QTLC QUEENSLAND TRANSPORT AND LOGISTICS COUNCIL

Queensland Parliament Inquiry into Rail Freight Use by the Agriculture and Livestock Industries

Submission by the Queensland Transport and Logistics Council

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SUMMARY

As the peak freight transport and logistics industry advisory body to government on supply chain policy and freight investment and infrastructure issues in Queensland, the Queensland Transport and Logistics Council (QTLC) would like to make the following key points for consideration by the Queensland Parliament Inquiry into Rail Freight Use by Agriculture and Livestock Industries.

The QTLC understands that detailed information regarding volumes, freight flows and modal split for the movement of agricultural commodities and livestock is being provided by other organisations. Consequently, this information is not contained in this submission and will only be referred to incidentally as required.

1. Any attempt to increase the use of rail by the agricultural and livestock industries needs to recognise the complexity and variations of these supply chains and adopt a "whole of supply chain" approach that is cognisant of upstream and downstream components, interactions and impacts.
2. Improved data collection and analysis is critical to understanding, managing and influencing agricultural and livestock supply chains.
3. The competitiveness of rail is impacted by infrastructure limitations which will likely be improved by the construction of the Dedicated Rail Freight Corridor and strategically located intermodal terminals.
4. The competiveness of rail to move livestock and agricultural commodities is eroded by the responsiveness and reliability of road transport; the higher cost to use rail and failure to internalise externalities into road charges; and, commodity competition on rail.
5. Access to common use rail infrastructure for the movement of agricultural products and livestock competes with high value market opportunities such as coal and mineral.
6. The lack of competition in the above rail market as well as the condition and limitations of the rail network and the current level of investment into rail is eroding the competitiveness of rail for the movement of livestock and agricultural commodities.
7. A continuing form of subsidy is likely required to encourage above rail operators to enter the market to support the movement of agricultural commodities.
8. There is a disconnect and lack of transparency for pricing across rail based agricultural and livestock supply chains that needs to be addressed.

INTRODUCTION

The QTLC is a cooperative industry and Government advisory body that provides advice to industry stakeholders and state and federal governments on the development, planning, regulation and operation of freight and logistics transport, infrastructure and services in Queensland.

As the peak industry body representing the views of the freight transport and logistics industry, the QTLC advocates for the provision of infrastructure, regulation and policy that will support sustainable freight transport and logistics in Queensland.

The QTLC supports the efficient movement of freight in order to support sustainable and productive economic development and prosperity by pursuing:

- Appropriate and ongoing investment in supply chain infrastructure;
- Integrated regional and urban planning frameworks that secure land for current and future freight corridors;
- An access policy and regulation environment that facilitates productivity and innovation; and,
- Efficient integration and linkage of freight and logistics systems across the whole supply chain.

TERMS OF REFERENCE - Inquiry into rail freight use by the agriculture and livestock industries

The QTLC understands that the parliamentary inquiry into rail freight use by the agriculture and livestock industries intends to:

- Identify opportunities to enhance coordination and collaboration across government, transport industry and primary producers about rail freight;
- Provide future direction for enhancing the utilisation of the rail system for primary producers and their freight needs including the demand for freight, including future volume, nature, timing and frequency;
- Identify the characteristics of the future transport system for primary producer freight needs;
- Identify a broad range of options, including appropriate risk sharing amongst supply chain participants, for delivering freight solutions for primary producers;

- Optimise the capacity and performance of the rail system for freight;
- Plan a rail system that is positioned to exploit future freight, particularly export, opportunities; and
- Develop sustainable long-term solutions for freight movement by rail for the agriculture and livestock industry.

The QTLC has considered these objectives and makes the following comments.

QTLC SUBMISSION

The QTLC has recently finalised its **Strengthening Queensland's Supply Chains** report. The report makes 52 strategic and operational recommendations to improve the development and sustainability of efficient and productive supply chains in Queensland, including agricultural supply chains.

The following comments largely reflect the content of the Strengthening Queensland's Supply Chains report and this report was submitted for government for consideration and response and is available on the QTLC website (http://www.qtlc.com.au/wp-content/uploads/2013/05/QTLC-SQSC-Report.pdf) for further reference.

Supply Chains Matter

The Queensland economy comprises a higher proportion of agricultural, mining, manufacturing, construction and trade/transport sectors than any other state with the exception of Western Australia. The freight task for each of these industry sectors is different.

