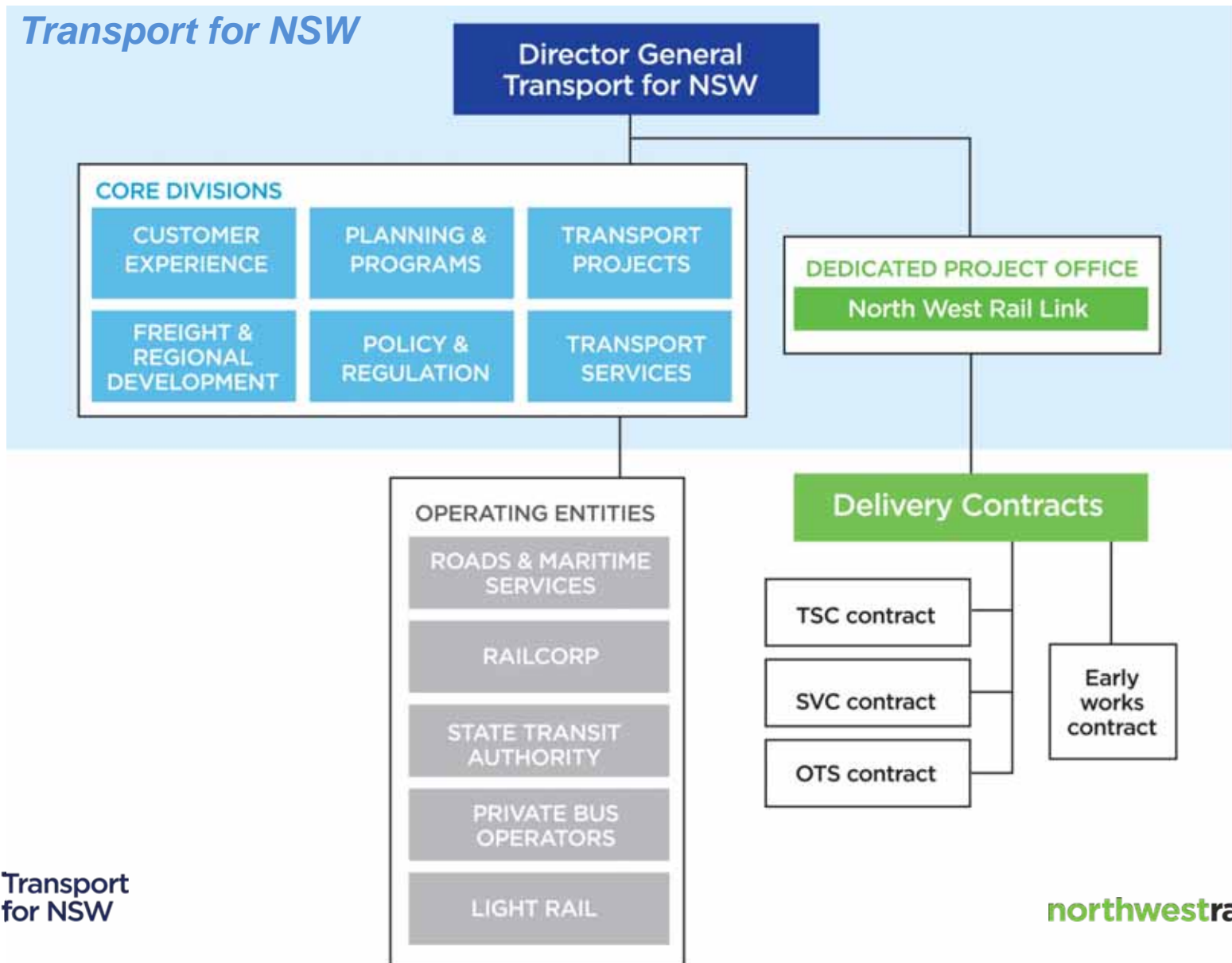
Project funding

The NSW Government is committed to fully funding the project

- The NSW State Budget for 2012-13:
 - **\$360 million in 2012-13**
Project development, property acquisition & early works
 - **\$3.3 billion over the four year budget period**
Activities that follow award of the major construction contracts
- Funding beyond four years allocated in subsequent budgets
Consistent with the standard “forward estimates” budget processes
- The project is not contingent on Federal Govt funding



