John Hardwick
Executive Director Sydney Roads and Maritime Services
Delivering for our Sydney customers
Addressing population growth and mode integration
Sydney motorways
Delivering the missing links for getting around and through Sydney

- WestConnex:
  - New M4
  - M5/KGR Interchange
  - New M4 tunnel extension
  - New M5
  - M4-M5 Link
- NorthConnex
- Western Harbour Tunnel/Beaches Link
- M12
- Sydney Gateway
Our build program across Sydney
Keeping Sydney moving
Planning for the future
Making sure our assets stand the test of time
Easing Sydney’s congestion today
Clearways, Pinch Points and major builds underway around Sydney
Our asset management task

Around $500 million a year in Sydney maintenance
Sydney division end-to-end delivery

Putting the customer first everyday

For our customers

Plan

Build

Maintain
Roy Wakelin-King AM
Executive Director Regional and Freight Roads and Maritime Services
Our regional priorities
Connecting communities, supporting growth and safe journeys

- Improving safety
  - Building safe roads – reducing fatalities

- Supporting growth
  - Significant NSW regional population growth forecast
  - Freight movements to double by 2031

- Supporting the local economy
  - Direct employment
  - Using local suppliers

15% population increase in regional NSW by 2031
Our regional priorities

Connecting communities, supporting growth and safe journeys

• Improving safety
  • Building safe roads – reducing fatalities

Pacific Highway – fatal crashes and fatality

Fatal crashes Fatalities Linear trend (Fatal crashes)
Our regional priorities
Connecting communities, supporting growth and safe journeys

- Supporting growth
  - Significant NSW regional population growth forecast
  - Freight movements to double by 2031
- Supporting the local economy
  - Direct employment
  - Using local suppliers

15% population increase in regional NSW by 2031
$4.8 billion investment in regional NSW

Our biggest year on record

• 28 major projects in construction
• 27 major projects in development
• Thousands of minor and maintenance work projects
Our bridge and maintenance program

Looking after our network

- **15,943** km of road and bridge infrastructure
- Re-marking **15,000** km of lines annually
- **17** bridges for the bush projects in-flight
- Supporting councils to upgrade bridges through our Country Bridge Solutions program
- Over $**500** million annual spend
Using local suppliers

Case study: Burrill Lake bridge

- Principal: BGC Contracting
- Steel and Fabricators from Milton NSW
- Traffic Control from South Nowra/Wollongong NSW
- Concrete supplied from Milton NSW
- Asphalt and spray sealing subcontractor from Mogo NSW
- Concrete subcontractor from Ulladulla
- Drainage from Nerriga NSW
- Supplier of general fill earthworks from South Nowra
- Welding/fabrication services from Ulladulla NSW
- Underboring services from Termeil NSW
Engaging with our regional suppliers

Supporting regional industry

- Five industry forums and round tables held in key regional locations
- Regional industry want to better understand the pipeline
- Smaller suppliers want to better understand how to connect with industry project leads
Aboriginal participation in construction (APiC)

Meeting and exceeding our targets

• 18 active contracts on major projects, with an estimated total targeted spend of almost $20 million

• Target spend of full program will be significantly bigger with Woolgoolga to Ballina’s target spend alone estimated at over $30 million

• Early adopters are making great headway
What our work means to our regional communities

Flooding on Macleay River (Kempsey bypass)
Major road projects are a big part of the infrastructure spend

- Based on the ‘mega projects’ over $2 billion

- In addition to the mega projects there is $5 billion in FY18 on highways and arterial road projects
  - Around $2 billion of this is attributed to NSW road projects

Source: BIS Oxford Economics 2017
Road infrastructure in Australia – NSW continues to lead the way

The peak of the NSW wave has reduced and it now extends for longer

Source: BIS Oxford Economics 2017
$3.3 billion spent on major road projects last year

Excludes NorthConnex and construction funding of M4-M5 link
Impact on resourcing

Demand for engineering skills in the NSW roads sector

Source: BIS Oxford Economics 2017
### 17 major projects awarded – total value $3 billion