Typically, government represents freight flows according to the movement of freight on the physical network. This view does not identify the components of the network that commonly interact to service supply chains, nor how and where freight enters and exits freight corridors. It also does not discriminate between the parts of the network that are critical to increasing productivity of key economic generators of Queensland, such as the agricultural sector.

The QTLC advocates for an alternative view of freight that considers the interaction between all components of supply chains. That is, the movement of freight from the point of production or manufacture to the point of consumption or export, including upstream and downstream inputs and outputs.

A whole of supply chain approach is critical towards improving the productivity of the agricultural sector. Typically, inefficiencies occur where components of supply chains interface. In the agricultural sector these inefficiencies manifest where commodities enter the network (loading or unloading) or at modal interfaces (breaking down vehicle combinations or road/rail).

It is critical that any network upgrades aimed at improving productivity of the agricultural sector consider the impact of upstream and downstream supply chain factors on realising productivity gains.

To maximise the benefits to the agricultural sector of any infrastructure upgrades the relative supply chains need to be optimised up and down stream of the point of investment. The QTLC suggests that optimisation assessments could be performed by a Supply Chain Coordinator, a function which has been used successfully for the Hunter Valley coal supply chain, the Port Botany Landside Improvement Strategy and here in Queensland performed in Central Queensland by the Integrated Logistics Company.

Agricultural and livestock supply chains are often complex with multiple participants with indiscrete roles. For example, in the livestock supply chain, the large processors often act as freight forwarders, consigning trainloads of cattle for producers. They are also large scale freight generators and above rail customers. Similarly, large grain traders also act as freight forwarders, booking rail space from other grain traders or merchant. Some of these grain traders operate their own terminals.

It is important to understand the complexity and multiple interactions of the various agricultural and livestock supply chains as inefficiencies at the interface of these components usually result in increased costs. A recently released report on the cost of Australia's bulk grain supply chains (Aust Export Grain Innovation Centre, 2014), states that Queensland has the highest bulk grain supply chain costs in Australia.

Data

The importance of agricultural supply chains is characterised by the value they confer to the Queensland economy.

It is important to understand agricultural supply chains and freight flows in order to identify critical freight infrastructure blockage points that constrain their value and plan for forecast growth.

A number of government sources present freight flows in Queensland, however many of these are out of date or do not report corridor level information on the freight volume being moved.

While the value of freight data to understanding and planning for agricultural supply chains is largely obvious, the complexity of these supply chains (multiple components, multi-modal, non-vertically integrated, seasonal, geographically dispersed; multiple commodities) places greater importance on collect and analysing robust quality data.

To address the data issue, the QTLC in partnership with the Port of Brisbane undertook an Import Export Logistics Chain (IMEX) Study in 2013. The study identifies:

- The landside movement of intermodal commodities including -
    - All full and empty import and export containers through the Port of Brisbane (the 'Port')
    - All full and empty containers moved through Acacia Ridge and the Brisbane Multimodal Terminal (BMT)
- And the landside movements of particular commodities, specifically
    - Motor vehicles
    - **Bulk coal, cereals and grains**
    - Break bulk, in particular Steel, Project cargo (wide and heavy loads)
- Maps landside movements showing key routes and traffic flows
- Understand supply chains for each commodity type including restrictions or potential restrictions (industry pathway analysis)
- Establishes current and contestable boundaries for each commodity and understand the barriers to entry
- Validates against PBPL trade data forecasts regarding the volume of full IMEX containers that originate at, or are destined for, each location in 2015, 2020, 2030 and 2040
- Describe supply chain factors influencing freight volumes, movements and modal choice

While only the summary report is publically available on the QTLC website, consideration could be given to providing the committee with the full report and data sets on a confidential basis pending support from the Port of Brisbane.

The IMEX Study provides current and useful data regarding volume, origin, flows and modal split of bulk grain exported through the Port of Brisbane.

Other data sets that are useful to the study of agricultural and livestock supply chains in Queensland, particularly detailing rail versus road are:

- **Development and assessment of options for the efficient and commercially sustainable transport of cattle in Queensland – Stage 1 Final Report** (August 2011), Economic Associates
- **The cost of Australia's bulk grain export supply chains** (January 2014), Australian Export Grains Innovation Centre
- **Central Queensland Rail Project** (ongoing), Department of Transport & Main Roads

Importantly, these resources identify cost and modal issues that impact on the efficiency of Queensland agricultural and livestock supply chains which then influences productivity and modal choice. This will be discussed further later in this submission.

