QUEENSLAND RAIL - PUBLIC VERSION

2020 Declaration Review : Queensland Rail Stakeholder Forum

9 April 2019

Documents evidencing road as a competitive constraint

Tab	Title	Date	Confidentiality
1.	Queensland Rail's Submission in Response to the QCA's Draft Recommendation (Extracts)	11 March 2019	**PART REDACTED FOR CONFIDENTIALITY**
2.	HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?* (Extracts)	March 2019	**PART REDACTED FOR CONFIDENTIALITY**
3.	Ranbury Management Group, *North Coast Line Capacity Improvement Study* (Extracts)	February 2015	**PART REDACTED FOR CONFIDENTIALITY**
4.	PwC, *Queensland Regional Rail Network Review Freight Logistics Chain Working Paper* (Extracts)	August 2016	**PART REDACTED FOR CONFIDENTIALITY**
5.	Pacific National, *Pacific National's submission in response to the staff issues paper* (Extracts)	May 2018	PUBLIC
6.	ARTC, *Submission on Submissions QCA Declaration Review* (Extracts)	July 2018	PUBLIC
7.	Harper et al, *Competition Policy Review - Final Report*	March 2015	PUBLIC
8.	Bureau of Infrastructure, Transport, Regional Development and Local Government, *Road and rail freight: competitors or complements?* (Extracts)	April 2009	PUBLIC

QUEENSLAND RAIL COMMERCIAL-IN-CONFIDENCE

Declaration Review: Queensland Rail's Response to the QCA's Draft Recommendation

11 March 2019

128.3 the Other Systems received $413.6 million in TSC payments and generated only $25.4 million, including $19.3 million in Metropolitan System coal in access revenue (accounting for 'internal charges' recorded as access revenue in the below rail financial statements).

129 The adequacy of the access charges declines even further when capital expenditure and a return on capital are taken into account. Accordingly, the absence of TSC payments would result in large parts of the rail network becoming commercially unviable, as providing customers with access to the rail network on a commercial basis would not generally be affordable for customers.

Constraints in the provision of below rail services to freight operators

North Coast Line

130 The existing regulatory arrangements are not a binding constraint on Queensland Rail's provision of services on the North Coast Line; Queensland Rail's access revenue on the North Coast Line is significantly below the price ceiling established by these arrangements, where access revenue only accounts for 32% of operating costs of providing the service, let alone a return on capital.[72]

131 Rather, Queensland Rail is constrained by market and other factors. The material constraints on Queensland Rail in the provision of below rail services for the purposes of transporting freight on the North Coast Line include the following:

131.1 Competition by road operators, which provides a substitute service in respect of the transportation of freight other than some bulk commodities over long distances. Parties requiring freight transportation services can readily shift to moving freight by road rather than rail in the event of an increase in access price and/or decline in quality of service provided.

131.2 Queensland Rail's statutory obligations and position as a statutory authority, including obligations to have approved and comply with strategic and operational plans, as well as its obligations under the TSC.

131.3 The threat of regulation or declaration under Parts 3 or 5 of the QCA Act.

132 Each constraint is discussed in turn below.

133 Further, as highlighted by HoustonKemp, Queensland Rail is constrained by customers' ability to pay and countervailing power on the North Coast Line.[73]

Road transport competition

134 While the QCA considers that there is only a subset of the above-rail market in respect of which road operators can be said to be competing with rail operators (namely, the transportation of non-bulk freight for a distance between 600km and 1,000km),[74] Queensland Rail submits that road operators provide a competitive constraint for all freight types on the North Coast Line. This is discussed in section 4.2. of the HoustonKemp Expert Report and below.

135 As a preliminary matter, Queensland Rail notes the difficulties with considering a small but significant non-transitory increase in price (**SSNIP**) to determine the relevant market in circumstances where prices are below the prices would occur in a workably competitive market that are described in section 3.3 of the HoustonKemp Expert Report (the 'reverse cellophane fallacy'). Given Queensland Rail's access prices result in revenues below the regulated ceiling limits and are subsidised by considerable TSC payments, the QCA cannot

[72] Queensland Rail, *2017-18 Below Rail Financial Statements*, December 2018, p 4, https://www.queenslandrail.com.au/business/acccess/Compliance%20and%20reporting/2017-18%20Below%20Rail%20Financial%20Statements.pdf [accessed 8 March 2019].
[73] HoustonKemp Expert Report, section 4.2.4.
[74] QCA Draft Recommendation, Part B, p 37.

apply a straight SSNIP analysis; doing so would result in too narrow a market definition (in this instance by excluding road transport competition).

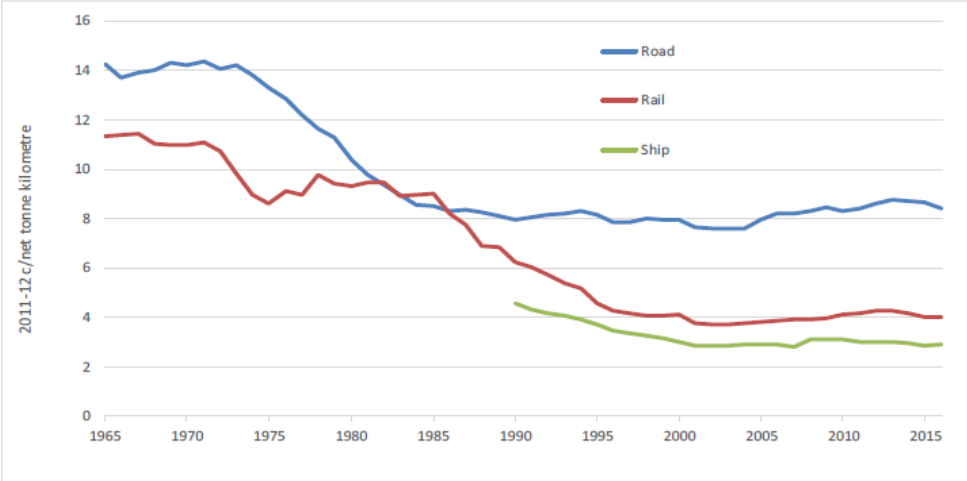
136 It is well established that road transport dominates the carriage of non-bulk freight on all major freight corridors in Australia except the East-West (Melbourne to Perth) corridor.[75]

137 Intrastate freight in Queensland is primarily moved by road, with 33% of the freight task in 2013-14 being moved by rail.[76] Queensland Rail's share of the freight task was just three per cent, the bulk of intrastate rail freight in Queensland being coal movements on Aurizon's Central Queensland Coal Network (**CQCN**).

138 The competition posed to rail in the transportation of freight by road operators has intensified in recent years given significant improvements in road vehicle productivity and substantial investment in road networks, a trend which is set to continue. Accordingly, over the last decade, Queensland Rail has seen freight traditionally moved by rail switch to road transport. This includes cement and fuel, containerised grain, sugar and some minerals concentrate.

139 The alternative offered by road means that end customers have alternative avenues open to them other than to using Queensland Rail's systems. This provides end customers with significant countervailing power, as the option of road transport means that they can make a credible threat to withdraw from negotiations with Queensland Rail (or an above rail provider) and switch to using road transport if a competitive price and reasonable terms and conditions are not offered by Queensland Rail for the below rail service.[77] For instance, the Ranbury Management Group Pty Ltd (**Ranbury**), in its report titled *North Coast Line Capacity Improvement Study — Final Report* for the Department of Main Roads and Transport of February 2015 (**2015 Ranbury Report**), included as **Confidential Attachment C**, observes that rail generally has had to significantly undercut road pricing to gain business.[78] This is common for rail pricing, with the Bureau of Infrastructure, Transport and Regional Economics (**BITRE**) showing that interstate rail freight rates have been consistently below interstate road freight rates since the late 1980s, with the gap appearing to grow over time (see Figure 2 below).

Figure 2: Real interstate road, rail and sea freight rates[79]



140 Rail pricing at this level is not commercially sustainable, as evidenced by the substantial payments under the TSC required to maintain the viability of the North Coast Line.

141 [redacted]

[75] Productivity Commission, *Road and Rail Freight Infrastructure Pricing,* Report No. 41, December 2006, p 13.
[76] Queensland Rail estimate. Australian Bureau of Statistics Road Freight Movements, Australia, 12 months ended 31 October 2014, Queensland Rail total net tonnes 2013-15, coal movements on the Central Queensland Coal Network 2013-14.
[77] Cf. *Virgin Blue Airlines Pty Limited* [2005] ACompT 5 at [484]-[485].
[78] Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 11.
[79] BITRE, *Information Sheet 90*, 2017.

142 [redacted]

143 Rail has a number of challenges compared to road freight, both generally and specific to the categories of freight carried on the North Coast Line. These are discussed below, followed by specific examples of these challenges impacting on rail's ability to compete with road on the North Coast Line.

Challenges of rail compared to road transport

144 Rail suffers a range of challenges compared to road freight. These were summarised in the 2015 Ranbury Report as follows:[83]

> ***Transit Time:*** *Even if rail could match road on the line-haul transit time (which it does not), rail cannot match door-door transit time, due to the Pick Up and Delivery (PUD) legs at each end, and the extra rail terminal times (including waiting for loading/unloading, waiting for the train departure time slot, and the activities post-train arrival). This is exacerbated by the limitations on train scheduling imposed by sharing track with passenger services (in Sydney and Brisbane), and the constraints of single track corridors.*
>
> ***Greater complexity and lack of responsiveness:*** *The complexity of the rail transport chain, with its numerous participants, the rigidity of the network and its operation, and*

[80] Queensland Rail, Confidential *Pricing Principles, Freight access charges* (approved by the Board 22 March 2017), p 7.
[81] Queensland Rail, Confidential *Pricing Principles, Freight access charges* (approved by the Board 22 March 2017), pp 15-16.
[82] Queensland Rail, Confidential *Pricing Principles, Freight access charges* (approved by the Board 22 March 2017), p 16.
[83] Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, pp 10 to 11.

the impact each participant has on the overall transport outcome. There is no single point of accountability, compared to the "single truck and driver" road option.

Greater unreliability and less availability: *Due to a combination of infrastructure performance and reliability outcomes, complexity of the infrastructure, rail operator equipment and terminal operations, and the work practices and culture of the participants in the rail logistics chain.*

Price: *Rail's major point of differentiation is price, with rail generally having to significantly undercut road pricing to gain business.*

145 These matters are discussed further in turn below.

145.1 **Transit time:** The 2015 Ranbury Report set out northbound travel and transit times for road and rail along the length of the longest line in the Queensland Rail network, the North Coast Line. These are replicated in Table 1 below.

Table 1: Regional travel distance and travel time[84]

	Road		Rail		
Brisbane to	Distance (km)	Travel time (no rest periods)	Travel time + 7hrs stationary rest + 1hr general	Green light transit time	Average Master Train Plan transit time
Rockhampton	660	8hrs 44m	-	9hrs 39m	13hrs 46m
Mackay	990	13hrs 1m	-	14hrs 26m	20hrs 14m
Townsville	1,379	18hrs 24m	26hrs 24m	19hrs 37m	27hrs 32m
Cairns	1,721	23hrs 10m	31hrs 10m	25hrs 29m	34hrs 24m

If rest periods are not taken into account (which may be achieved by road operators through driver shift changes or two-up driving), road is significantly faster than rail. Even when rest periods are taken into account, transit times over long distances are comparable. However, whereas the road travel times above include the direct door-door journey, the rail transit times are terminal-terminal only and do not take into account the additional time taken for rail freight transport arising from:[85]

145.1.1 the pick-up and delivery legs at each end of the rail trip;

145.1.2 the waiting times and handling times within the terminals (including allowances for road delivery cut-off time, freight pick-up availability time, waiting time for trucks at the terminals, train loading and waiting time for pre-despatch and post-arrival activities such as shunting and train examinations);

145.1.3 the rigidities of rail time-tabling and time spent waiting for the specific train path; and

145.1.4 the requirement to aggregate loads for train transport.