Project governance



Delivery Strategy and Status

Colin Rudd – Deputy Project Director, Project Delivery

Industry Engagement Process

Industry Engagement Process

1. Inform industry of project status

- ‘Reference case’ scope/delivery model

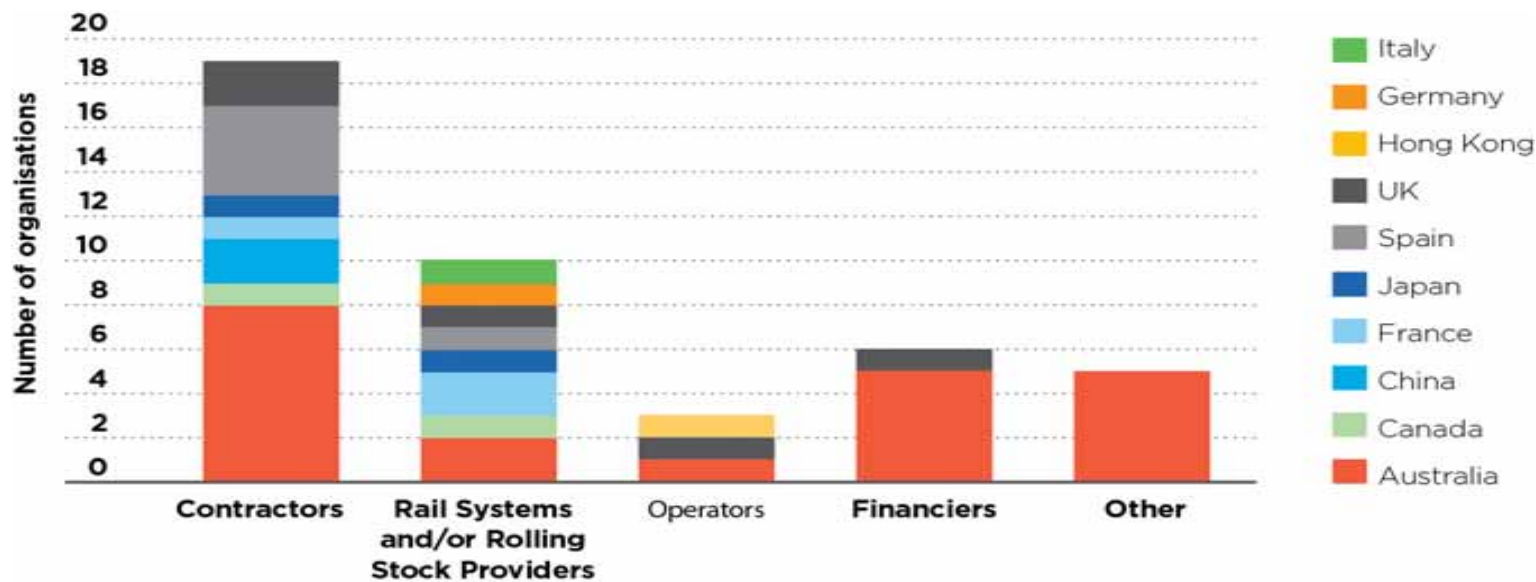
2. Seek industry feedback on:

