



# Adapting the CLOCS approach to Sydney Metro

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# Australia's biggest public transport project

## Metro North West Line

Opened 26 May 2019



13 stations



4000 commuter car parks



36 kilometres

## City & Southwest

Opening 2024



18 stations



New CBD connections



30 kilometres, including under Sydney Harbour

## West

Construction starts 2020



Eight stations



Connecting Greater Parramatta and the Sydney CBD



Western Sydney population, 2036

## Sydney Metro - Western Sydney Airport

Construction starts 2020



Six stations



Connecting Western Sydney International Airport to the rest of Greater Western Sydney

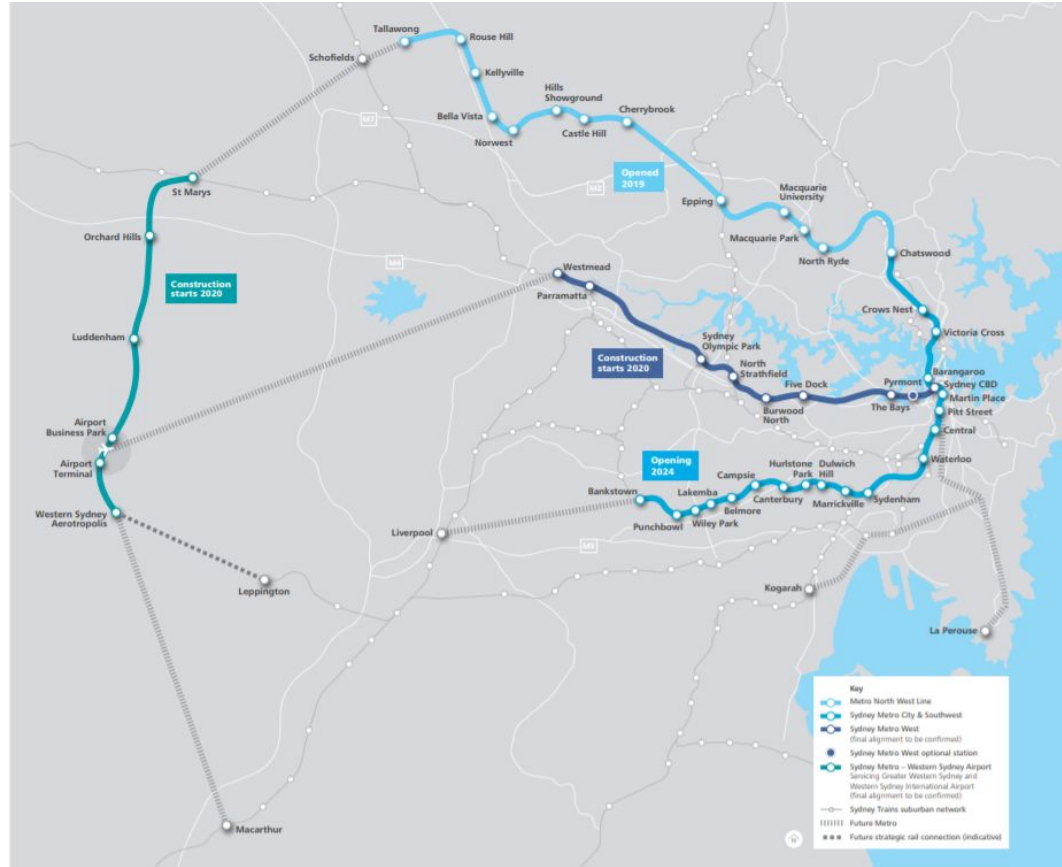


Servicing Greater Western Sydney

 Sydney Trains suburban network

 Future metro

 Future strategic rail connection (indicative)



# Sydney Metro's construction freight task

Significant construction freight task across Greater Sydney, transporting:

- Demolition waste and excavated material
- Construction materials including steel, concrete, precast elements, construction plant, and equipment

Sydney Metro City & Southwest has transported:

- 99,746 tunnel segments
- 5.8 million tonnes of excavated spoil
- more than 1 million tonnes of construction materials to date