Once these matters are taken into account, it is evident that road transport provides a significantly more timely service than rail across all relevant distances. That rail cannot compete with road on transit time is generally accepted.[86]

145.2 **Greater complexity and lack of responsiveness:** A customer wishing to transport freight by rail requires the services of multiple parties: below rail service

[84] Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, pp 86, 147.
[85] Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, pp 86, 147-148, 150.
[86] Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 86; ACCC, *Statement of Issues, Pacific National / Linfox - Proposed acquisitions of intermodal assets from Aurizon*, 15 March 2018 at [78].

providers; above rail service providers; logistics providers offering pick-up and delivery services; and terminal handling service providers. While freight forwarders may acquire rail linehaul services 'wholesale' then provide end customers with an end-to-end freight solution, the provision of the service is still critically dependent on the performance of a range of operators. This creates issues of accountability and implementing customer service initiatives is more difficult. By contrast, road transport offers customers a single interface, with responsibility for delivery resting on one service provider. Customers value this greater accountability and flexibility to respond to customer needs.[87]

145.3 **Greater unreliability and less availability:** Issues associated with unreliability and availability make rail less attractive to end customers. Given the single track nature of a rail network, the availability of rail transportation is more affected by both planned maintenance and unplanned incidents than road transportation, which allows competitors to utilise alternative route options in the event of service disruptions. The consequences of reliability are also exacerbated in the case of rail given it affects 'full train' loads, compared to the 'single truck' consequences for road reliability.[88]

Unplanned incidents causing disruptions to rail services can include flooding and cyclones, excessive heat, high winds, derailments and level crossing incidents. Each of Queensland Rail's systems are affected by flooding (though flood damage is typically more serious in north Queensland). The 2015 Ranbury Report noted that based on event experience (and while the time will vary depending on the event and the damage caused), the expected recovery time to reopen a track after a flood is usually approximately three days. This includes waiting for the flood water to reside, performing damage inspections, mobilisation, repair work and track certification.[89]

There has been substantial investment in the Bruce Highway freight infrastructure network in the last ten years which has enhanced the operational efficiency of road providers. Specifically, the Federal and Queensland governments announced the $8.5 billion Bruce Highway Upgrade Program in 2012,[90] and the Federal Government committed an additional $3.3 billion in 2018.[91] As well as improving transit times, such upgrades significantly improve road transport competitiveness in terms of transit time reliability.

145.4 **Price:** Even if rail operators can demonstrate a high level of reliability, the high levels of risk and consequential impacts of service delivery failures mean that rail operators must still provide equivalent or greater value for money compared to road based operators.[92] Shorter road vehicle replacement cycles (compared to longer life rail fleets) and changes in government policy have resulted in improved vehicle productivity and fuel efficiency, as well as rapid adoption of technology, in the road freight industry. This has significantly improved the cost effectiveness of road transport operators in recent years.

146 A further challenge of rail transportation in Queensland when compared to road transport is the significant investment required by above rail operators/end customers and the risk of asset stranding. Whereas the investment required to provide road haulage services is readily made and transferable, this is not the case for above rail services. The capital investment required is substantial and there are limited uses for the narrow gauge rolling stock required for Queensland Rail's network. Above rail operators therefore require longer term take or pay contracts to make such investment viable. There is a reluctance on the part of customers

[87] Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 105.
[88] Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 73.
[89] Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 58.
[90] Department of Transport and Main Roads, https://www.tmr.qld.gov.au/Projects/Featured-projects/About-the-Bruce-Highway-Upgrade-Program [accessed 8 March 2019].
[91] Department of Transport and Main Roads, https://www.tmr.qld.gov.au/Projects/Featured-projects/About-the-Bruce-Highway-Upgrade-Program [accessed 8 March 2019]; See also Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 72.
[92] Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 104.

(particularly intermodal customers) to enter into such contracts.[93] This has been recognised by the ACCC in its Statement of Issues regarding Aurizon's intermodal assets, which states that narrow gauge rolling stock and locomotives, as well as sufficient customer contracts or volume, are high barriers to entry into intermodal rail linehaul in Queensland.[94]

147 Further to the above, there are a number of competitiveness issues faced by rail that are specific to the freight task. For instance, on the North Coast Line, intermodal freight and sugar account for 98 per cent of freight tonnage along most sections of the Line. Other freight carried includes livestock, grain and freight carried from the Mount Isa System between Stuart and the Port of Townsville. Challenges for rail specific to these categories of freight include the following:

147.1 **Intermodal:** Changes to regulations to allow higher mass load limits for road transport have had a significant impact on rail freight. Australia now has some of the most liberal heavy road vehicle mass limits for operating trucks on public roads in the world.

Other factors impacting road versus rail competition include significant investment in the road highway network including the Bruce Highway and Townsville Port Access Road, which has reduced travel time and improved road productivity.

[redacted]

147.2 **Sugar (bulk raw sugar and molasses):** Bulk raw sugar is transported from sugar mills to the nearest export terminal. Many of the mills are located close to export terminals, resulting in short hauls that make it difficult for (heavy) rail to compete with road. The mills also have limited storage capacity for raw sugar, which means that they rely on continual clearing of bins to avoid delays to crushing. [redacted]

147.3 **Grain (wheat, barley, sorghum, chickpeas):** There is an increasingly diverse range of products (differing by supplier, purchaser, product and quality, requiring segregation throughout the transport chain), which is more suited to truck and container loading than full train loads. [redacted]

In 2015-16, BITRE estimated that 46% of grain movements to port in Queensland were by rail,[100] a significant reduction from a market share of 95% of export grain

[93] Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 105.
[94] ACCC, *Statement of Issues, Pacific National / Linfox - Proposed acquisitions of intermodal assets from Aurizon*, 15 March 2018 at [91]-[92].
[95] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 20.
[96] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 22.
[97] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 20.
[98] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, pp 28-30. See also the 2015 Ranbury Report (p 48), which states that the relatively short distances between the mills and ports serviced by the North Coast Line make the sugar task vulnerable to a switch to road.
[99] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, pp 23-27.
[100] BITRE, *Trainline 3, Statistical Report,* November 2015, p 25.

and 56% in the movement of domestic grain in 2004.[101] Queensland Rail estimates that bulk grain movements were around 23% of grain exports in 2016-17.

147.4 **Livestock (live cattle):** Cattle producers and feedlots are widely dispersed across Queensland, whereas the rail coverage is limited. Processors are not willing to commit to using rail services, with the result that there are minimal incentives to invest in the single use infrastructure, rolling stock and associated equipment required for transporting livestock. Total volumes (and individual consignments) are relatively small and are seasonal, making it less attractive for investment by rail operators. [redacted]

148 Finally, rigidities around Citytrain network train scheduling place some limitations on the scheduling of trains that need to traverse the Metropolitan System from the North Coast Line.

Evidence of road contestability with rail on the North Coast Line

149 There is significant evidence of recent substitution on the North Coast Line. For example:

149.1 As noted in the 2015 Ranbury Report:[103]

> *Rail has been losing market share to road freight on this corridor, a situation mirroring that happening along the east coast South–North corridor. Rail is struggling to compete with road freight transport, in an environment of a significant uplift in road vehicle productivity, and massive investment in the highway network between Melbourne and Brisbane, and now planned for Brisbane – Cairns.*

The volumes of intermodal freight transported along the North Coast Line have been in decline since the peak of 2007-2008, with a 21% reduction since that time, from approximately 3.8 million tonnes of product to 3.0 million tonnes in 2016-17.

149.2 The degree of substitutability between road and rail on the North Coast Line is also highlighted by the fact that much of the intermodal rail freight on the North Coast Line is transferred to road during periods when the North Coast Line is not available during scheduled closures or due to unscheduled disruptions.

149.3 Regarding sugar, escalating rail transport costs has resulted in a movement away from rail to trucks for transporting raw sugar from mills to export terminals.[104] In 2014, approximately 1.4 million tonnes of raw sugar was transported from mills to export terminals by public rail, while 2 million tonnes was transported by road.[105] By way of specific example, Plane Creek Mill at Sarina used the North Coast Line until 2012, when it shifted to road to transport its raw sugar to the export terminal at Mackay. [redacted]

150 The competitive constraint posed by road operators is also evident in the views expressed by those who operate in the market. For instance:

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[101] Booz Allen Hamilton, Advice to Queensland Rail, 2004.
[102] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, pp 30-35.
[103] Ranbury, *North Coast Line Capacity Improvement Study — Final Report*, February 2015, p 10.
[104] Department of Infrastructure and Regional Development, Bureau of Infrastructure, Transport and Regional Economics, *Freightline 3 — Australian sugar freight transport*, December 2015, p 12.
[105] Department of Infrastructure and Regional Development, Bureau of Infrastructure, Transport and Regional Economics, *Freightline 3 — Australian sugar freight transport*, December 2015, p 12.
[106] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 30.

150.1 Pacific National considers that it 'faces significant competition from road operators along all of its key freight corridors, particularly the North Coast line corridor and the Mt Isa to Townsville corridor'.[107] Further Pacific National consider that there is 'modal substitution between road and rail' in the above-rail haulage market.[108]

150.2 Aurizon considered that it competed fiercely with road operators for the haulage of intermodal freight on the North Coast Line, citing road competition as a key market characteristic contributing to its decision to exit intermodal in August 2017.[109]

150.3 The ARTC states that rail faces significant competitive constraints via competition from road in the intermodal freight market.[110]

151 Regulators have also consistently recognised that intermodal freight corridors subject to competition with road transport substantially constrain both below and above-rail operators.[111]

Queensland Rail's statutory obligations and position as statutory authority and recipient of TSC payments

152 As a statutory authority, Queensland Rail is one of the avenues through which the Queensland Government achieves its rail policy objectives. One such objective is to facilitate the efficient movement of freight through expanding the use of rail.[112] Increasing access charges would be inconsistent with this objective.

153 In the event of conduct by Queensland Rail that compromised the Queensland Government's objectives (for example, limiting access to its network), the responsible Ministers have powers including in particular the powers under the QRTA Act to:

153.1 control strategic and operational plans (with which Queensland Rail must comply); and

153.2 issue written directions to Queensland Rail.

154 Given the extensive reporting requirements required to be completed by Queensland Rail, both under the QRTA Act and the TSC, the responsible Ministers can readily ascertain whether any such issues need to be addressed.

The threat of regulation or declaration

155 Both the NCC and the Tribunal have accepted that the threat of regulation provides some constraint on service providers.[113] Queensland Rail would be constrained in the future without declaration by the threat of regulation and declaration under the QCA Act. In particular, Part 3 of the QCA Act provides for the declaration of 'monopoly business activities', which enables investigations and reporting on price practices and price monitoring, and Part 5

[107] Pacific National submission to the QCA Declaration Review, p 12.
[108] Pacific National submission to the QCA Declaration Review, p 13.
[109] Rail Express, *Aurizon to sell Queensland Intermodal to PN/Linfox, will close interstate terminals,* August 2017, https://www.railexpress.com.au/aurizon-to-sell-queensland-intermodal-to-pnlinfox-will-close-interstate-terminals/
[110] ARTC Submission to the QCA Declaration Review, p 9.
[111] For example, the Essential Services Commission in Victoria considers that 'the rail supply chain in Victoria does not have sustainable market power against road transport alternatives' and that 'this is further evidenced by the subsidies currently provided by the Victorian Government towards maintaining both the regional and metropolitan networks': *Review of the Victorian Rail Access Regime,* February 2010, p 14, https://www.esc.vic.gov.au/sites/default/files/documents/0a75bcfc-1fe2-47c1-a1d6-eb5f7fd147dd.pdf [accessed 8 March 2019]; Essential Services Commission of South Australia, *South Australian Rail Access Regime Review: Final Report,* August 2015, p 20; See also Harper et al, *Competition Policy Review (Final Report),* March 2015, p 211, providing that competition with road has 'reduced the need for heavy-handed regulation in much of the rail sector'.
[112] Department of Transport and Main Roads, *Moving Freight, A strategy for more efficient freight movement*, December 2013, pp 4, 34-38.
[113] *Duke Eastern Gas Pipeline Pty Ltd* [2001] ACompT 2 at [130]; NCC, *Application for revocation of coverage of the Moomba to Adelaide Pipeline System under the National Gas Access Regime - Final Recommendation,* 14 December 2005 at [6.122].

provides for the declaration of services for the purposes of the access regime established by that part. In either case, the threat of regulation, with its associated compliance and regulatory costs, would deter Queensland Rail from exercising any market power to hinder competition in dependent markets.

Mount Isa Line

156 Access revenues on the Mount Isa Line cover incremental operating costs, however Queensland Rail does not generate sufficient access revenues to cover the total economic cost of providing the service with regard to the substantial fixed cost base of the system.[114]

157 The existing regulatory arrangements are not a binding constraint on Queensland Rail provision of services on the Mount Isa Line; Queensland Rail's access revenue on this Line is significantly below the ceiling limit established by these arrangements.

158 Rather, Queensland Rail is constrained by market and other factors. The material constraints on Queensland Rail in the provision of below rail services for the purposes of transporting freight on the Mount Isa Line include the following:

158.1 Competition by road operators, which provides a substitute service in respect of the transportation of freight other than some bulk commodities over long distances. Parties requiring freight transportation services can readily shift to moving freight by road rather than rail in the event of an increase in access price and/or decline in quality of service provided.

158.2 Queensland Rail's statutory obligations and position as a statutory authority, including obligations to have approved and comply with strategic and operational plans.