- Scope alternatives
- Delivery model alternatives

***Aim was to challenge
‘big picture’ ideas to maximise
innovation and enhance project***

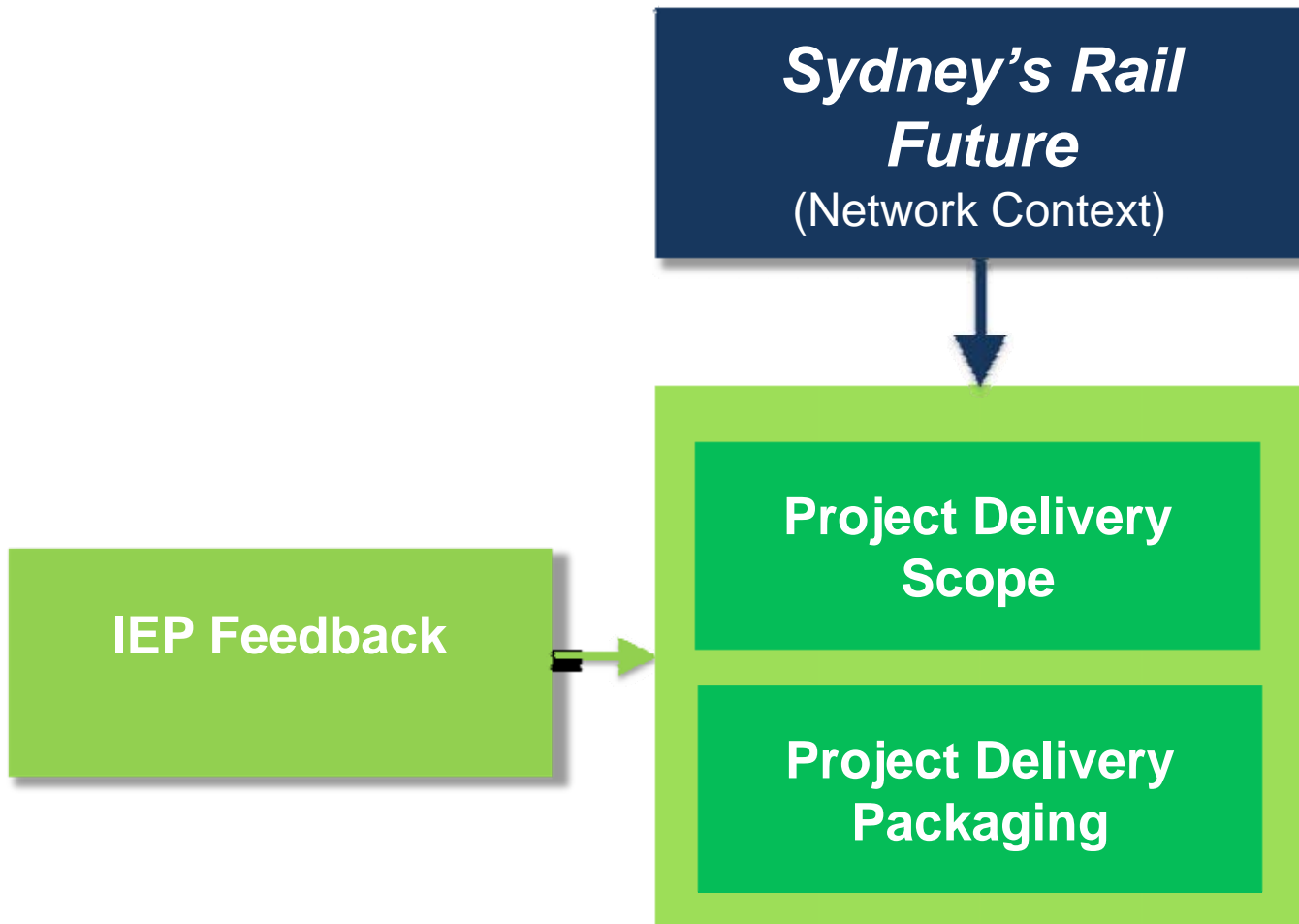


Industry Engagement – Extensive Feedback



- \$8Bn Project too big to deliver using single package
- Clear logic to splitting civil infrastructure and rail systems /operations packages
- Strong support for splitting civil works into 2 packages;
 - Tunnels, and
 - Surface earthworks and viaduct
- Appetite for rail systems, rollingstock and operations PPP

Project Delivery Strategy



Project Delivery Strategy (cont)

Cudgegong

Bella Vista

Epping

Chatswood

Operations, Trains & Systems (OTS)

Partially privately financed (with a substantial State contribution) – subject to VfM

Train & station operations

Mechanical, electrical, signalling, train control & other systems (new and upgraded)

Supply & maintain rolling stock, including maintenance facility

New stations construction & fit-out

Overall infrastructure maintenance

Surface & Viaduct Civils (SVC)

Design & construct

Surface civil infrastructure (including viaduct), Bella Vista to Cudgegong

Tunnels & Station Civils (TSC)