<table>
<thead>
<tr>
<th>Project</th>
<th>Contract award</th>
</tr>
</thead>
<tbody>
<tr>
<td>M4 Smart Motorway, Package A</td>
<td>23-Jun-17</td>
</tr>
<tr>
<td>Sydney Airport East, Wentworth Avenue Extension and Joyce Drive Widening</td>
<td>16-Nov-16</td>
</tr>
<tr>
<td>TNR, Peter Brock Drive to Mersey Road and Bringelly Road to King Street (Stage 2)</td>
<td>19-May-17</td>
</tr>
<tr>
<td>TNR, Glenmore Parkway to Jamison Road (Stage 3)</td>
<td>06-Dec-16</td>
</tr>
<tr>
<td>Bruxner Highway, Tabulam Bridge over the Clarence River</td>
<td>06-Apr-17</td>
</tr>
<tr>
<td>Newell Highway, Grong Grong Realignment</td>
<td>31-Oct-16</td>
</tr>
<tr>
<td>Pacific Motorway (M1) Widening, Wyong Road to Doyalson Link Road</td>
<td>20-Feb-17</td>
</tr>
<tr>
<td>Princes Highway, Dignams Creek Realignment</td>
<td>16-Dec-16</td>
</tr>
<tr>
<td>Woolgoolga to Ballina, Bridge Construction, Glenugie to Tyndale</td>
<td>31-Mar-17</td>
</tr>
<tr>
<td>Woolgoolga to Ballina, Construction of Woodburn-Broadwater Service Road</td>
<td>08-Feb-17</td>
</tr>
<tr>
<td>Woolgoolga to Ballina, Ancillary Site Compounds, Sections 3-11 (Portions A-D)</td>
<td>26-Sep-16</td>
</tr>
<tr>
<td>Woolgoolga to Ballina, Piling Works</td>
<td>28-Mar-17</td>
</tr>
<tr>
<td>Woolgoolga to Ballina, Early Works - Temporary Diversion Lanes and Intersection Upgrades</td>
<td>12-Sep-16</td>
</tr>
<tr>
<td>Woolgoolga to Ballina, Early Works - Wave 5A (Glenugie to Maclean)</td>
<td>25-Jul-16</td>
</tr>
<tr>
<td>Woolgoolga to Ballina, Early Works - Bridge Construction - Portion B</td>
<td>31-Oct-16</td>
</tr>
<tr>
<td>Woolgoolga to Ballina, Bridge over Richmond River</td>
<td>16-Feb-17</td>
</tr>
<tr>
<td>Woolgoolga to Ballina, Pimlico to Teven (Stage 3)</td>
<td>10-Feb-17</td>
</tr>
</tbody>
</table>

### 2016/2017 Projects with revised timelines

<table>
<thead>
<tr>
<th>Project</th>
<th>Revised award date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxley Highway, New Bridge Over Railway at Gunnedah</td>
<td>Q4 FY18</td>
</tr>
<tr>
<td>Pacific Motorway (M1) Widening, Kariong Interchange to Somersby Interchange</td>
<td>Q2 FY18</td>
</tr>
<tr>
<td>Queanbeyan Bypass, Ellerton Drive Extension</td>
<td>Q1 FY18</td>
</tr>
<tr>
<td>Woolgoolga to Ballina Packages</td>
<td>Q1-Q3 FY18</td>
</tr>
</tbody>
</table>
Contracts awarded by contract size

- Reduced number of <$100m contracts last year – but increasing this year
- Growing number of >$100m projects this year
Our portfolio of partners is diverse
For both construction and professional services firms

• Construction portfolio (in flight)
  • 53 contracts >$10 million
  • 34 contractors engaged

• Professional services contracts (in flight)
  • 108 contracts > $1 million
  • 42 firms engaged
  • An additional 144 firms engaged on PSCs < $1 million

Construction portfolio total value $5.4 billion
(includes contracts awarded over $10 million)

PSC portfolio total value $460 million
(includes contracts over $1 million)
Industry feedback - innovation in procurement

Reducing the cost of tendering

- Increased the use of 2 stage processes, where appropriate
- Reduced documentation required
- Shortened evaluation timeframes
- Tailored evaluation criteria
- Bundled multiple construct only packages, where appropriate
Industry feedback - contractor performance reporting

**Current state**
- 4 monthly reporting
- Evaluation guidelines too subjective
- Limited calibration
- No benchmarking

**Future state**
- Quarterly reporting
- 7 standard KPIs
- Online standardised scoring guidelines to ensure **objective evaluation**
- Facilitates **calibration, analysis and benchmarking** across industry (and the Transport Cluster)
- Report and scoring grid to be **shared with industry**
Contractor performance report - sample

Benchmarking, trends and analysis

- Performance overviews
- Performance comparisons and trends
- Benchmarking to be shared with industry

<table>
<thead>
<tr>
<th>Category</th>
<th>Overall</th>
<th>WHS</th>
<th>Environmental</th>
<th>Time</th>
<th>Co-operative Relationship</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERALL</td>
<td>60%</td>
<td>70%</td>
<td>60%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRAFFIC MGMT</td>
<td>50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIME</td>
<td>49%</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SUPPLIER MGMT</td>
<td>57%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEOPLE</td>
<td>57%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUALITY</td>
<td>55%</td>
<td></td>
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</tr>
</tbody>
</table>