158.3 The threat of regulation or declaration under Parts 3 or 5 of the QCA Act.

159 The nature of these constraints are largely as discussed above in relation to the North Coast Line. Further, as highlighted by HoustonKemp, Queensland Rail is constrained by customers' ability to pay and countervailing power on the Mount Isa Line.[115]

160 In relation to competition by road operators, while the 2015 Ranbury Report relates to the North Coast Line, the matters outlined in relation to rail's competitiveness with road affect each of the categories of freight on each of Queensland Rail's systems. In addition, investment in road infrastructure and changes to regulations to allow higher mass load limits for road transport have had a particularly significant impact on the Mount Isa Line:

160.1 There has been substantial investment by the Federal and Queensland governments in the Flinders Highway (parallel to the Mount Isa Line) in the last ten years. This includes $55 million on several upgrades between 2010-2012,[116] $25 million in 2015,[117] and $42 million in 2016[118] to improve road freight transit

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[114] Queensland Rail, *2017-18 Below Rail Financial Statements*, December 2018, p 4, https://www.queenslandrail.com.au/business/acccess/Compliance%20and%20reporting/2017-18%20Below%20Rail%20Financial%20Statements.pdf [accessed 8 March 2019].

[115] HoustonKemp Expert Report, section 4.1.4.

[116] Queensland Government, Minister for Main Roads, Media Release, *North Queensland Roads Boosted by Huge Reconstruction Investment*, July 2011,https://www.capitalmonitor.com.au/Display.aspx?TempLock=SaWoRiwSbxu6EMJxef0XkI54ZWISjLHB [accessed 8 March 2019]; Queensland Government Minister for Main Roads , Media release, *Fixing the flood-damaged Flinders Highway*, December 2010, https://www.capitalmonitor.com.au/Display.aspx?TempLock=6F1%2bJ0LbsttAwFHMN7Dbx9BzBBawU1dC [accessed 8 March 2019]; Australian Government, Department of Infrastructure Regional Development and Cities, *Cloncurry Bypass (Online),* https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=044468-11QLD-OFF [accessed 8 March 2019].

[117] Australian Government, Department of Infrastructure Regional Development and Cities, *Flinders Highway - Hughenden to Cloncurry - Pavement Widening and Strengthening (Online),* https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=044468-11QLD-OFF [accessed 8 March 2019].

[118] Australian Government, Department of Infrastructure Regional Development and Cities, *Flinders Highway (Charters Towers - Richmond) Culvert upgrades (Package 1) (Online),*

times, improve network resilience to weather events and promote freight efficiency.[119]

160.2 With a heavy mass limit permit trucks on the Flinders Highway can operate up to 130 gross tonnes whereas in the United States and many European counties trucks on public roads are limited to 45 gross tonnes or less. The operation of triple road-trains on the Flinders Highway and the ability for trucks to 'back load' means that commodities traditionally moved by rail can now be hauled competitively by road.

161 Queensland Rail also faces the following challenges of rail specific to the freight carried on the Mount Isa Line:

161.1 **Minerals and mineral concentrates (lead, zinc and copper):** [redacted]

There has been a trend toward miners moving minerals concentrates as containerised freight on intermodal trains, to avoid the costs of specific bulk wagons and loading/unloading facilities. However, moving minerals concentrates in containers is less efficient (and more costly and thus less competitive) than a bulk transport solution.

161.2 **Chemicals (fertiliser and sulphuric acid):** [redacted]

162 Evidence of the increasing competition from road operators on the Mount Isa Line includes the following.

163 On 31 January 2017, Aurizon ceased its intermodal service between Townsville and Mount Isa following Glencore's decision to move around [redacted] tonnes of its intermodal freight to Pacific National. At the time, Aurizon had been moving around [redacted] per annum on the service. Pacific National did not have intermodal wagons available to take up the [redacted] tonnes of freight it had contracted with Glencore to transport and for a period of time the entire [redacted] of freight previously transported by Aurizon was moved by road.

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https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=067211-16QLD-NAR [accessed 8 March 2019].

[119] ; Australian Government, Department of Infrastructure Regional Development and Cities, *Flinders Highway (Townsville - Torrens Creek) Pavement Strengthening and Rehabilitation (Package 1),* https://investment.infrastructure.gov.au/projects/ProjectDetails.aspx?Project_id=067212-16QLD-NAR [accessed 8 March 2019].

[120] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 12.

[121] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 13.

[122] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 12.

[123] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, pp 19-22.

For approximately 18 months, the remaining [redacted] tonnes per annum of freight (including cement, lead, sulphur and fuel) was moved by road. In October 2018, Aurizon recommenced a combination bulk/intermodal train service with two return services between Mount Isa and Townsville per week with approximately [redacted] tonnes being returned to rail but still some [redacted] tonnes remain on road. This provides clear evidence of the contestability of traffics between road and rail on this line.

164 The residual freight, including lead, cement and fuel switched to road transport. Lead and cement in particular have traditionally been considered as primarily rail transport commodities given their weight and the distance being hauled.

165 While this is heavy freight, which is not time sensitive and thus ideal for transportation by rail, Queensland Rail understands that factors causing users to continue to use road transport include a reluctance of end-customers to enter into longer term take or pay contracts that rail operators seek and the flexibility of road to chase backloading opportunities to be more competitive.

166 While rail was once the primary mode of transport for fuel from ports to regional areas, the final remaining bulk fuel service (on the Mount Isa Line) ceased in 2016-17.

167 Investment in the Port Access Road in Townsville allowed high capacity Type 2 Road Trains direct access to the port, which has facilitated mode shift of minerals products from the Mount Isa Line catchment. Also smaller scale mines on the Mount Isa Line wanting to reduce upfront capital costs on train loading and unloading facilities may choose an intermodal logistics solution that road can compete on.

168 The increasing competition from road on the Mount Isa Line is also discussed in section 4.2.1 of the HoustonKemp Expert Report.

West Moreton System

169 As outlined in the HoustonKemp Expert Report, there is considerable uncertainty around the future volume of coal that will be transported on the West Moreton System.[124] The most likely scenarios are that it will either increase to nine mtpa (across two mines with the development of the New Acland mine) (high tonnage scenario) or decrease to two mtpa (with closure of the New Acland mine) (low tonnage scenario) within the next five years.

170 In the low tonnage scenario, it is likely that the level of access charge required to cover the costs of providing Queensland Rail's services would exceed the ability of the remaining mine to pay.[125] The likely access prices would instead result in revenues below the revenue ceiling limit. As described by HoustonKemp, in these circumstances, and given the West Moreton System would be underutilised, Queensland Rail would have very strong incentives to negotiate a price with the remaining mine that maximises utilisation and to promote competition in dependent markets so as to maximise demand for services on the West Moreton System (including by facilitating access to the system). HoustonKemp therefore concludes that the volumes and access prices on the West Moreton System would be the same in the future with or without declaration. As such, declaration can have no impact on dependent markets and it follows that criterion (a) cannot be satisfied in respect of the use of the West Moreton System.[126]

171 In the high tonnage scenario, for the reasons outlined in the HoustonKemp Expert Report, Queensland Rail still has a strong incentive to increase mining output and it is not clear that the use of the West Moreton System satisfies criterion (a).[127]

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[124] HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?,* March 2019, section 4.3.2.
[125] HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?,* March 2019, section 4.3.3.
[126] HoustonKemp Expert Report, *Does Queensland Rail's network satisfy criterion (a)?,* March 2019, section 4.3.3.
[127] HoustonKemp Expert Report, *Does Queensland Rail's network satisfy Criterion (a)?,* March 2019, section 4.3.4.

172 Freight on the West Moreton System other than coal is contestable with road, for the reasons outlined above in respect of the North Coast Line (including rigidities around Citytrain network train scheduling place some limitations on the scheduling of trains that need to traverse the Metropolitan System from the West Moreton System).

173 While bulk grain can be operated competitively with road on this system, the 15.75 TAL on this system makes competition with road transport challenging for containerised products such as grain and cotton.

174 The other material constraints on Queensland Rail in the provision of below rail services for the purposes of transporting freight on the West Moreton System include those discussed above in respect of the North Coast Line, namely:

174.1 Queensland Rail's statutory obligations and position as a statutory authority, including obligations to have approved and comply with strategic and operational plans.

174.2 The threat of regulation or declaration under Parts 3 or 5 of the QCA Act.

Other Systems

175 Only a very low volume of freight is transported on Central Western, Western and South Western Systems. The freight transported is primarily grain and livestock. As outlined above in respect of the North Coast Line, such freight is highly contestable by road. In fact, general freight demand on these systems is so low it does not amount to efficient train load quantities.

176 Freight on the Other Systems is contestable with road, for the reasons outlined above in respect of the North Coast Line (including rigidities around Citytrain network train scheduling place some limitations on the scheduling of trains originating from the South Western, Western and Central Western Systems that need to traverse the Metropolitan System).

177 Older infrastructure with low axle loads is a barrier to entry, particularly for the South Western, Western, Central Western and Tablelands Systems.

178 A Queensland Parliament Committee report *Rail freight use by the agriculture and livestock industries* of June 2014 noted comments from a range of interested stakeholders including the following:[128]

178.1 The competitiveness of rail is impacted by infrastructure limitations including certain agricultural products such as containerised grain are not able to be freighted by rail due to their weight.

178.2 The Port of Brisbane pointed to the fact that the deregulation of the grain market has seen a shift toward containerised products to provide more market flexibility, but the rail system with a 15.75 TAL weight limitation cannot accommodate many containerised products, resulting in higher volumes being moved by road.

179 [redacted] Road has no such limitations.

180 Evidence of the constraint posed by road transport on the Central Western, Western and South Western Systems includes the following:

[128] Transport, Housing and Local Government Committee, *Rail freight use by the agriculture and livestock industries, Report No. 45*, June 2014, p 24, http://www.parliament.qld.gov.au/documents/tableOffice/TabledPapers/2014/5414T5368.pdf [accessed 8 March 2019]).
[129] PwC, *Queensland Regional Rail Network Review, Network Infrastructure & Utilisation*, August 2016, pp 11-12.
[130] PwC, *Queensland Regional Rail Network Review, Network Infrastructure & Utilisation*, August 2016, pp 11-12.

180.1 **Grain:** [redacted]

180.2 **Livestock:** [redacted] Queensland is the only State where cattle are still transported by rail[134] and the traffic is subsidised under the Livestock Transport Services Contract between the Queensland Government and Aurizon. Without such subsidies, it would not be commercially viable for these services to be provided.

180.3 **Central Western System:** Aurizon provides subsidised freight services on the Central Western System pursuant to the Regional Freight Transport Services Contract with the Queensland Government. Without such subsidies, it would not be commercially viable for these services to be provided.

180.4 **South Western System:** There has been significant change in the transport market in the South West, with all cotton movements from the South West switching from rail to road from 2014-15. As a result of increases to heavy vehicle mass limits, over 85% of grain is moved in containers by trucks from the South West to the Port of Brisbane.[135]

181 The other material constraints on Queensland Rail in the provision of below rail services for the purposes of transporting freight on the Other Systems include those discussed above in respect of the North Coast Line, namely:

181.1 Queensland Rail's statutory obligations and position as a statutory authority, including obligations to have approved and comply with strategic and operational plans.

181.2 The threat of regulation or declaration under Parts 3 or 5 of the QCA Act.

182 No freight is transported on the Tablelands System.

Metropolitan System

183 To the extent the Metropolitan System is used to provide freight services, the analysis set out above for the other Queensland Rail systems is relevant.

184 The remaining traffic on the Metropolitan System comprises:

184.1 Citytrain, the commuter passenger service on the Metropolitan System; and

184.2 infrequent or ad hoc heritage tourist services.

185 Queensland Rail therefore has no ability or incentive to exercise market power in the provision of below rail services for the purposes of providing these services for the reasons Queensland Rail has no ability or incentive to use any market power to affect passenger service markets set out below.

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[131] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 27.
[132] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, pp 24-25, 27.
[133] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 35.
[134] PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains, Working Paper*, August 2016, p 32.
[135] The Port of Brisbane advised a Queensland Parliamentary committee that over the past three years there had been a modal shift from 85 per cent of agriculture on rail down to 15 per cent today and declining, Transport, Housing and Local Government Committee, *Rail freight use by the agriculture and livestock industries,* June 2014, p 6, https://www.parliament.qld.gov.au/Documents/TableOffice/TabledPapers/2014/5414T5368.pdf [accessed 8 March 2019].

Confidential Attachment B:

HoustonKemp Economists, *Does Queensland Rail's rail network satisfy criterion (a)?*, March 2019

HOUSTONKEMP
Economists

Does Queensland Rail's network satisfy criterion (a)?