Design & construct

Driven tunnels, station excavation, ground support

Early Works (EW) – Managing Contractor

HV power, demolition, road and access, service diversions

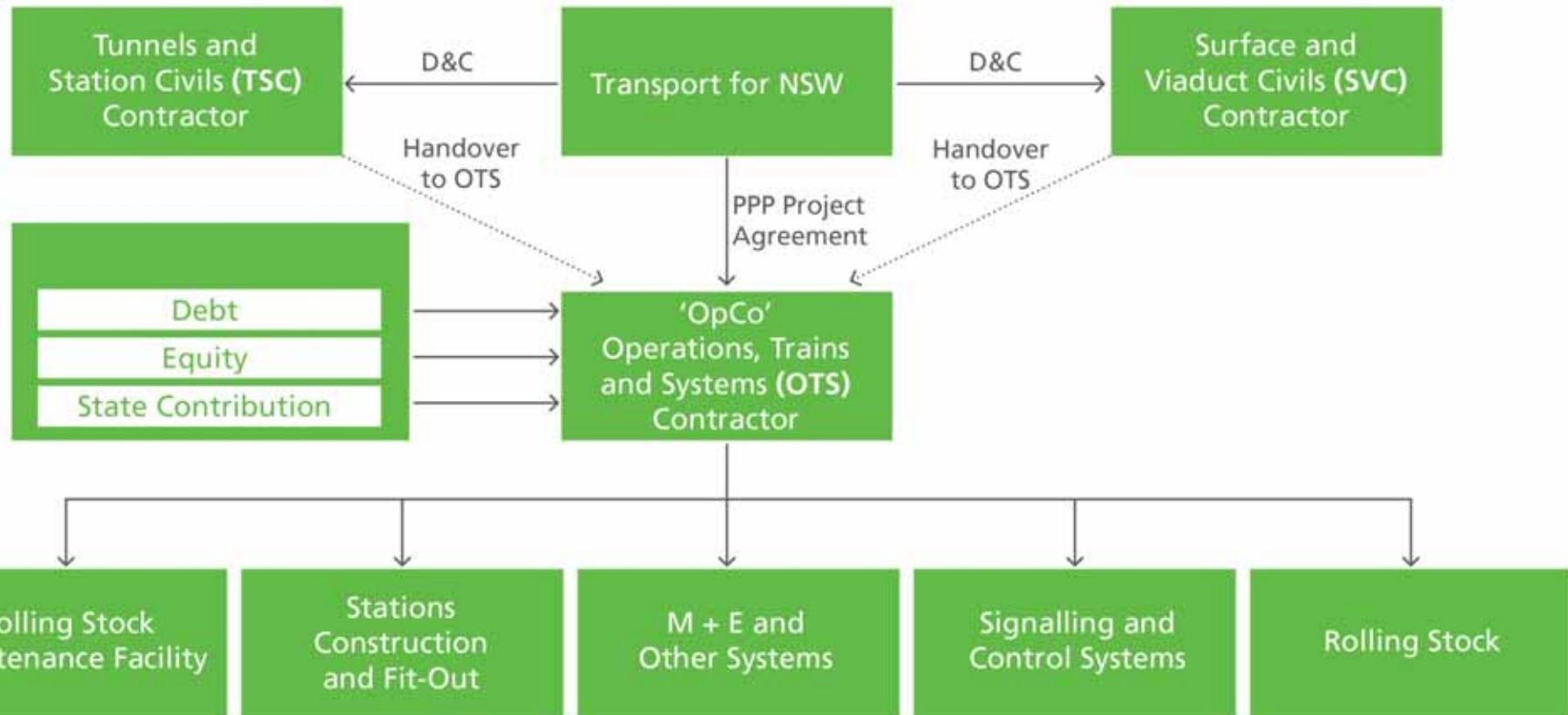
Cudgegong

Bella Vista

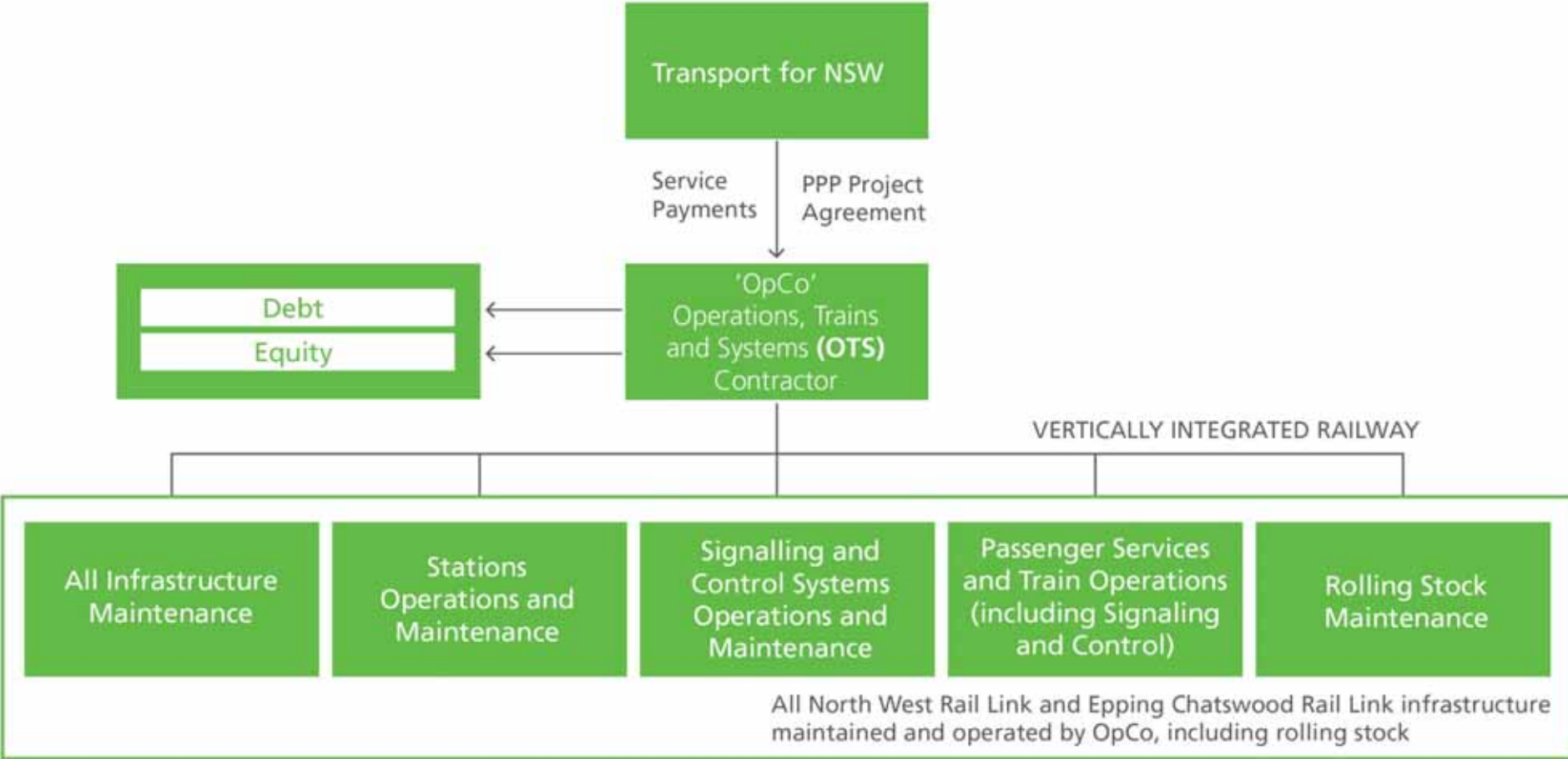
Epping

Chatswood

Delivery Strategy - Commercial Arrangements – Delivery Phase



