



## Department of State Development

### Roundtable for Unconventional Gas Projects in SA

#### Working Group 2

*Tuesday 1 July 2014*  
*The Science Exchange, 55 Exchange Place, Adelaide*

#### Recommendations – post it notes on sticky wall

##### Short Term

- Data sharing on costs versus opportunity. Cost by demand and supply to establish base line of investment versus savings
- Assessment of routes to Moomba to identify bottle necks impeding access for triple and quad road trains
- Prioritisation as a group exercise
- Start discussions with Dept. / equity private sector funded models to fund the development
- Understand the demand (and value) requirements of the transport infrastructure users over time (think together road, rail, port, airport etc.)
- Investors start conversation
- Commonality across state borders for road transport regulation
- Tidal flow of road trains – one way at a time or CB call point system (one way traffic at a time, which can be implemented without upgrading the road)?
- Need more rooms for workers – no place to stay means no way to expand
- Heavy vehicle access – triples and quads north of Lyndhurst
- Targeted investment of money to high risk sections of the track
- Maintaining the unsealed road and repair of crossings etc.
- Allow for more commercial access to Moomba, similar to Jebel Ali / Labuan (Jebel Ali Offshore Company / Labuan Offshore Company)
- Strzelecki track to Innamincka – roads identified as most immediate problem:
  1. Staged approach: identify worst 30-40km first. Reduce wash out areas. Reduce corrugation lengths
  2. Identify sources of material for road build quality
  3. Understand medium / long term demand
  4. Create clear plan for staged improvement of road, staged and capable of fast tracking when UCG (unconventional gas) is successful
- Targeted maintenance of road
- Validity of data is a key issue. Feed into business case and all options in between
- Increase size of trucks to improve efficiencies, decrease impacts
- Short term plan / strategy to prioritise current maintenance efforts (short term) or to inform current available budgets
- Benefits quantified



- Obtain further detail info / data and metrics re. transport frequency and loads from within industry. Get together to populate it
- Define ownership of road network. Who is the asset manager?
- Intra-basin spine roads are very important. JVs for roads? User pays. Coordination? Damage and repairs
- In field moves – how to improve them? Can't gold plate every road. Spine roads – info on running it? Have statistics on frequency of damage, when can't utilise roads
- Flights to Moomba – charter to fly to Innamincka – Moomba
- Greater access to Moomba airstrip – expensive
- Remove high impact / high consequence defects (2011 flood locations). Reduce down line. Targeted maintenance
- River / stream monitoring – real time data to inform trip planning. Develop funding framework – co-funding
- Improve maintenance practices on the track
- Significant upgrade to Strzelecki track
- Critical infrastructure system – upgrade the Strzelecki track – this may stimulate other activities (tourism, cattle movements, etc)
- Focus needs to be beyond the Strzelecki track – what happens once we drive off the road in order to get a well site / location?
- Early development of funding framework that talks now of key beneficiaries co-funding
- Think broader i.e. include other industries: tourism, pastoralists etc.
- Have we quantified the “red money” associated with a less than adequate infrastructure as per today?

### **Medium Term**

- Construction of a sealed road. However, this needs the reserves to be booked to justify development, leading to increased royalty potential
- Maintenance of sealed roads
- Improve safety (with better roads) by reducing trip length from 16-18 hours (reduce by 2-3 hours). Also increases truck utilisation
- Bridges – new technologies
- Weather mitigations – start sealing
- What disruptive factors could change the paradigm that we are looking to improve
- Seal track
- Zeppelin transport
- Air transport of people outside of Santos controlled airstrip
- ID opportunities to pool / aggregate cargo volumes
- Seal Strzelecki track
- Track improvements and target key hotspots for improvement, max bang for buck
- Upgrade Strzelecki track. Once done, can reallocate industry road maintenance resources to the key priority private industry roads
- Using a priority order of activities, start improving the section of the transport chain that will add greatest value