A report for Queensland Rail

10 March 2019

> The uneconomically low prices cause other services to appear to be weaker substitutes than they would be at compensatory prices and therefore lead to improperly narrow market definitions and erroneous inferences of market power. This in turn leads to the self-perpetuation of regulation, in which regulators insist on finding that the incumbent lacks market power before deregulating prices, whereas the artificially restricted prices lead to an erroneous inference of market power.[39]

The implication of this is that much caution should be exercised when defining markets, ie, it is erroneous to apply a SSNIP test without being aware of the fact that subsidised prices will be significantly lower than those dictated by a competitive market, and the competitive impact of road-based substitution will be underestimated.

3.3.4 Our assessment whether road and rail are in the same market

The cellophane fallacy and the reverse cellophane fallacy indicate the importance of applying the SSNIP framework using prices that would apply under a workably competitive market, rather than other pricing points.

We note that under workably competitive outcomes, price outcomes should at least reflect the long run cost of providing services, which would be the revenue ceiling. In the case of Queensland Rail, the revenue from access charges are significantly lower than the revenue ceiling. It follows that current prices are significantly below those that would be observed under workably competitive outcomes, and so applying the SNNIP test using realised prices is highly likely to case error.

The consequence of applying the SSNIP framework to prevailing prices thus has the potential to be significant. This is especially the case if the disparity between prevailing prices and the ceiling is large, as is the case for Queensland Rail's systems. Prevailing prices are approximately 60 per cent lower than the price ceiling on the Mount Isa system, and approximately 78 per cent lower on the North Coast line. Put another way, applying a SSNIP test with reference to current prices would lead to a definition of market that is narrower than it should be.

[39] Aron, Debra and Burnstein, David, "Regulatory Policy and the Reverse Cellophane Fallacy", *Journal of Competition Law and Economics*, v 6(4), 2010, p 973.

4. System by system analysis

In this section we analyse whether criterion (a) is met for the Mount Isa, North Coast and West Moreton and Metropolitan system services. Our analysis does not take account of the Access Framework in assessing whether criterion (a) is met – rather, we discuss the Access Framework and its effect in section 5.

We discuss the potential competition consequences of Queensland Rail's services no longer being declared and conclude that there would be no material effect on competition. We find that the current declared status of Queensland Rail's network does not result in a promotion of competition in any market. Our findings are based on:

- the service provider has no market power – Queensland Rail has neither the ability nor the incentive to cause any adverse effect on competition in either its own or dependent markets, irrespective of its declaration status; and
- Queensland Rail has strong incentives to maximise demand for its services, and so to promote competition in dependent markets.

Accordingly, declaration would not promote a material increase in competition, and so criterion (a) is not satisfied. The remainder of this section explains the reasoning underpinning each of these conclusions on a system by system basis.

4.1 Mount Isa system

4.1.1 QCA Approach and conclusions[40]

In its analysis, the QCA focuses on the dependent market of North West Queensland minerals tenement market.

QCA argues that the products carried on the Mount Isa system are bulk, and so are not suitable for carrying by road (ie, the freight is heavy and is a long distance away from port). Thus, the QCA concludes that Queensland Rail has the ability to exercise market power on the Mount Isa system service as there is no competition from road.

The QCA considers that this would affect competition in another market via what it terms as the hold-up problem. The QCA accepts that Queensland Rail is likely to have an incentive to offer access to a potential entrant miner in order to promote utilisation of its below rail infrastructure and increase its revenues. However, it claims that in the second period (ie, at the time of contract renewal), Queensland Rail will raise its prices or impose less favourable non-price access terms.

The QCA claims that freight costs are likely to be a material component of the overall decision-making process for a firm seeking to enter the North West Queensland minerals tenement market. As a result, the QCA concludes that declaration of the Mount Isa service will deliver a material increase in competition in the North West Queensland minerals tenement market when compared with the counterfactual of no declaration.

4.1.2 Increasing competition from road

Products carried on the Mount Isa system services are more diverse than just bulk products. The products transported includes mineral and metal concentrates, mining inputs, industrial products and fertiliser, fuel and livestock, as well as passengers.

[40] Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, pp 57-58.

Road freight provides an increasing constraint on rail freight along the Mount Isa system. Although the constraint from road haulage is less likely to bite for heavier, bulky items for which rail is most suited, road freight is becoming a viable option for some bulk items. In particular:[41]

- several new, smaller scale mines along the Mount Isa system are opting for intermodal solutions such as half-height containers, reducing the up-front capital costs necessary for new mine sites to put in place transport and logistics arrangements – this is often a preferred solution, even where the total cost is lower under traditional, bulk rail wagons, and makes road a closer constraint for bulk items;
- there are multiple recent examples of bulk and general freight items that have shifted to road, including:
  - lead ingots;
  - fuel, which is increasingly utilising road freight to Mount Isa;
  - sulphur, due to a lack of intermodal rail capacity in early 2017, with the consequence that these volumes have not switched back to rail; and
  - copper concentrates; and
- backhaul options on road improve the value proposition relative to rail freight:
  - for example, cement volumes going west to serve Glencore mines from Townsville to Mount Isa, has made road freight contestable with rail.

The recent examples of substitutions from rail freight to road highlight the increasing constraint that Queensland Rail faces from road.

4.1.3 Significant spare capacity on Mount Isa

As described in section 3.1.2, where there is excess capacity and no vertical integration, Queensland Rail has an incentive to maximise utilisation on its network and maximise competition in dependent markets. This is because any user that can be charged any positive margin over incremental cost of using the network represents a contribution to Queensland Rail's substantial fixed cost base.

The QCA recognised that there is existing spare capacity on the Mount Isa system but did not discuss the extent of the spare capacity.[42] Figure 4.1 illustrates the significant available capacity on the Mount Isa system. The available spare capacity ranges from 45 per cent on the Surat to Hughenden and Hughenden to Cloncurry sections, up to 73 per cent on the Flynn to Phosphate Hill section.

The QCA also recognises that Queensland Rail is likely to have an incentive to offer access to a potential entrant miner in order to promote utilisation of its below-rail infrastructure. However, it does not consider this as a relevant consideration in its two-period, static view of the hold-up problem. We set out in section 3 why the QCA's conclusions based on hold-up problem are erroneous.

[41] This information has been provided by Queensland Rail

[42] Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, p 57.

4.1.4 Charges are below the regulated ceiling

Revenue collected from access prices on the Mount Isa system ($74 million in 2017-18) is significantly below the revenue ceiling limit ($181 million in the same year), and prices will not change materially if Queensland Rail became undeclared.[43] This is because the current regulatory arrangements do not prevent Queensland Rail from increasing access prices.

It follows that the binding constraints on Queensland Rail's price setting are non-regulatory factors such as competition from road, end consumer's ability to pay and countervailing power. These factors will not change with removal of declaration and thus removing declaration, and it associated regulatory pricing constraint, would not lead to access price changes.

4.1.5 Impact on dependent markets

There are a number of issues with the QCA's analysis that result in it determining that criterion (a) is satisfied, namely:

- the QCA underestimates the constraints placed on rail by road on the Mount Isa system;
- the QCA relies on a flawed interpretation of the hold-up problem; and
- the QCA claims that freight costs are a material component of the overall decision making process for a firm seeking to enter the market.

On the last point, we note that the analysis of materiality of cost should focus on below rail costs only. Estimates provided by Queensland Rail suggests that the importance of below rail costs varies depending on commodity. For example, Queensland Rail's analysis suggests that in 2017-18, below rail costs represent around:

[43] This is estimated access revenue and excludes TSC and other revenue. The ceiling limit value is estimated through the application of a modified DORC valuation and is calculated using revenue and expense forecasts from Queensland Rail Below Rail Product forecasts, which reflect 2017-18 Corporate Plan estimates. These values are generated by Queensland Rail.

- 0.3 per cent of estimated commodity price for cooper;
- 0.8 per cent of estimated commodity price for zinc;
- 0.9 per cent of estimated commodity price for lead; and
- 5 per cent of estimated commodity price for fertiliser.

In summary, below rail costs are an immaterial input costs for many of the bulk products on the Mount Isa system.

Our conclusion is that with or without declaration, the volumes and access prices on the Mount Isa system will be the same. This is because Queensland Rail has the incentive to maximise volume due to spare capacity, and that the access pries are not constrained by regulation, and as such would not be expected to change without regulation.

Given no change in access prices or change in the volumes transported on the Mount Isa system, the structure and conduct of firms in the dependent markets would not be affected by declaration. For example, the likelihood of entry in any of these commodity markets is not affected by declaration.

We conclude that declaration could not promote a material increase in competition in any dependent market on the Mount Isa system, given that declaration will not affect:

- the structure of the markets, or conduct of firms in any dependent market, in a way that enhances the competitive process; or
- the volume or quality of output in any dependent market.

We conclude that criterion (a) is not satisfied, even without taking account the impact of the Queensland Rail Access Framework which is discussed in section 5.

4.2 North Coast line

4.2.1 QCA Approach and conclusions[44]

The QCA considers the services provided by the North Coast line and Metropolitan system together. In its analysis, the QCA focuses on the dependent above rail haulage market on the North Coast (and Metropolitan) system.

The QCA argues that there are subsets in the rail haulage market namely:

- bulk products, where rail is the preferred transport mode;
- non bulk travelling less than 600km, where road is the preferred transport mode;
- non bulk freight for a medium distance (between 600-1000km), in which rail competes with road; and
- non bulk freight travelling greater than 1000km, where rail is preferred.

The QCA concludes that road and rail compete only for certain segments on the North Cost transport corridors. The QCA's conclusions are based on the current operation of the market and current road and rail prices.

The QCA accepts that Queensland Rail in not vertically integrated into freight services and considers it unlikely that Queensland Rail would enter the above-rail freight market in the foreseeable future.

The QCA places significant weight on what it describes as the hold-up problem. The QCA concludes that in a future without declaration, market participants will face material uncertainties relating to price and non-price

[44] Queensland Competition Authority, *Part B: Queensland Rail Declaration Review*, December 2018, Section 3.7.

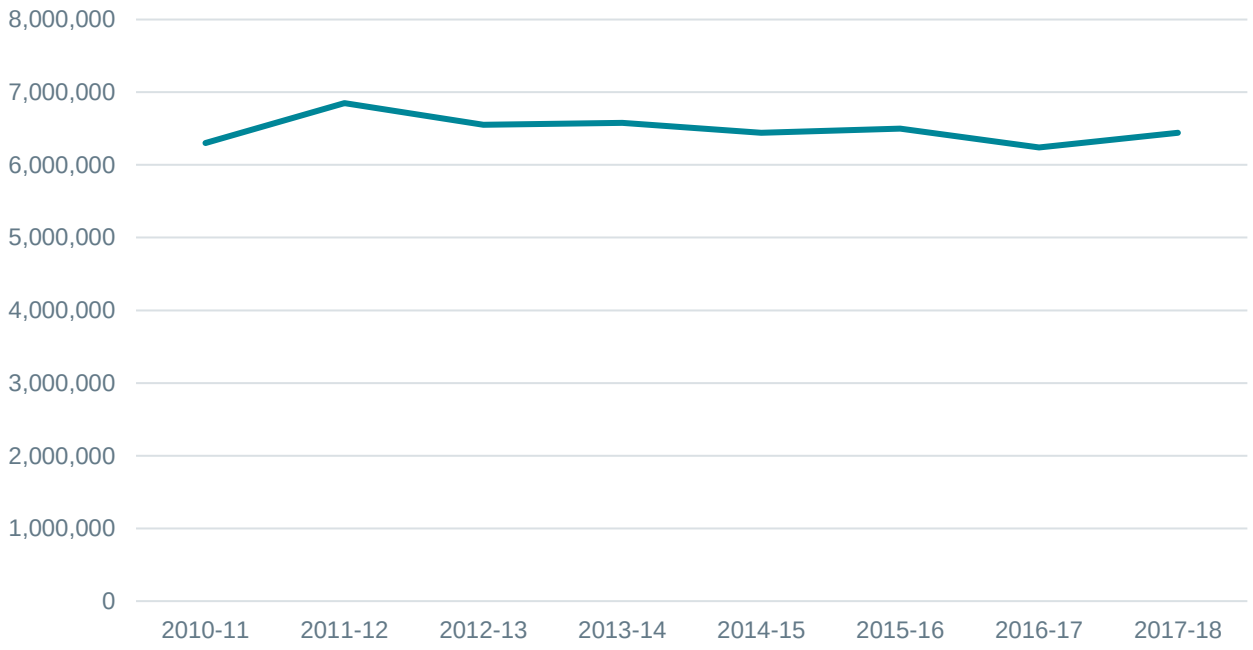
terms, particularly at the time of contract renewal. Thus, it concludes that declaration will create a material increase in competition in dependent markets.

4.2.2 Competition between rail and road

Unlike other systems, Queensland Rail does not have a direct relationship with end customers on the North Coast line. In consequence, Queensland Rail also has less visibility on whether it is losing market share on this system.