Delivery Strategy - Commercial Arrangements – Operational Phase

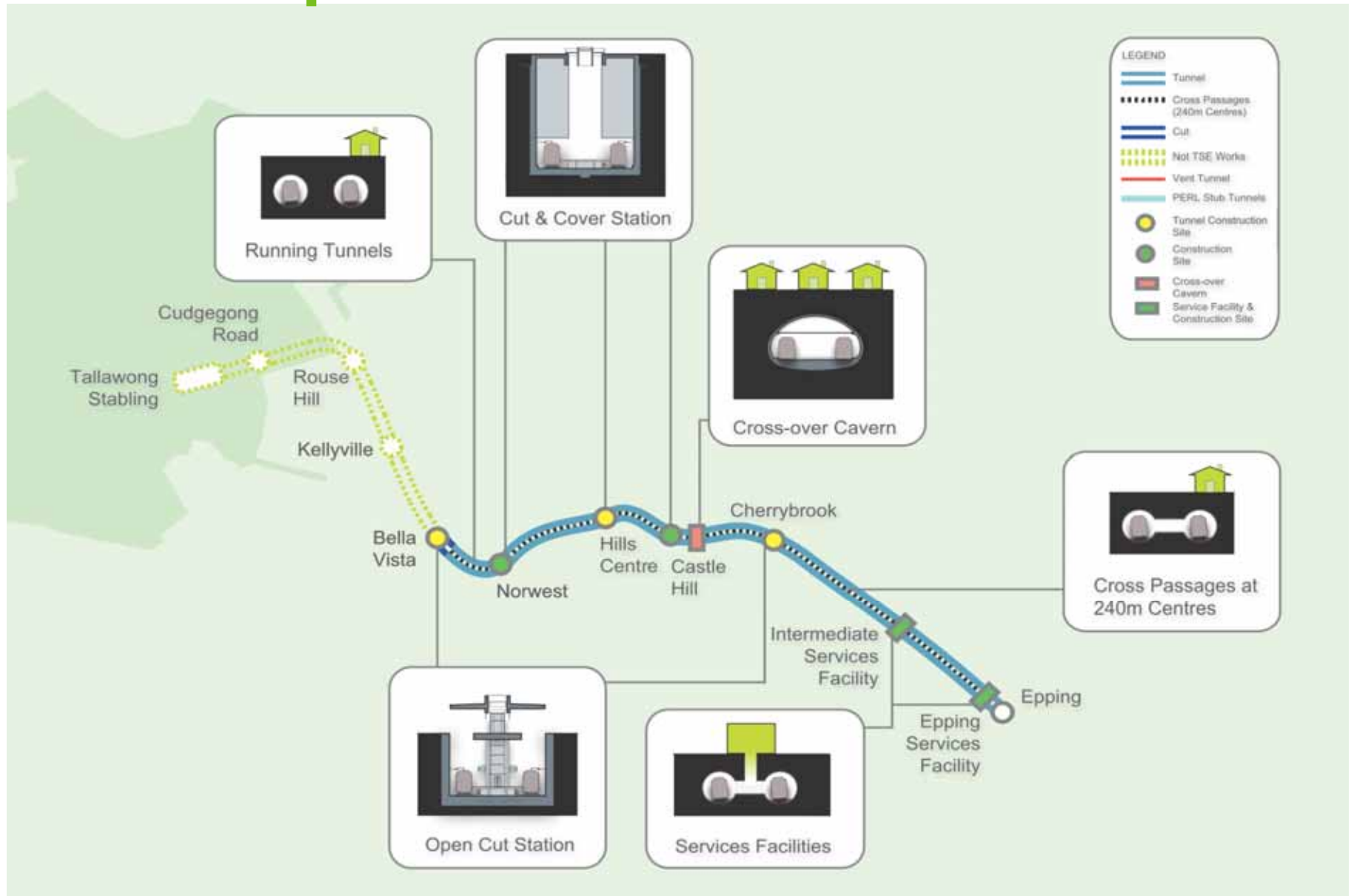


Delivery Strategy - Asset Standards & Rail Safety Accreditation

- New 'Asset Standards Authority' being established:
 - Independent body within Transport for NSW
 - Responsible for assuring the design safety & integrity of the network
 - Contractors to become authorised parties to carry out design (Authorised Engineering Organisations)
- Rail Safety Accreditation proposed strategy:
 - Transport for NSW, as a Rail Infrastructure Manager, to be entity accredited during TSC and SVC contract works, until handover to OTS
 - OTS entity to be accredited as Rail Infrastructure Manager & Rolling Stock Operator during construction and operation