## Long Term

- Full seal
- Address 'spider web' of roads across the Cooper Basin
- Rail to Cooper (if volumes are sufficient)
- Rail not just ending at Moomba – connect across Australia
- This needs to be backed up with a substantial conversion of resources to reserves. Then, a rail infrastructure would be appropriate to increase the activities leading to revolution
- Intermodal supply routes established
- Tie infrastructure together among the states and among tag needs (mining, O&G, tourism etc.)
- Industry forecast means all road assets need addressing
- Future growth means change in infrastructure for Moomba population i.e. community planning e.g. food transport, etc.
- Final sealing of Strzelecki track
- Road into Basin – can rail contribute?
- Intra-basin roads
- Airstrips – Innamincka, Merty / Daralingie
- Facilities – transport accommodation / services
- Pipeline corridors
- Regulations – third party access
- Bridge over Strzelecki Creek

## Additional notes from table hosts:

- Develop a better understanding of the current condition of the road and priority areas to address first
- Engage someone with the right skills to ensure each section of the road is designed to be 'fit for purpose'

## Short Term – improvements for transport Infrastructure

- The demand side needs more work to understand – detail is perceived to be still unknown and what data integrity issues if any are there.
- Need to define the here and now before we understand the future
- Considerations for demand growth i.e. development of a base model that not only includes producers but could include details re:-
  - Potential minerals explorers/producers
  - Pastoralists
  - Impact from tourism / growth
- Developing a plan that looks at all options including a staged approach as a solution
- Continue to explore technology and / or innovation in maintain current road/s whilst considerations of a more permanent solution e.g. the polymer option being looked at currently.



- The planning and consideration must go beyond Moomba gate - must be to at least Innamincka and consider the main routes / ring roads within the Moomba fields.
- Outback Communities Authority – involvement from the beginning to consider community and environmental issues.
- Survey / analysis of current costs – desktop study that includes:-
  - Health
  - Productivity
  - Production
  - Drop in OPEX costs
  - Availability of road
  - Etc.
- More research into how the Qld model for infrastructure spend works – i.e. how can they build infrastructure / what were their considerations to make it work?
- Queensland has sealed the road in sections as funding became available, rather than doing it all at once
- Consider bite sized chunks, and costs vs benefits of sections rather than the entire road at once
- Queensland now allow triple road trains to Roma as from 1 July 2014, by allowing a ‘tidal flow’ or CB call point system (one way traffic at a time, which can be implemented without upgrading the road)
- Funding is available provided there is sufficient return on investment
- First fix the high risk areas of the track
- In 2011, 6 weeks of activity were lost due to flooding. Culverts were washed away.
- Consider design for long haul roads (same as for mining)
- Expect an increase in fatalities due to increased traffic and dust
- Create a hub for quads to halve the number of vehicles on the road
- Currently can’t get to Moomba in one trip – it takes 16-18 hours. If the trip time can be reduced by 2-3 hours, the number of trips per vehicle can be increased from 2/wk to 4-5/wk.
- South Australia allows heavy vehicles that aren’t allowed in Queensland – and 2/3 of the Cooper Basin is in Queensland
- Most of driving in the Cooper Basin is well site to well site – the ‘spider web out’
- Aggregate demand – historical and forecast
- Infrastructure Australia – industry co-contribution builds the case for funding
- Consider the possibility of disruptive change, disruption of the paradigm (e.g. new technologies using less proppant/sand, local proppant supplies)
- Fix corrugations, they are what slows trucks – reflect deep structural problem in road.



- Staged approached to track – do critical 30-40km of road first.
- Assess demand for freight, volume and weight. Need to understand drilling forecasts to model future demand.
- Pool and aggregate freight volumes to cut costs.
- Pool and aggregate road repairs and maintenance to cut costs – work stops at tenement boundaries – more communication/coordination.
- Identify sources of fill for road work in the region.
- Common infrastructure planning.

### **Medium Term**

- Identification of the worst sections of the track for targeting to address
- Focus on the importance of Moomba gas as feedstock to the LNG plants in Qld – re national significance
- Paving to commence at least in sections.
- Consideration and getting the private sector involved – considered this could be a prime project to fund by investors and or managed funds from the USA and /or Asia.
- We should expect an increase in grey nomad traffic when the road is sealed – this will have tourism benefits

### **Long term**

- Private sector participation – from an investment perspective
- Rail scenarios to be included in the longer Term as providing options
- There may be additional flooding due to climate change
- Consider building a bridge for sections of the road
- Bridge – new technology is available for strengthening
- Rail – should not terminate at Moomba, should connect east and west