From 2010-11 to 2017-18, the rail freight task on the North Coast line has been largely stable with limited growth. Queensland Rail has advised that the rail freight tasks in 2010-11 was usually low due to flood events. Excluding this year would suggest that rail freight volumes on the North Coast line have steadily declined, going from around seven billion gross tonne kilometres of intermodal freight in 2011-12 to around 6.5 billion in 2017-18.

Figure 4.2: Total intermodal gross tonne kilometres, North Coast line 2010-11 to 2017-19 ('000)[45]



The QCA uses existing prices to conclude that only non-bulk goods travelling between 600 and 1000km are contestable by rail and road. Thus, the QCA's analysis suffers from the reverse cellophane fallacy discussed in section 3.2. That is, the QCA has applied the SNNIP test using existing below rail access prices, which do not cover costs, and so are below prices that would occur in a workably competitive environment. Using this lower than competitive rail price to define the market results in an underestimation of the constraint that road would impose on rail in a competitive market. That is, if non-subsidised prices were used, then road and rail freight costs for longer hauls would be much closer.

The QCA also references a Bureau of Infrastructure, Transport and Regional Economics (BITRE) information sheet to suggest that rail becomes cheaper for door to door freight hauls above 1,000 km.[46] Further review of

[45] This information has been provided by Queensland Rail

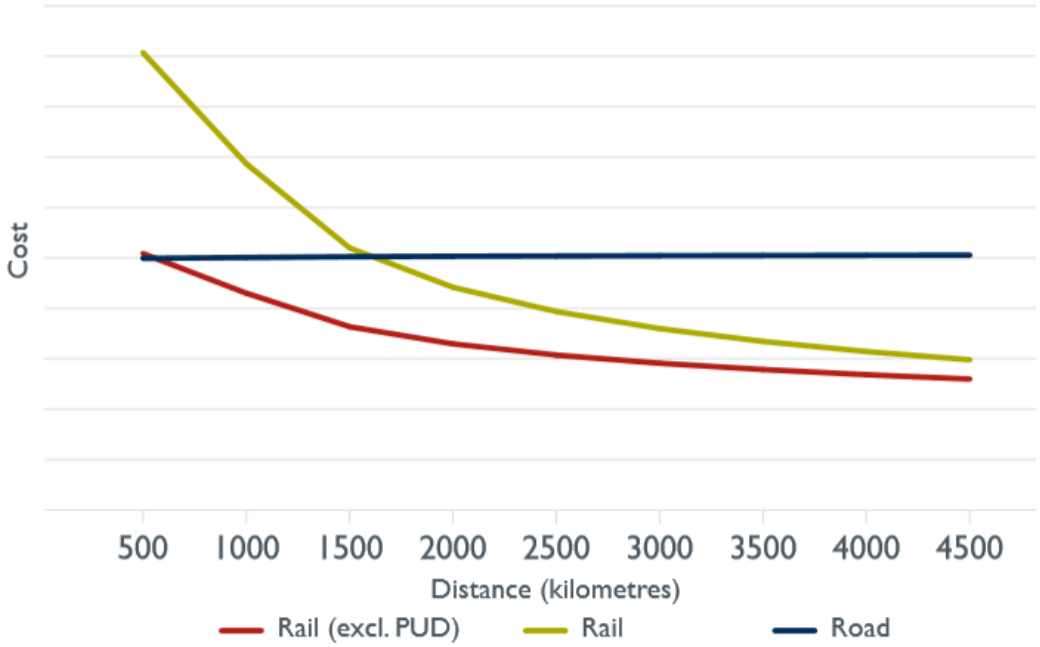
[46] BITRE, *Road and Rail Freight: Competitors or Complements?* Information sheet 34, July 2009, p.8.

the BITRE information sheet, as shown in Figure 4.3, suggests that the distance at which rail has a cost advantage over road is:

- approximately 600km if the costs of pickup and delivery are excluded; and
- approximately 1500km if pickup and delivery costs are included.

The North Coast line freight is mostly containerised and hence pickup and delivery costs should be accounted for when determining a tipping point. This BITRE data thus suggests that road could be cheaper even for freight tasks involving distances from 1000 to 1500 kilometres.

Figure 4.3: Average freight costs for Australian intercapital road and rail freight



Note: Average freight costs for oil prices at approximately US$30-50 per barrel. BITRE, Road and rail freight: competitors or complements? Information sheet 34, July 2009, p 8.

4.2.3 Significant spare capacity on NCL

Although the QCA accepts that the North Coast line is not operating at capacity,[47] it does not provide any quantification of the extent of available capacity. Figure 4.4 illustrates that none of the sections on the North Coast line are more than 50 per cent utilised. The most utilised section is Mackay to Durroburra at 44 per cent of train path capacity and the least used section Erkala to Mackay Harbour at 4 per cent. Thus, there is significant available capacity.

[47] Queensland Competition Authority, *Part B Queensland Rail declaration review*, December 2018, p.45.

Sources and notes: PWC (August 2016), Regional Rail Network Review, Network Infrastructure & Utilisation, p 45.

As described in section 3, where there is excess capacity the provider has an incentive to maximise utilisation on its network. This is because any user that can be charged any positive margin over incremental cost of using the network represents a contribution to Queensland Rail's substantial fixed cost base.

4.2.4 Charges are below regulated ceiling

As with the Mount Isa system, estimated access revenue ($19 million for NCL South and $27 million for NCL North, in 2017-18) is significantly below the revenue ceiling limit ($64 million for NCL South and $148 million for NCL North).[48] The access prices will remain materially the same with or without declaration as the binding constraints on Queensland Rail's prices are non-regulatory factors such as competition from road, end consumer's ability to pay and countervailing power. These factors will not change with removal of declaration and thus removing regulatory pricing constraints would not lead to access price changes.

4.2.5 Impact of removing declaration on dependent markets

There are a number of problems with the QCA's analysis that cause it to determine that criterion (a) is satisfied, namely:

- the QCA underestimates the constraints placed on rail by road on the North coast line; and
- the QCA relies on a flawed interpretation of the hold-up problem.

Our conclusion is that with or without declaration the volumes and access prices on the North Coast line will be the same. This is because Queensland Rail has the incentive to maximise volume due to spare capacity, and that the access prices are not constrained by regulation and as such would not be expected to change without regulation.

[48] This excludes TSC and other revenue. The ceiling limit value is estimated based on book values and is calculated using revenue and expense forecasts from Queensland Rail Below Rail Product forecasts, which reflect 2017-18 Corporate Plan estimates. These values are generated by Queensland Rail.

QueenslandRail

Confidential Attachment C:

Ranbury Management Group, *North Coast Line Capacity Improvement Study - Final Report for the Department of Main Roads and Transport*, February 2015

ranbury
THE TURNING POINT

TRANSLINK – DEPARTMENT OF TRANSPORT AND MAIN ROADS

North Coast Line Capacity Improvement Study – Final Report

FEBRUARY 2015

LANDMARK PROJECT SOLUTIONS / Rail / Property / Building / Infrastructure / Resources

Executive Summary

The North Coast Line provides a range of rail service functions, including the Citytrain commuter services in South East Queensland, a limited number of long-distance passenger trains along its length, major coal volumes on the shared sections with the Aurizon network in Central Queensland, some short-haul bulk services (mineral and agricultural products), livestock, industrial products and intermodal containerised freight services.

The North Coast Line Capacity Improvement (NCLCI) project objectives are:

- *Investigate rail freight capacity scenarios and develop infrastructure options that facilitate increased freight on rail, and support both the freight and passenger growth over the next 20 years.*
- *Develop infrastructure and non-infrastructure solutions for a number of different scenarios to produce capacity improvement options and help inform a future investment program for the NCL.*

The primary objectives of the NCLCI include:

- *Identify the current issues that limit the competitiveness of rail freight on the NCL.*
- *Demonstrate that rail freight growth can be accommodated on the NCL.*
- *Support future freight and passenger services.*
- *Improve passenger and freight efficiency.*
- *Improve performance on the NCL over the next 10 and 20 year planning horizon.*
- *Propose the staged delivery of capacity improvement in a cost effective, value for money investment.*

Key findings and conclusions from this Study include:

1. Contestable intermodal rail freight demand has declined in recent years, with a 20% fall in volumes over the past 8 years, in-spite of continuing regional population growth and economic activity within the Central Queensland and North Queensland regions, and a recent major capital investment program in LNG, coal and associated infrastructure. Rail has been losing market share to road freight on this corridor, a situation mirroring that happening along the east coast South–North corridor. Rail is struggling to compete with road freight transport, in an environment of a significant uplift in road vehicle productivity, and massive investment in the highway network between Melbourne and Brisbane, and now planned for Brisbane – Cairns. A major ($3 billion) investment in the Melbourne – Sydney – Brisbane rail link has failed to attract any extra freight volumes, contrary to expectations in undertaking this upgrade.

2. Rail suffers from a range of disadvantages compared to road freight, including:

   Transit Time: Even if rail could match road on the line-haul transit time (which it does not), rail cannot match door to door transit time, due to the Pick Up and Delivery (PUD) legs at each end, and the extra rail terminal times (including waiting for loading/unloading, waiting for the train departure time slot, and the activities post-train arrival). This is exacerbated by the limitations on train scheduling imposed by sharing track with passenger services (in Sydney and Brisbane), and the constraints of single track corridors.

   Greater complexity and lack of responsiveness: The complexity of the rail transport chain, with its numerous participants, the rigidity of the network and its operation, and the impact each participant has on the overall transport outcome. There is no single point of accountability, compared to the “single truck and driver” road option.

Greater unreliability and less availability: This arises due to a combination of infrastructure performance and reliability outcomes, complexity of the infrastructure, rail operator equipment and terminal operations, and the work practices and culture of the participants in the rail logistics chain.

Price: Rail's major point of differentiation is price, with rail generally having to significantly undercut road pricing to gain business.

3. Specific rail competitiveness issues associated with NCL intermodal freight include:
   - Unreliability, manifested in service disruptions due to extreme weather events (flooding) and the extended duration of track maintenance closures within the Brisbane metro region (Scheduled Corridor Access Scheme [SCAS] closures).
   - Lack of discipline in train operations, evidenced by the poor record of on-time departures and flow-on disruptions to the Daily Train Plan (DTP), and the excessive level of make-up time in the Master Train Plan (MTP) and the DTP.
   - Rigidities around South East Queensland Citytrain network train scheduling, with the impact of passenger peak curfews on departing trains in the PM peak, and arriving trains in the AM peak.
   - Perceived issues with train priorities through the Aurizon network (Parana – Rocklands); but in reality more an issue for the lack of discipline on NCL schedules, and not arriving on time at the Aurizon network entry points.
   - Rail competes strongly on price to the long haul destinations from Brisbane to Mackay and north.

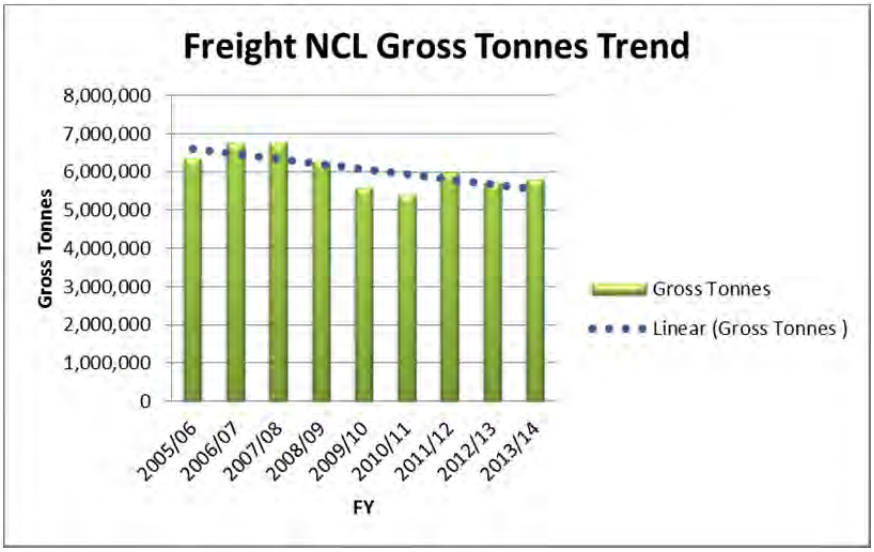
4. There is substantial current "spare" train path capacity on the corridor, with at least 50% spare capacity on the peak day for the preferred evening departures out of Brisbane. There is even more spare capacity, if the demand profile and customer preference was modified to take advantage of the non-peak times for freight paths.