Fit for Task Infrastructure

While a more detailed discussion on drivers of modal choice for the agricultural and livestock sectors and the effect of competition between agricultural and resource commodities for access and use of common infrastructure will follow, this section seeks to emphasise the importance of fit for task infrastructure to the efficient movement on rail.

The QTLC understands that of the 112 one way rail paths over the Toowoomba Range, approximately 7 remain unused. The fact that the agricultural sector continues to argue for increased capacity when pathways exist suggest that utilisation of rail is impacted by infrastructure or supply chain factors other than available pathways.

For the south west corridor, impediments to utilising capacity include low axle limits (15.75 TAL) and restricted tunnel heights (8'6"). The net result of these impediments is that road is more attractive to move agricultural commodities as it delivers higher payloads. For example, no containerised grain is moved on rail as the low axle load limits require two slots (versus one), whereas two 20 foot containers can be moved on an A-Double.

With most of cotton lint packed up county (70%), the issue with moving this by rail is that the preferred 9'6" containers are not able to fit through tunnels on the Western Line (height of 8'6"). Queensland Rail is currently undertaking works to lower the Grandchester tunnel heights to allow high cube cotton containers to move on rail from up country. The Queensland Government is also constructing two passing loops which should result in an additional 25 paths per week, increasing rail capacity.

These improvements, while welcomed, do not address axle mass restrictions which are eroding the competitiveness of rail over road.

Grain containers are restricted to 22t payload (heavy grain containers (27/28t gross). Current TAL of 15.75t limits one container per current class of wagon. Conversely, the A-

Double is able to carry 2 x 20 ft containers. The inability to get an adequate payload on rail and the advent of the A double has resulted in all containerised grain moving to road.

While upgrading south west rail infrastructure to 20t TAL may improve rails competitiveness for containerised grain, the net benefit is reduced for bulk grain. Grain wagons are restricted to 46t payload or 1,767t per train. Existing bulk grain wagons are effectively full at 46t, therefore new wagons with increased capacity or extra wagons would be required to take advantage of high axle mass limits. The construction of additional pass loops may facilitate this.

With approximately, 85% of cotton seed packed up country in 40ft containers, it is unclear why only 5% is delivered to the Port by rail. Cotton seed is lighter than grain and therefore it is unlikely that axle load restrictions reduce payload on rail. Again this suggests that the advantage of road over rail for agricultural commodities is likely a combination of infrastructure, policy settings and supply chain factors, emphasising the importance of understand how these variables interact to drive commodity productivity and modal choice.

Speed restrictions and overall rail infrastructure condition also limit rails competitiveness for the movement of agricultural goods and livestock. Long cycle times are associated with traversing the Toowoomba range and these are compounded by speed restrictions. Train lengths are limited to 650m. Even with the construction of an additional two passing loops, train length will remain constrained by existing passing loops.

Intermodal Terminals

The efficiency of rail may be improved by consolidating loading points and the construction of an intermodal terminal contiguous to Toowoomba. Type 2 and 3 road trains are not permitted to travel east of Toowoomba. Consequently they must be broken down to smaller combinations. The uncoupling process requires the provision of break down locations, decreases productivity and increases congestion as more trucks enter the network.

An estimated 200,000 – 250,000 head of cattle are moved from the Quilpie region each year, with only 22,000 currently moved on rail and the rest on road. This equates to approximately 1500 truck trips over a 4-5 month season going through Toowoomba. There may be an opportunity to reduce the number of truck trips with an intermodal solution that would see seven stack triple road train combinations operate west of Quilpie and transfer the cattle at the rail head staging ground for delivery to Toowoomba or Dinmore.

Like livestock, bulk grain moved on AB triples is broken down outside Toowoomba to a B-Double or semi-trailer and then moved on to Port of Brisbane. Consideration could be given

to developing an intermodal terminal, with bulk grain handling, contiguous to Toowoomba and running a short rail shuttle to the POB. This may also provide an opportunity to increase competition in the above rail operations market.

Similar benefits will be conferred to central Queensland agricultural supply chains from the development of an intermodal terminal in the Emerald region to service Mackay, Gladstone and Brisbane port by rail.

The QTLC understands that the Queensland Government is currently undertaking studies into intermodal terminal planning and the Council supports these activities.

Dedicated Rail Freight Corridor

Many, if not all, of the rail infrastructure issues in the south western corridor will be ameliorated by the proposed Dedicated Rail Freight Corridor (DRFC) (Port of Brisbane). The DRFC project proposes the construction of a dedicated freight rail corridor that will run from the Port of Brisbane to Wandoan, bypassing the Brisbane metropolitan area.