# Construction logistics challenges in Sydney

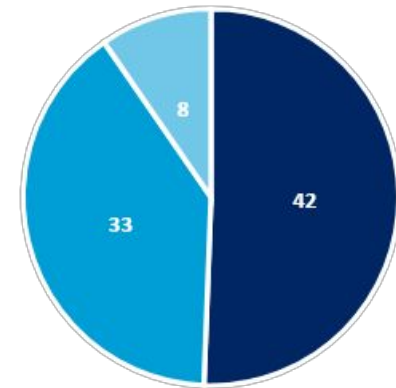
- Unprecedented rail infrastructure and high-rise development in 'brownfield' urban environments
- Multiple interfaces with local businesses and communities
- Environments with high volume of pedestrian traffic, bicyclists, couriers, commuters, etc.
- Highest priority to maintain public safety whilst minimising impacts to the community



# Understanding our risk profile

- Recognising the risks don't stop at the hoarding and responsibilities extend into the community
- Understanding the risk profile of existing road environment and industries we work with
- Approximately 51% of fatalities involved in heavy truck crashes in Sydney region were a vulnerable road user (pedestrian, cyclist or motorcyclist)
- Many crashes where heavy vehicle blind spots are contributing factor

Lives lost in fatal crashes with heavy trucks in Sydney Metropolitan Region (2015 - 2019)



■ Vulnerable road user ■ Driver ■ Passenger

Source: NSW Centre for Road Safety (2020) Interactive Crash Statistics.

# Sydney Metro's approach to safety

- Overarching Health and Safety Model
  - Strong direction and governance
  - Systematic application of health and safety
  - Engagement, collaboration and consultation
  - Evidence-based decision making
- Lifecycle approach to health and safety
  - Integrated into all project phases including planning, design, procurement and delivery
- “Safe System” approach applied to road safety



# Our delivery partners



# Adopting best practice

- Reviewing lessons learned, industry best practice, and academic literature
- Best practice approaches locally and internationally
- CLOCS identified internationally and recognised as best practice approach to managing road safety in construction through planning and procurement
- Road safety requirements adapted and included within project safety standards and contract specifications





# Safe vehicles

Minimum vehicle safety requirements included in safety standards and contract specifications

- Blind spot elimination
- Side underrun protection
- Telematics / GPS monitoring
- Nearside and rear warning signage
- Enhanced visibility markings

Additional active and passive safety features are promoted and preferred in contract documents



# Safe drivers

## Sydney Metro Heavy Vehicle Driver Introduction

- Low-risk driving behaviours
- Driver professionalism
- Sharing the road safely with vulnerable road users
- Familiarisation of haulage routes, associated hazards and risks
- Accredited units provided

As at October 2020, more than 1,697 drivers trained, with 95% positive feedback received.



# Safe and aware community

## “Be Truck Aware” campaign

- Provide awareness and reinforce safe behaviours when sharing the road with heavy vehicles
- Digital and physical advertising assets
- Community engagement with street ambassadors and at Sydney Royal Easter Show
- Over 4.8 million people reached
- Public television commercial in NSW



# Safety in planning and design

Barging at Barangaroo and Blues Point:

- Alternative mode used to transport tunnel boring machinery and up to 760,000 tonnes of excavated spoil.
- This meant over 40,000 less truck movements in highly congested urban areas

Truck Marshalling Facility at White Bay

- Reducing congestion, emissions and traffic risk in Sydney CBD
- Facility for safety and compliance inspections



# Monitoring and assurance

- Sydney Metro health and safety governance across program
- Collaboration with supply chain partners on issues and initiatives
- Assurance program involving regular surveillance monitoring and audit (client-led and third-party)
- Independent environmental audits (construction traffic and transport)



# Adapting CLOCS in Australia

Sydney Metro strives to ensure it has the safest operators and construction partners

Adopting a CLOCS approach in Australia will provide:

- Consistent level playing field across major public infrastructure projects;
- Industry partners with confidence in winning work;
- Significant safety and efficiency improvements throughout project supply chains;
- Ensuring construction freight activities are safe for the community and impacts minimised; and
- A lasting positive road safety legacy, saving lives and preventing unnecessary road trauma.



# Thank you