5. The demand forecasts undertaken as part of the South East Queensland Rail Freight Terminal Study (SEQRFTS) indicate that the rail intermodal volumes on the NCL could increase significantly, assuming rail can address its relative competitive position with road. If these rail freight volumes can be realised, a move to run longer intermodal trains on the corridor is considered the best option to increase capacity moving forward, requiring a staged extension of the current crossing loop lengths, as the number of longer trains being deployed increased. This would also require complementary investment in intermodal terminals required to handle the increased volumes and longer trains. Staging for this would depend on the rate of demand growth.

6. The SEQRFTS also identified that the current land-locked narrow gauge intermodal terminals at Acacia Ridge and Moolabin have limited expansion capacity for intrastate NCL freight, cannot readily be upgraded to directly handle longer trains, and could run out of capacity within 10 years if the forecast demand was realised. A new intermodal terminal located on the northside of Brisbane, remote from most of the constraints of Citytrain scheduling and infrastructure maintenance closures (impacting availability within the Brisbane metro network), would be highly desirable, and outweigh the extra road-haul leg from the currently located customer base. A purpose designed Northern Freight Terminal would have significant advantages for operation of the NCL and on the future competitiveness of rail, from a reliability and total transit time perspective. It could also provide a catalyst for the development of a logistics precinct with co-location of customer Distribution Centres, adding further to the competitiveness of rail on the NCL.

7. The current NCL corridor suffers from its legacy beginnings, even with the very significant upgrade projects undertaken during the 1980s and 1990s. There remain significant sections of poor alignment, with sharp curves limiting speeds down to 40 and 50 kph, coupled with poor vertical alignment sections, a large number of old, almost life-expired timber and steel deck bridges, which also impose speed

Figure 6.2 Recent gross NCL intermodal freight trends



The sugar and molasses volumes from the Burdekin area mills (to Port of Townsville) and from Proserpine Mill (to Mackay Harbour) totals around 2.1 Mt during the 6 month season. However, the relatively short cycle distances of circa 100 km between the Mills and the Ports make the sugar task vulnerable to a switch to road.

The non-contestable freight includes nickel ore and bulk products from the Mount Isa line.

10. Road – Rail mode share competition

10.1 CONTEXT

The North Coast Line performs a number of rail tasks, including short haul and longer haul bulk tasks over various sections, commuter and long distance passenger services, and various miscellaneous tasks such as livestock and work trains. This study is focussed on the contestable freight tasks along the route, including consumer freight and industrial freight tasks. This predominantly includes containerised freight, with major origin–destinations being South East Queensland and the major coastal cities along the route. It also includes the less significant task in serving the hinterlands of the major coastal regional centres.

The Bruce Highway performs a similar freight transport function, with a wider geographic influence, with its greater accessibility to the communities along the route, and its natural advantages for short-haul freight, as well as the longer line-haul function. The advantages of road freight include:

- Generally provides the direct Pick-Up-Delivery (PUD) functionality that rail cannot directly provide (no cost/time penalty).
- Deals with truck size loads, not train size loads, with less requirement to aggregate loads with the time penalties this entails.
- Has scheduling flexibility related to departure times not possible with rail (truck load versus train load), and is not commuter peak constrained as applies within the SEQ Citytrain rail network).
- Has loading flexibility and greater geographic spread not possible with rail, including the ability to more effectively compete for back-loadings from multiple origin/destinations.
- Has fewer interfaces within the supply chain that add to the complexity of dealing with rail.
- Operates on a road network that has more operational flexibility, and alternate route options in the event of service disruptions, compared to rail.
- Operates under an access model that does not reflect the cost of providing a road network built to truck design standards, nor prices the externalities associated with road use (accidents, environmental).
- Has low barriers to entry, with the ability for a more rapid take-up of technology improvements at the truck and enterprise level, rather than rail where upgrades generally entail the broader rail network level, with the different below-rail and above-rail entities involved and potential non-alignment of objectives and decision making.

In effect, the road transport market segment is a competitive, multi-service provider mode that is adaptive, flexible and relatively unconstrained. In comparison, the rail transport market segment has an oligopoly market structure where various geographic market segments tend to be dominated by 2 or 3 competitors. In addition, the below-rail infrastructure is structured as a regulated monopoly where the Rail Infrastructure Manager seeks a ROA (return on asset) from Rail Operators in track access charges. Such a return is not sought from road transport operators and as a result, intermodal/general freight rail networks invariably cannot achieve a commercial market rate of return on assets, and consequently have to be subsidised by Government.

The Bruce Highway has been undergoing significant upgrades over recent years, particularly within South East Queensland, and has benefitted from the approval of more competitive higher vehicle load combinations. Even more substantial major highway upgrades are committed by both the Commonwealth and State Governments over the next decade, with an $8.5 billion Action Plan approved for implementation by 2022/23.

12. North Coast Line – intermodal freight market

12.1 KEY CONSIDERATIONS

A description of the North Coast Line and its performance are more fully described in previous Sections of this report (Sections 4, 7 and 8). From a freight perspective key considerations are:

- Corridor limitations on train configuration (length, axle load, payload, rollingstock loading gauge, locomotive requirements)
- Corridor limitations impacting on train speeds (horizontal alignment, grading, level crossings)
- Capacity limitations in aligning with market requirements (predominantly single track with passing loops requiring numerous train crosses, and Brisbane metro freight curfews)
- Relative train priorities (passengers, livestock, coal) and impacts through the Brisbane metro network and the Central Queensland coal network
- Older legacy network infrastructure assets (timber and steel bridges)
- Extensive sections of poor flood immunity with overtopping and flood washouts
- Freight terminal limitations (configuration, length constraints, train turn-around times)
- Maintenance shut-down periods with minimal work-around flexibility.

Contestable intermodal rail freight cannot currently compete with road on line-haul transit time along the route. In addition, there are the additional imposts of the rigidities of rail time-tabling, and the PUD (pick-up and delivery) legs at each end of the rail trip that impact the rail value proposition and add to the total transit time achievable for customers. Table 12.1 below outlines the transit time challenge for rail and the impacts that the Master Train Plan (MTP) rail schedule and loading/unloading times at terminals can have on the door to door task that is a key determinant of customer transport options evaluation.

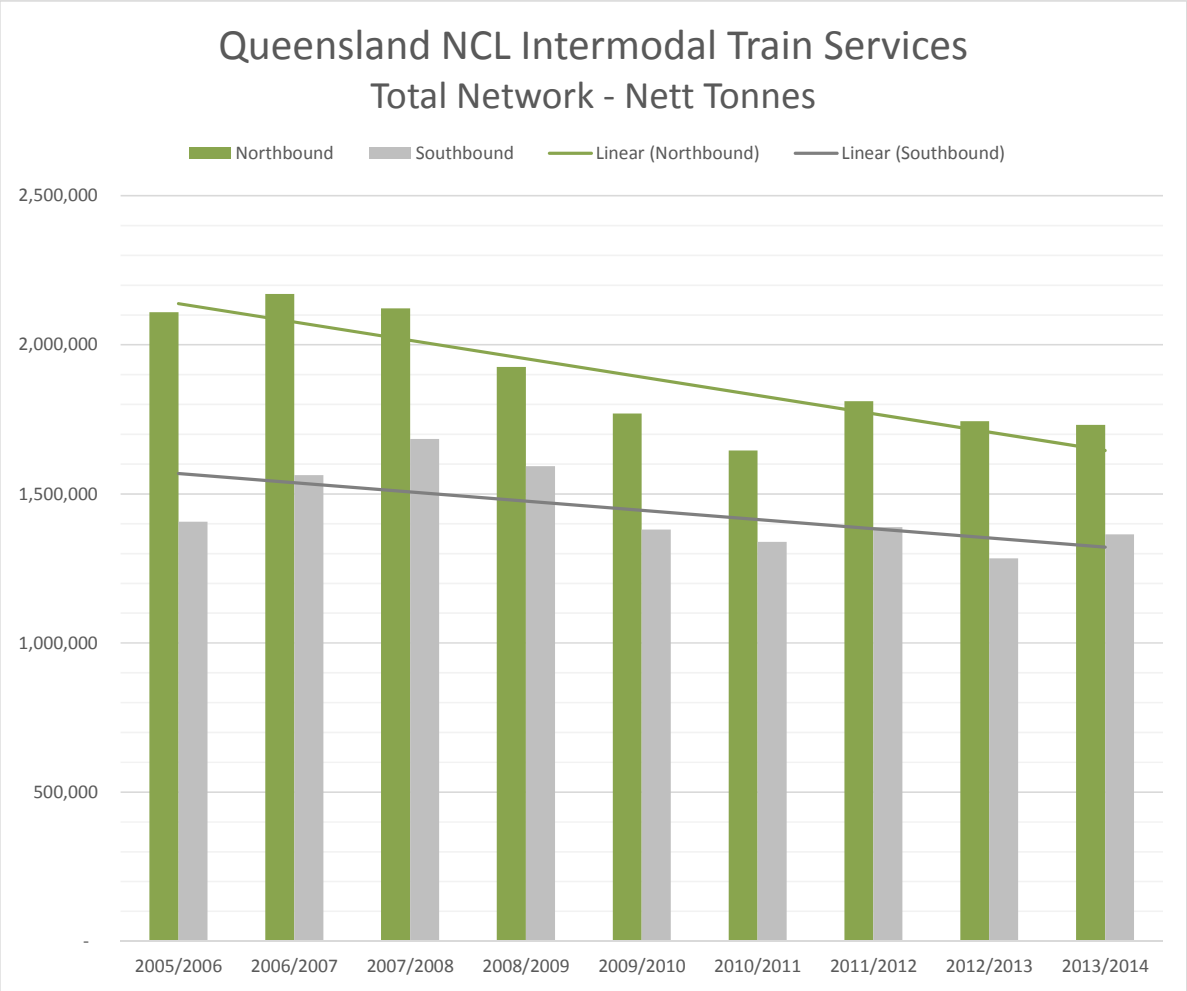
Table 12.1 Comparative travel and transit times to major NCL destinations

		Road		Rail		
Brisbane to:	**Distance (km)**	**Travel time (no rest periods)**	**Travel time + mandatory rest**	**Green light transit time**	**Average MTP transit time**	**Line-haul cut-off to Availability**
Rockhampton	660	8 h 44 m	9 h 14 m	9 h 39 m	13 h 46 m	34.5 h
Mackay	990	13 h 01 m	14 h 01 m	14 h 26m	20 h 14 m	35.5 h
Townsville	1,379	18 h 24 m	26 h 24 m	19 h 37 m	27 h 32 m	35 h
Cairns	1,721	23 h 10 m	31 h 10 m	25 h 29 m	34 h 24 m	40 h

12.2 NCL RAIL LINE-HAUL TRENDS

The performance of the line-haul task by rail that underpins the intermodal rail service offering to the transport market, struggles to compete with road in the contestable intermodal market segment. Various performance factors inhibit optimal rail performance and these factors will be dealt with in more detail in Section 15. The reality is that intermodal rail services on the NCL have been in decline since 2007/8 as indicated in Figure 12.1.

Figure 12.1 Queensland NCL Intermodal Volumes[29]



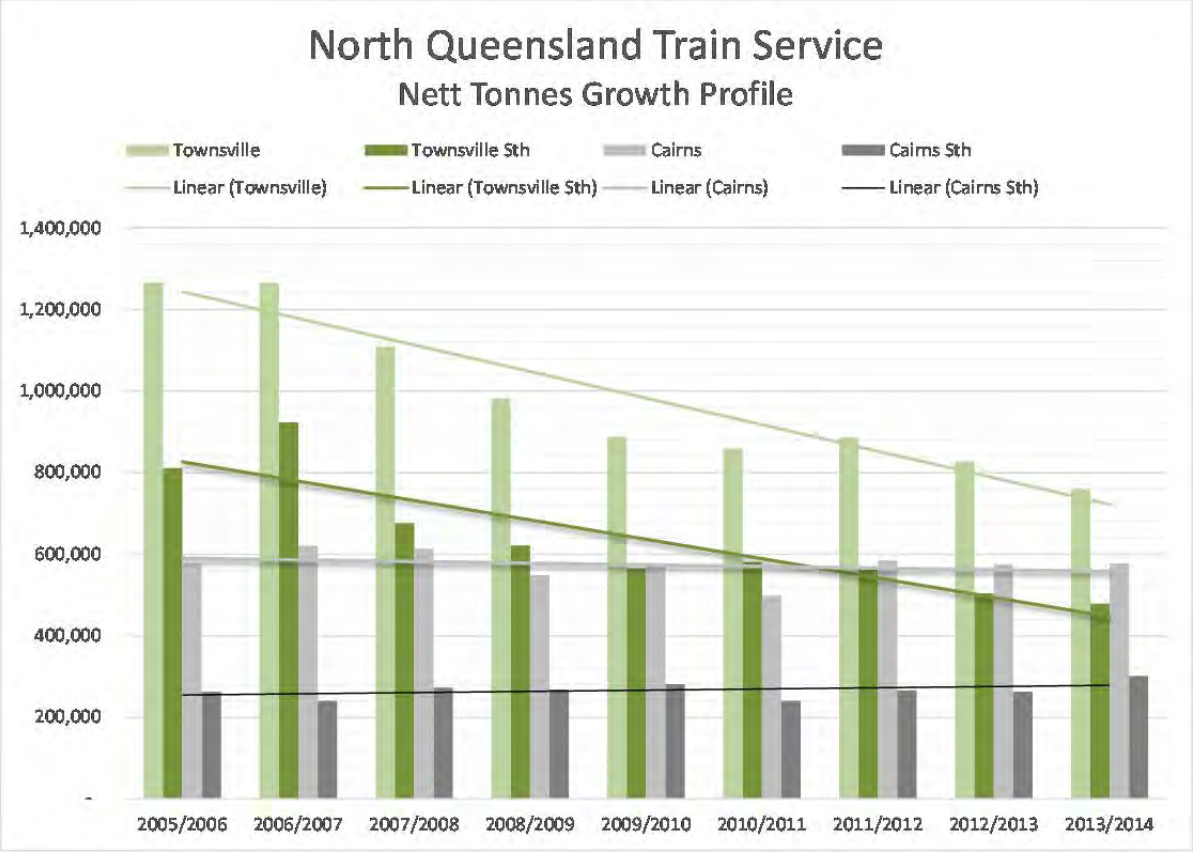
Notes: Excludes inter-port freight flows outside SEQ. Nett Tonnes includes the tare of the container