Company X - period trending performance comparison
Keeping our 10,000 workers safe

Project SafeR

- Industry forum held Dec 2016 attended by 70 senior construction and WHS state leads
- Agreement to 4 RMS + industry initiatives
  - Wearable technology (The Northern Road)
  - Automated traffic control (Pinch Points)
  - Consistent delineation of people and plant, ‘Separate yourself’ (Pacific Highway)
  - Common language to categorise data (WHS leads)
- CEO roundtable held March 2017
- Next SafeR forum to be held end 2017.
Wearable technology initiative

Early warning system for workers

- Installation of an immediate warning sensor system (EgoPro®) that detects the presence/position of workers or vehicles entering hazardous areas
- Hard hat and plant-mounted sensors warn operators and pedestrians of possible clashes
- **Trial to start on The Northern Road Stage 3 in Sept 2017**
Delineation of people and plant

Separate yourself initiative

- Nine site situations identified
- Guided by agreed mandatory controls ‘on the ground’
- Consistent look and feel on all sites (unbranded)
- Trials have commenced on Woolgoolga to Ballina project
Thank you to all our industry partners
Over 30 partners and supporters actively participating

Wearable technology
(The Northern Road)
Lendlease
Acciona
Fulton Hogan
Pacific Complete
SEE Civil
Transurban
Ventia Boral Amey

Working near traffic
(Pinch Points)
Bouygues
Burton
Lendlease Tyco
Ward
DM Roads
Daracon

Data categorisation
CPB Contractors
DM Roads
John Holland
Lendlease Tyco
McConnell Dowell
York Civil

Delineation
(Pacific Highway)
Pacific Complete
Seymour Whyte

Delineation project initiative supporters
Lendlease, OHL McConnell Dowell JV, OHL York JV, Acciona Ferrovial
JV, CPB, CMC, Golding Contractors, SEE Civil, Seymour Whyte, Fulton
Hogan, Pacific Complete (Laing O’Rourke PB JV), FKG, Georgiou,
BMD, Shamrock, Davbridge, CBC
SafeR data and trends analysis

✓ 6963 events received categorised and analysed over 20 months from 55 projects - 25 contracting organisations

✓ Quality of data is improving

✓ 20% uplift in hazard/near miss reporting across our projects

✓ Continued willingness to provide data at executive level - some issues noted at operational level

✓ This data directly influences our SafeR working initiatives

Hazard/near miss frequency ratio**

** per 1 million hours worked
SafeR data and trends analysis

- Working near mobile plant has the highest ‘industry specific’ events
- Manual tasks continue to injure our people
- Working near traffic events have reduced

Reporting has increased, severity has decreased

*Approximately 10 million hours worked
Our forward work plan

Major Projects 2022

Rocks and Maritime Services Forward Work plan Major Projects 2022

Roads & Maritime Services
Our forward work forecast

$15.9 billion across five years (excluding motorways)
### Procuring our major projects

**Procurement peaks in 2018**

<table>
<thead>
<tr>
<th>Project status</th>
<th>5 year perspective</th>
<th>Tenders in FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Projects</td>
<td>Estimated Project Value, $M</td>
</tr>
<tr>
<td><strong>In flight</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under construction or contract awarded</td>
<td>31</td>
<td>$6,200</td>
</tr>
<tr>
<td><strong>Funded but construction not yet contracted</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Includes Commuter Wharf Upgrades</td>
<td>33</td>
<td>$5,500</td>
</tr>
<tr>
<td><strong>Planning funded but delivery funding not yet confirmed</strong></td>
<td>23</td>
<td>$7,000</td>
</tr>
<tr>
<td>Woolgoolga to Ballina</td>
<td>17</td>
<td>$4,356</td>
</tr>
<tr>
<td>Easing Sydney’s Congestion</td>
<td>6</td>
<td>$1,500</td>
</tr>
<tr>
<td>Other projects (not named in FWP)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>110</td>
<td>$24,556</td>
</tr>
</tbody>
</table>

Excludes motorway projects. Table shows projects > $10 million only.
In summary
We still have a significant program ahead

- We are aligning our business model to ensure customer needs are central to our decision making process
- We are investing in our people to build skills and capacity
- We continue to be transparent and accessible to our partners
- We have responded to your feedback
- We are working with you to improve safety for our workers
- …and together we are successfully delivering the biggest infrastructure investment in the state’s history!