With fast cycle times, higher axle mass limits and increased capacity, the DRFC will significantly increase rail's competitiveness and the overall efficiency of the bulk and containerised agricultural transport task. The pre-feasibility report for the project submitted to Infrastructure Australia projects that by 2031, 1,445 daily trucks will be removed from the SEQ road network as a direct result of the DRFC. This is likely to increase to 4,000 by 2045.

Critically, the DRFC is the first stage of the Melbourne to Brisbane Inland Rail Project.

The QTLC is supportive of the DRFC project.

Modal and Commodity Competition

It is well know that the movement of agricultural commodities and livestock (70-100%) is largely skewed towards road. The ability of rail to compete with road has been eroded by a number of factors including:

- Poor condition of rail infrastructure
- Quick transit times on road
- Innovation in the road transport industry (high productivity vehicles)
- Responsiveness and reliability of road transport
- Higher cost to use rail and failure to internalise externalities into road charges
- Commodity competition on rail

While there are undoubtedly broader social, economic and environmental benefits to using rail, the reality is the afore mentioned factors have resulted in a shift to road that is unlikely to change substantially unless significant investment and regulatory reform occurs and supply chains are optimised.

The previous section discussed the impact of infrastructure on modal choice. This section will further explore the other factors that contribute to road's dominance in the movement of agricultural and livestock products.

The heavy vehicle industry is constantly innovating, developing vehicle designs that increase payload. In Queensland, containerised grain is moved in 2 x 20ft containers to the Port of Brisbane on A-Double high productivity vehicles. This innovation doubled previous productivity and significantly eroded the competitiveness of rail which requires two slots for a comparative payload.

Currently, most containerised meat and cotton is moved to the Port on B-Doubles by road due to low axle load limits on Lockyer Creek bridge. Work is currently underway to upgrade the bridge to Higher Mass Limits which would enable 2 x 40 foot containers to be moved on an A-Double, dramatically improving road transport productivity.

Unlike rail, road transport is extremely responsive and flexible. Whereas most rail lines that move livestock or agricultural commodities have limited loading points, speed restriction (either due to track condition or geometry), axle mass limits and are vulnerable to closure from flooding, road transport can move goods from the point of production to export, can be mobilised quickly to respond to changes in demand and have generally have access to alternative routes in the event of flooding.

Conversely, rail schedules are determined early in the year and are largely non-responsive to changes in demand such as a "good season". Where trains are cancelled due to insufficient volumes, penalties are often incurred.

There is continuing debate whether there is competitively neutrality in road and rail pricing. While the Heavy Vehicle Charging and Investment reforms may go some way to resolving this debate, it is the view of the QTLC that rail pricing in Queensland is subject to market distortions from policy settings and regulatory interventions that negatively impact on rail's ability to compete for the agricultural and livestock freight market.

Within the rail based supply chains, livestock and agricultural commodities are competing for access to common use rail infrastructure with high value commodities such as coal and minerals. These products also represent a high value market opportunity to above rail operators as they are generally on large volume, long term take or pay contracts.

Regulation, Pricing and Policy Settings

Subsidies and Above Rail Competition

The livestock industry benefits from a Transport Service Contract (TSC) to subsidise the movement of livestock on rail. This contract is currently with one rail operator. This operator holds contracts with major meat processors and some producers to move cattle to processing plants. Importantly, the meat processors act as a freight forwarder in the sense that they do not own the cattle during shipment. Rather, they consign the trains on behalf of the producers who own the cattle until they reach the processing plant.

The current livestock TSC will expire in 2015.

As part of the Queensland government's commitment to seeing an increase in rail's modal share of agricultural commodities (especially grain, cotton and livestock) an Expression of Interest was issued by the Department of Transport and Main Roads in 2013 to identify innovative approaches that will improve supply chain efficiency of these markets through better utilisation of rail and the TSC subsidy.

The QTLC suggests that the main impediment to the identification of innovative approaches to improve the supply chain efficiency of agricultural markets, particularly livestock, is that there is a lack of competition in the above rail market in Queensland. Furthermore, the condition and limitations of the rail network and the current level of investment into rail infrastructure does not provide an incentive for other operators to enter the market.

The net result of this lack of competition is:

- Only the incumbent operator has detailed knowledge about demand and commercial arrangements such as asset condition and pricing inputs;
- Currently, only the incumbent operator contracts with the producers and processors. Thus, under the existing arrangements, even if the government tendered the TSC to operate livestock services, other potential operators do not have commercial arrangements with the processors to move livestock.