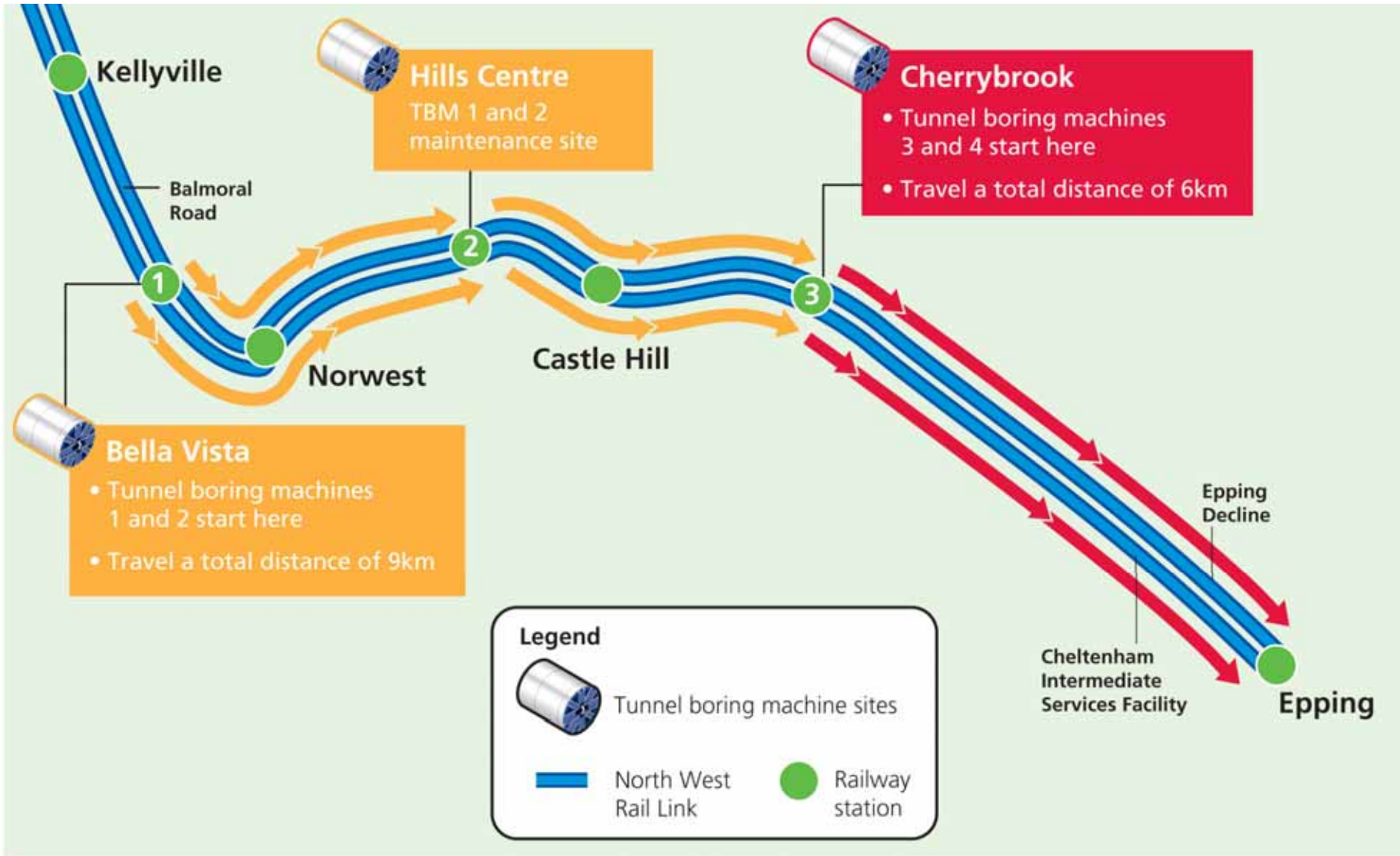
TSC Scope



TSC Scope - cont

- Twin running tunnels:
 - Each of approx. 6 metres internal diameter and 15.5km in length
 - Constructed predominantly by TBMs – plus some road header
- Cross passages between the running tunnels (55 + 4)
- Mined caverns, niches & openings:
 - For crossovers (Castle Hill) & equipment
- Permanent concrete lining:
 - In all tunnels, caverns, cross passages & underground openings
- Excavations and temporary support (5 No):
 - Cherrybrook, Castle Hill, Hills Centre, Norwest & Bella Vista stations

TSC Reference Case Methodology



TSC Contract Objectives

1. **Provide tunnels and infrastructure** - 100 year design life
2. **Facilitate subsequent construction** of all rail systems, station structures and operation of rolling stock
3. **Minimise impacts on the environment** - including minimising carbon emissions and embodied environmental impacts
4. **Minimise disruption, delay and inconvenience** to Stakeholders and the community
5. **Achieve a value-for-money outcome** - effective risk management and whole-of-life cost
6. **Commence tunnelling in 2014**

SVC Contract Scope

- 4 km skytrain with stations at Kellyville & Rouse Hill
- 4 km of bulk earthworks including all cut, fill, ground support & embankments
- Multiple bridges