The peak annual intermodal transport task on the NCL was achieved in 2007/8, with a total of 3.8 million tonnes of freight was hauled in both directions on the corridor. This task has shrunk significantly since that time, with a 20% reduction in the task from the peak in 2007/8 to trough in 2012/13. Volumes have stabilised in recent times with almost 3.1 million tonnes of product being hauled across the corridor in 2013/14. The split-up between the major OD pairs over this period is as shown in Figure 12.2.

[29] Queensland Rail Train Service Data.

Interestingly, despite rail being more competitive against road over the longer haul distances, when further analysis is undertaken of the major origin-destination (OD) pairs on the NCL, it is evident that Townsville has suffered a significant erosion of volume since the peak in 2006/7. Both the northbound and southbound haulage tasks have suffered large reductions in tonnage. The northbound forward leg has decreased by 40% since the peak in 2006/7 and the trend has not yet bottomed out. On the southbound backhaul leg where road is ultra-competitive given the imperative to defray return trip operating costs, the tonnages have reduced by over 48% between 2006/7 and 2013/14. This trend has been exacerbated by the trend to move product through the Port of Townsville rather than the Port of Brisbane. Products such as meat that were railed direct to the Port of Brisbane for export and copper railed to Brisbane for tranship to Port Kembla have been lost by rail or volumes have reduced significantly.

Figure 12.2 North Queensland NCL Tonnage Profiles[30]



Note: Excludes inter-port freight flows outside SEQ. Nett Tonnes includes the tare of the container

In addition, intermodal traffic to and from Cairns has also struggled over recent years. Again, the northbound forward leg has lost ground with tonnages reducing from the peak year of 2006/7 by almost 7% to 2013/14. In contrast to these trends, the Cairns southbound backload leg to Brisbane has managed to grow by 25% over the same period. Despite this trend, in 2013/4 the backload leg tonnage from Cairns was only 52% of the forward leg which remains low compared to the 63% ratio of Townsville back loading (compared to forward tonnage).

[30] Queensland Rail Train Service Data.

15. Freight market conclusions

A significant freight task is undertaken on the Queensland north coast corridor. This corridor is serviced by all the transport modes with the majority of the freight on road and a minor share on rail. However not all of the freight task on the north coast corridor is contestable between road and rail. Bulk freight is predominantly on rail and intra-regional general freight is 100% on road. The contestable component of the NCL freight market is the general freight intermodal line-haul market segment that travels principally between the origin-destination pairs of SEQ and major North Queensland and Central Queensland regional cities including Cairns, Townsville, Mackay, Rockhampton and Gladstone. This total general freight task is estimated at approximately 45 Mtpa.

Rail has struggled to compete with road partly because it is considered less flexible. As a result, customers are conscious of the high levels of risk and consequential impacts of service delivery failures for stock replenishment to the Central and North Queensland markets. Consequently, high levels of service reliability are considered a pre-requisite for consideration of intermodal rail line-haul as a supply chain solution. If rail as a mode can pre-qualify on these service dimensions, the rail line-haul service offer or bundled rail/road door-to-door transport solution must still provide equivalent or greater value for money compared to an independent road based supply chain service offer.

The Bruce Highway continues to provide a highly competitive road corridor alternative to the NCL rail network. However, the highway is considered a relatively dangerous route with most of the length only achieving a 2 or 3 star safety rating out of 5 under the Australian Roads Assessment Program. Transit times on road are superior to those of rail by a significant margin, even when the impacts of mandatory truck driver rest requirements are factored into transit times for the longer line-haul routes.

The north coast corridor road line-haul task is invariably undertaken by B-double configuration vehicles that can in most circumstances travel depot-to-depot or door-to-door for large customers. In addition, road vehicles have an inherent flexibility to travel away from defined route depots to pursue and capture back loading that underpins the operating costs associated with the return journey. This significantly increases the efficiency and competitiveness of road as a mode compared to rail. In addition, an $8.5 billion upgrade of the Bruce Highway is being undertaken to address a range of issues including improved safety, reduced flooding impacts and reduced transit time on the road network. The Bruce Highway upgrade will improve the performance of road freight on the corridor across the major service parameters of reliability, transit time and cost, but not result in any incremental road user charges for the road freight operators.

These factors have resulted in a reduction of the amount of freight transport on the NCL rail system. Over the past six years, the rail intermodal haulage task on the NCL has contracted by 20% to 3.1 Mtpa. Different OD pairs have suffered differential impacts. Townsville volumes have been the most impacted through intense competition from road and more direct import/export task occurring through the Port of Townsville, in lieu of railing product to/from the Port of Brisbane. In contrast, shorter haul routes to CQ have fared better, albeit on the back of the doubling of Mackay volumes in recent years.

Similar to Queensland, the interstate rail corridor between Brisbane, Sydney and Melbourne has struggled to compete with road as the Hume and Pacific Highways have benefitted from major upgrades in recent years. The Pacific Highway is progressing toward the completion of a four lane dual carriageway all the way between Newcastle and Brisbane.

In parallel with the major Hume and Pacific Highway upgrades, ARTC has completed a $3 billion upgrade of the Melbourne – Sydney – Brisbane rail corridor. This investment in the rail network was essential to bring the network infrastructure up to the contemporary standards, and included upgrading of signalling and train control systems, replacing old timber sleepered track with PSC

sleepers and heavier rail, long passing lanes and crossing loops to accommodate 1500 metre long trains). The forecast of substantial increases in rail mode share and rail line-haul tonnages arising from this investment have yet to be realised, with rail volumes contracting by approximately 10% over the past 4 years (albeit in a soft market), and with some loss of market share.

A range of feedback from key industry participants has confirmed the challenge that rail will have competing with road on the NCL in the current environment and into the future. Generally, intermodal rail transport in Queensland is still perceived as an inflexible and complex multi-party supply chain, that is also under capitalised and subject to flood impacts exacerbating reliability doubts from customers. Conflicts were perceived in SEQ with passenger services and SEQ network maintenance tasks as well as conflicts with coal services in central Queensland on the Aurizon network section between Gladstone and Rockhampton. Road in contrast is considered more flexible and responsive, deploying more modern higher productivity road vehicles. As a result, it was clear that the customers want rail services to be able to deliver consistent and efficient transport services that are cost effective, accountable and able to reliably meet the essential timeframes associated with various supply chain replenishment cycles.

It was acknowledged that freight volumes over recent years had been relatively flat and as a result competition had intensified across the market. This in turn has resulted in shorter duration contracts that can be limited to a period of 1 to 3 years, or even spot schedule of rates agreements subject to ongoing minimum performance levels. These contracts are not considered a conducive framework for ongoing investment in long life rail assets.

Ongoing softness in the freight market with minimal growth is expected to continue in the short term. Short haul market routes are expected to be the most difficult to win and retain from road carriers. This will also make the competition for back load freight very intense as well.

In the medium to long term, the overall freight market is expected to stabilise. Future market growth is expected to be consistent with the overall GDP growth in the economy. Distribution patterns are expected to continue to change and evolve. Key drivers will be the ongoing expansion of IMEX freight flows to and from port locations at the expense of traditional transnational freight flows. However in spite of these influences, the scenario options developed by Deloitte's for the SEQRFT Study suggest that the NCL rail market demand will expand from the current level of 256,000 TEUs in 2013 to a minimum of 562,000 TEUs in 2041[55].

[55] TMR – SEQ Rail Freight Terminal Study – Deloitte - Freight Logistics and Demand Assessment - 2014

[redacted]

31.2 TRANSIT TIME COMPETITION

Previous Section 12.1 identified current rail transit times for the major OD pairs, and compared these with road freight line-haul legs. This is summarised in Table 31.1 and graphically in Figure 31.3.

Table 31.1 Regional NCL travel distance and line-haul transit time from Brisbane[56]

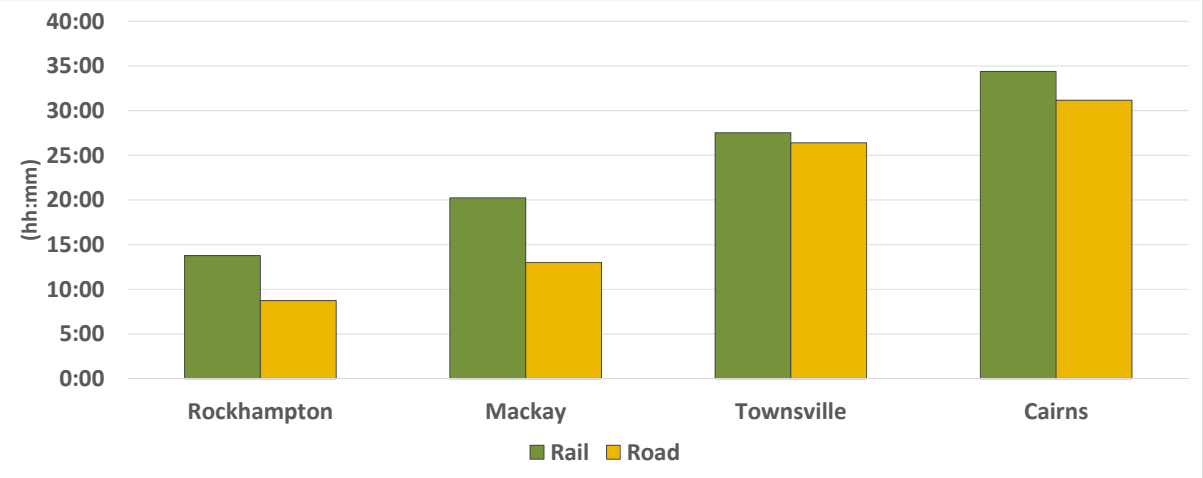
	Road			Rail	
Brisbane to:	**Distance (km)**	**Travel time (no rest periods)**	**Travel time + 7hrs stationary rest + 1hr general**	**Green light transit time**	**Average MTP transit time**
Bundaberg	391	5 hrs 2 mins	–	–	–
Rockhampton	660	8 hrs 44 mins	–	9 hrs 39 mins	13 hrs 46 mins
Mackay	990	13 hrs 1 mins	–	14 hrs 26 mins	20 hrs 14 mins
Townsville	1,379	18 hrs 24 mins	26 hrs 24 mins	19 hrs 37 mins	27 hrs 32 mins
Cairns	1,721	23 hrs 10 mins	31 hrs 10 mins	25 hrs 29 mins	34 hrs 24 mins

The road travel times include the direct door-door journey, assuming full container load (FCL) or full truck load for each mode. The rail transit times cover only the line-haul terminal – terminal times, excluding the Pick-up-Delivery (PUD) legs and the waiting times and handling times within the terminals (includes allowances for road delivery Cut-Off Time, Freight Pick-Up Availability time, and the train loading and waiting times pre-despatch and post-arrival).

Even if rail could compete on transit time for the line-haul leg by straightening track, running faster trains and co-locating a Brisbane origin Distribution Centre with the rail terminal, it cannot compete on a customer door-door transit time for the major centres on the NCL.

[56] National Heavy Vehicle Regulator – NHVR Website – NHVR Journey Planner

Figure 31.3 Road–rail line haul indicative transit times



It is clear that rail cannot compete with road on transit time, particularly given the rigidities of rail freight train scheduling, with limited options for train despatch times, compared to the flexibility of individual truck scheduling and despatch times from customer premises. The planned upgrades to the Bruce Highway will provide some improvement to road freight transit times, but importantly provide increased transit time reliability.