These issues are not insurmountable, but they require a comprehensive response that considers the needs and service requirements of producers and processors, transparency in pricing inputs and commercial arrangements (i.e. number of services, access charges, fixed asset costs etc.), TSC administration arrangements (i.e. one operator or a rebate system with multiple operators who negotiate contracts with producers and processors).

There is a real risk that if TSCs were not renewed or substantially reduced at the end of the current contract, the incumbent operator may focus its operations on the coal market

leaving the rail sector without an above rail operator to move agricultural commodities. This would effectively eliminate rails competition with road and may have the potential to decrease payloads due to resulting shortages in road transport services.

A continuing form of subsidy is likely required to encourage above rail operators to enter the market to support the movement of agricultural commodities. Initially, above rail operators operating in other states may consider entering the Queensland market through the operation of a short haul shuttle service from west of Toowoomba moving bulk grain. While some incentives (subsidies, train consists) may be required in the short term, this is a low risk option for above rail operators to mature their service with a view to expanding to other commodities and freight types.

Alternative, if the idea of providing incentives to a private operator was unpalatable, the Queensland Government may consider engaging local governments to operate above rail services. In North America there are several instances were locally governed cooperatives have taken over railway operations. For example, the Battle River New Generations Co-Op in Canada began loading grain in 2003 and in 20096 assumed ownership of the local grain line.

The reality is that, while rail may be best suited to the movement of bulk agricultural commodities, the condition and constraints of the infrastructure compounded with the rapid innovation in the road industry resulting in higher payloads means that it will not be commercially competitive without some form of government support. This being the case, government should consider the value of re-directing passenger transport subsidies such as the Travel Train services towards supporting key economic generators like the agricultural industries.

Passenger Priority

A major impediment to the efficient movement of agricultural commodities by rail is the requirements of the Transport Infrastructure Act 1994 (TIA), Part 8 sections 265 and 266 that require a railway manager to endeavour to bring a (scheduled) passenger service that is delayed back to its scheduled running time and to allocate priority for regularly scheduled passenger service in allocating train paths. Effectively, this regulation prioritised passenger services over freight services (with the exception of livestock trains as these have animal welfare requirements).

Perversely, the TIA allocates the same priority for CityTrains carrying hundreds of commuters to work in Brisbane during peak hours to a long-distance TravelTrain carrying small numbers of passengers benefiting from substantial subsidies under TSCs.

The effect of the current regulation is that commercial rail freight train services are less reliable than they might be under different policy settings. The movement of freight,

including agricultural commodities, is a profit seeking activity so the risk of increasing costs caused by delays further erodes the competitiveness of rail against road.

The QTLC Strengthening Queensland's Supply Chains report proposes a policy setting that would see some freight prioritised over passenger services thereby increasing the efficiency and reliability of rail.

Through Moving Freight, the Queensland government has indicated it is considering a review of passenger priority legislation to elevate the priority of freight under certain circumstances and the QTLC is strongly supportive of this approach.

Access Charges and Pricing

The QTLC proposes that there is a disconnect and lack of transparency for pricing across rail based agricultural supply chains which may be impacting on the mode's feasibility. In particular, there does not appear to be readily available information that outlines:

- The cost of providing agricultural rail services;
- How pricing is calculated (i.e. fixed costs, inputs and subsidies); and,
- The relationship between rail access charges and pricing.

In relation to this last point, it is worth noting that Queensland Rail have discretion, through the Access Undertaking lodged with the Queensland Competition Authority, to vary rail access charges. While this is a useful mechanism to reduce costs to incentivise agricultural commodities onto rail, there is no requirement for the above rail operator to pass on any savings associated with reduced access charges.

While not explicitly mentioned in the Terms of Reference, the QTLC proposes that the Committee consider the need for transparent pricing of rail and mechanisms to ensure that any incentives provided through reduced access charges benefit producers.

Master Plan for the Western and South Western Lines

While Queensland Rail have developed a Master Plan for the Mt Isa Line, to our knowledge a Master Plan has not been developed for the Western and South Western lines despite the systems sharing similar attributes.

The QTLC advocates for the development of a Master Plan for the Western and South Western line which should provide certainty for the agricultural sector to plan operations into the future.

The QTLC appreciates the opportunity to input into the parliamentary inquiry into rail freight use by the agricultural and livestock industries. Should you require any further information, please contact Dr Rebecca Michael, CEO QTLC on ceo@qtlc.com.au or phone 0418 201 179.