SVC Contract Objectives

1. **Provide civil infrastructure** - 100 year design life
2. **Facilitate subsequent construction** of all rail systems, station structures and operation of rolling stock
3. **Minimise impacts on the environment** - including minimising carbon emissions and embodied environmental impacts
4. **Minimise disruption, delay and inconvenience** to Stakeholders and the community
5. **Achieve a value-for-money outcome** - effective risk management and whole-of-life cost
6. **Defining project feature** – must be an elegant blend of engineering and architecture and integrate with urban environment
7. **Commence construction in 2014**

SVC – Viaduct Construction



OTS Scope

1. **Design, construct operate and maintain rapid transit rail link:**
 - a. Greenfields component – Cudgegong Rd to Epping
 - b. Brownfields component - upgrade ECRL
2. **Includes** station construction, rail and station systems (incl. track), rolling stock, stabling and maintenance depot, carparking and integration with transport network
3. **PPP** - with significant state contribution – 15 year operating term
4. **OPCO to be the accredited entity**
5. **Focus on customer service and operations** - rapid transit – turn up and go (5min service at peak)
6. **Extensive industry consultation** - local and overseas

Early Works

Hills News

TUESDAY, AUGUST 7, 2012 A FAIRFAX COMMUNITY NEWSPAPER CLASSIFIEDS PH: 53 24 25



Magic moments

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PAGE 7



By Sally Willoughby

PREPARATION work for the North West Rail Link's skytrain has begun.

works were proof the rail line was going "full steam ahead". "I am pleased with the progress that has been made in such a short space of time with the North West Rail Link and delighted that our key election commitment is on its way to completion," Mr Elliott said.

The rail link's project team said the north-west T-way bus station will be unaffected by the construction but the T-way car park will be temporarily relocated to the eastern side of the bus station.

The four-kilometre skytrain will run from Bella Vista to Rouse Hill.

By Sally Willoughby

PREPARATION work for the North West Rail Link's skytrain has begun.

Demolition work at the Memorial Avenue construction zone at Kellyville started last week.

The construction site, bounded by Old Windsor, Memorial and Balmoral roads, will be the staging point for the construction of the skytrain and contain the project's second concrete mixing plant.

About 6000 cubic metres of concrete will be produced at the plant and distributed along the viaduct corridor.

Baulkham Hills MP David Elliott said the first construction

works were proof the rail line was going "full steam ahead".

"I am pleased with the progress that has been made in such a short space of time with the North West Rail Link and delighted that our key election commitment is on its way to completion," Mr Elliott said.

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Early works

1. **Objective** is to minimise risk and reduce lead times for major packages

2. **Scope:**
 - a. HV power for tunnelling sites
 - b. Design and/or construction of intersections and road works to facilitate site access
 - c. Demolition
 - d. Site investigation – geotech, survey, archaeology etc.

4. **Boulderstone appointed** as Managing Contractor in August 2012

Key dates for transaction program

ELEMENT	INDICATIVE TIMING
Tunnels and Station Civil Works Contract	
Commence procurement (Expressions of Interest release)	29 June 2012
Announce tender shortlist	Mid September 2012
Request for tender released	October 2012
Contract award	Q3 2013
Tunnel boring machines in ground	Q4 2014
Surface and Viaduct Civil Works Contract	
Commence procurement (Expressions of Interest release)	October 2012
Request for tender released	Q1 2013
Contract award	Q4 2013
Operations, Trains and Systems Contract	
Commence procurement (Expressions of Interest release)	November / December 2012
Expressions of Interest preparation period	8 to 10 weeks
Request for tender released	Q2 2013
Contract award	Q3 2014

Industry Opportunities

1. **Early Works** – design and construction packages
2. **Contract Management** – tenders for each role (TSC, SVC, OTS) – TSC tender this year
3. **Independent Certifiers** - tenders for each role (TSC, SVC, OTS)
4. **TSC - Tunnel & Station Civil Works**
 - Tenders issued October 2012
5. **SVC – Surface & Viaduct Civil Works**
 - EOI issued
 - Tenders Q1 2013
6. **OTS – Operations, Trains & Systems**
 - ROI issued - EOI Nov/Dec 2012
 - Tenders by mid-2013

Available material



Information also available at:
www.transportmasterplan.nsw.gov.au
www.northwestrail.com.au ←
www.tenders.nsw.gov.au