Whilst transit time is important (and has some influence on transport costs), the key requirement for a customer is reliably arriving at the destination on-time and to meet its pick-up requirement, together with having a despatch cut-off time that also meets its business requirements. Arriving too early has limited value to the customer, other than being a measure of contingency for potential transit time delays.

Transit time has a secondary impact on costs, with notionally lower crew costs, and potentially lower energy and other running costs. Asset utilisation for intermodal freight is not greatly impacted, with the current rail operating paradigm based on scheduled service times, and scheduling and extended terminal occupation at both origin and destination terminals (unlike cyclic bulk rail haulage).

31.3 RELIABILITY

Reliability in this context has two elements. These are:

- Day-to-day operational reliability – “Did the train arrive on-time?”
- Availability of the network – “Did the train run at all?”

These elements include the impacts of:

- Individual Rail Operator performance on its own operation (scheduling discipline, crew availability, equipment performance, terminal performance)
- The performance of other Rail Operators and the Network Infrastructure Managers on the network.
- Corridor infrastructure performance (infrastructure failures, derailment caused delays).
- External caused events (e.g. level crossing incidents)
- Weather caused delays (e.g. flooding and flood damage impacts, extreme hot weather speed restrictions).

- Planned major network closures for infrastructure maintenance (e.g. the Scheduled Corridor Access Scheme (SCAS) extended weekend corridor closures within the SEQ Citytrain network).

Stakeholder feedback (from SEQRFTS) in respect of the NCL reliability included:

- The North Coast Line rail corridor is considered to be severely under-capitalised and coupled with a fragmented multi-party supply chain ownership and governance structure delivers poor reliability.
- Where rail is utilised on long haul corridors, road is also used in parallel with a quoted 60/40 rough split of volumes between rail and road, largely as a hedging strategy against rail reliability issues and high cost of single point failure.
- The Mid North Coast region, up to Mackay, is acknowledged as being a road captive corridor. Rail becomes competitive on cost above Mackay and has a reasonable differential once you reach Townsville. However reliability remains an ongoing issue. Only major customers with scale and substantial freight volumes can realise the benefits of the cost differential even with reliability issues leaving other smaller mid-market customers road centric.
- A rail-based supply chain is seen as a higher risk option with a far greater impact of single point failure. As such reliability is seen by customers as a "ticket to the game" and in fact needs to exceed that of road before becoming contestable.
- Factors noted as favouring road over rail included:
  - Rail suffering poor reliability for North Coast Line movements thereby pushing freight onto road even for long hauls.
  - Wet weather impacts on rail access issues in Far North Queensland
- Rail is not perceived by customers as being as robust when compared to road especially with respect to the impact of extreme weather events and recovery time durations.

Feedback from the NCL Supply Chain Forum (March 2013) included:

- The Forum identified the impact of track maintenance closures across the network and whether changes were possible to make the track possessions for these maintenance activities more aligned given the NCL freight services transitioned multiple networks (SEQ, NCL and CQ Coal Network).
- Rail infrastructure on the NCL was highlighted as a concern and potential impediment to the reliability and efficiency on the NCL. This issue had two main dimensions. Flood immunity and recovery was considered critical to enable rail to effectively compete with road on the NCL.
- The NCL Forum also identified the critical nature of train transit time performance that ensured on time running, the maintenance of train path priority and the potential to examine path flexibility in the Master Train Plan (MTP) that improve train service reliability and recovery.

The road network (Bruce Highway) historically has suffered from more numerous flooding impacts; but it generally can resume operations for freight vehicles sooner than is possible with the rail network, particularly where damage has occurred to the rail infrastructure. Road may also have the advantage of multiple options for detours in certain locations, not possible with a single track rail corridor.

The consequential impacts on road freight operations are much less following disruptions, than with rail, due to a combination of the size and diversity (including geographic diversity) of the road freight industry, compared to the rigidities of rail and the impacts disruptions have to a limited train fleet, train cycle durations, single track corridor limitations, and the rail terminal capabilities.

The road network also does not suffer from the equivalent of major planned shutdowns as does the rail network, with travel disruptions to road users for maintenance or constructions works being of short duration (minutes) or temporary deviations constructed, rather than the days or hours disruption time required for rail infrastructure activities.

31.4 CONCLUSIONS – SERVICE PARAMETERS

The main mode competitor to rail for contestable intermodal freight is road transport. Currently rail competes only on price, which is an attraction to the big customers for part of their business, but less so for the smaller or occasional customers.

Rail cannot compete on customer door-to-door journey time. Even if the rail corridor infrastructure standard and rail service could match road on a line-haul transit time basis, the extra rail mode journey time components covering door-to-door cannot be overcome. These include the length/duration of the extra PUD legs, waiting time for trucks at the intermodal terminals, the rail pre-departure and post-arrival activities covering shunting and train examinations, and waiting for the specific train path through the network.

However, whilst transit time is important, both in practical terms and in customer perceptions, reliability of the journey time (departure and arrival time) is a far more significant service parameter for rail. Arriving late is unacceptable for most customers' *just-in-time* supply chains, whilst arriving earlier than planned has limited benefits that generally cannot be realised by the customer.

For rail, reliability is the most significant measure that can be addressed. This includes:

- Reliability of day-of-operations performance (on-time performance) for the total door-door journey.
- Reliability that the services will be run (akin to corridor availability) with the likelihood of outages for a range of planned and unplanned events.
- Reliability in respect of integrity of the freight (e.g. damage to freight)

There is a perception that rail is more unreliable than road from flooding events (even if this is not the case). However the investment under the Bruce Highway Action Plan over the next decade will certainly make the Bruce Highway far more immune to flooding outages, and increase this perception if this flood-resilience upgrade is not at least matched by a similar upgrade of the NCL rail link.

Confidential Attachment D:

PwC, *Queensland Regional Rail Network Review, Freight Logistics Chains Working Paper*, August 2016

www.pwc.com.au

Queensland Regional Rail Network Review

Freight Logistics Chains

Working Paper

Department of Transport

RRN Freight Logistics Chains Working Paper

Version BL Final

August 2016

pwc

QCA declarations review: applying the access criteria

Pacific National's submission in response to the staff issues paper

Public

30 May 2018

6.2 Queensland Rail network

Access to QR's monopoly below rail infrastructure supports a highly competitive market for freight services along key rail corridors, particularly the North Coast Line and Mt Isa to Townsville rail corridors. Access to below-rail infrastructure is crucial to supporting competition in the downstream freight haulage markets. In these haulage markets, PN competes with other rail operators (Aurizon), as well other modes of freight transport (e.g. road transport).

PN faces significant competition from road operators along all of its key freight corridors, particularly the North Coast Line corridor and the Mt Isa to Townsville corridor.

Continued declaration of QR's rail infrastructure is critical to maintaining and promoting an environment conducive to facilitating effective competition on these key freight corridors. Declaration provides for critical regulatory oversight of the terms and conditions of access, as well as access to dispute resolution mechanisms in the event of an access dispute with the service provider.

Removal of declaration would compromise the competitiveness of rail freight services as it would remove the regulatory certainty and transparency of access regulation which ensures rail operators remains competitive with road operators in providing non-bulk haulage services in Queensland.

In summary, if declaration was removed, Queensland Rail would be incentivised to remove any pricing transparency around the cost of access to the network, increase access charges and reduce network service performance standards in a way that would be damaging to competition in downstream markets. In addition, the removal of declaration will remove access dispute mechanisms a in Part 5 of the QCA Act and could result in QR using its monopoly position to negotiate pricing, terms and conditions.

6.3 DBCT

In relation to DBCT, the removal of declaration could impact haulage markets as well as the market for coal tenements in the Hay Point catchment and the market for transferring short term access rights to DBCT as well of DBCT Management's secondary capacity trading market.[10]

Declaration of DBCT has been important in maintaining a structure that promotes competition in the provision of coal haulage services. Declaration has provided certainty in relation to the access arrangements underpinning access to the terminal.

7 These are significant natural monopoly facilities (criteria (b) and (c))

Each of the three essential facilities under consideration are natural monopoly facilities, and are of state significance in light of their size and importance to the Queensland economy. The fact that they were considered as appropriate facilities to be declared under the QCA Act indicates their size and importance to the Queensland economy.

[10] In relation to these markets, PN supports the submissions made by the DBCT User Group.

7.1 CQCN

The CQCN is a natural monopoly facility. There are no substitute facilities for supply of the relevant service, being 'the use of a coal system for providing transportation by rail'.[11]

There is also no real prospect of a competing facility being built. Given the high fixed costs of building any such new facility, the current single facility will have large cost advantages over two or more facilities.

7.2 Queensland Rail network

The QR rail infrastructure network is also a natural monopoly facility. There are no substitute facilities for the supply of the relevant service, being 'the use of rail transport infrastructure for providing transportation by rail'.[12] There is also no real prospect of a competing facility being built.

In the context of criterion (b), the relevant 'market' is the market in which QR provides access to below-rail services. As has been recognised on numerous occasions, this is separate to the market in which PN and other freight businesses provide haulage services.[13] In those markets there is modal substitution between road and rail, which constrains PN's pricing but absent declaration, PN has no mechanism of constraining the pricing it is charged by QR.

PN considers that it is clear that the QR infrastructure (either in its current form or as expanded) would be able to meet foreseeable demand in this market at lowest cost, compared to two or more facilities. The NCC has previously observed that railways typically exhibit natural monopoly properties due to high fixed costs and significant economies of scale.[14] The QR rail infrastructure is no exception in this regard.

7.3 DBCT

PN supports the submission made by the DBCT User Group in relation to application of criterion (b) to DBCT. This submission demonstrates that DBCT could meet foreseeable demand in the relevant market (the Hay Point common user coal handling services market) at least cost compared to any 2 or more facilities. This conclusion is supported by detailed economic modelling undertaken by PwC, based on an assumed 15 year term for the declaration.[15]

8 Continued regulatory oversight is in the public interest (criterion (d))

8.1 Economic benefits

Maintaining declaration and effective regulatory oversight of the CQCN, the Queensland Rail network and DBCT will deliver a range of economic benefits, including:

[11] QCA Act, s 250.

[12] QCA Act, s 250.

[13] *In the matter of Fortescue Metals Group Limited* [2010] ACompT 2, [1138].

[14] National Competition Council, Draft Recommendation: Applications for declaration of four services comprising the Central Queensland Coal Network under s 44F (1) of the Trade Practices Act 1974 (Cth), 14 September 2010.

[15] PwC, Dalrymple Bay Coal Terminal User Group: 2018 Access Declaration Review, May 2018.

ARTC Submission on Submissions

QCA Declaration Review

July 2018

- Timely, strong and binding dispute resolution procedures that give both sides confidence that the requisite decisions will be based on reasonable commercial (not theoretical) principles;
- The ability for access seekers to hold infrastructure owners to account for the delivery of the promised services and at a reasonable (commercial) price; but not in a manner that exposes the owner to significant, retrospective, operational risks;
- Transparency of negotiated outcomes to ensure that entrants have certainty on their competitive access position vis a vis their competitors and giving credence to the principle of non-discriminatory access; and
- A nationally consistent approach to transport access such that decisions on reasonableness of outcomes only reflect variances in the risk profile of assets and not the location or theoretical approach of the regulator;
    - Given the competition from road, this approach must reflect road pricing too.

In the rail industry, be it in either the coal or the freight transport sectors, there are a very limited number of highly informed, well-resourced and large counterparties (including many of the largest mining companies in the world) who exercize significant counter vailing bargaining power against the infrastructure owners. In addition, in the freight sector, rail faces a significant competitive constraint via competition from road. The statements by PN and Glencore highlight that these constraints ensure that competitive tariffs can be negotiated for rail access in both resource and freight environments and economic benefits achieved via negotiation rather than regulation.

ARTC recognizes that to be effective, such a framework would require the acceptance of Access Seekers and Access Owners. ARTC therefore does not offer specific comments on the proposed Access Framework Deed Polls examples provided by QR and DBCT, however supports these as a framework for discussion with customers to achieve a nationally consistent access framework that benefits owners and customers alike.

6 Conclusion

The Coasian economic framework that efficiency is driven by access negotiation rather than regulation is shown to apply in the rail industry. ARTC therefore supports the development of a system which promotes negotiated outcomes whilst providing the critical protections of binding commercial dispute resolution, transparency and national consistency of commercial transport regulation. This framework requires acceptance of owners and users alike to ensure there is confidence that it delivers the optimal outcomes for the rail industry.

ARTC would welcome the opportunity to engage with both Access Seekers and Infrastructure owners to build a consensus mechanism that delivers on these issues whist removing the regulatory cost burden on Australia's railways.

COMPETITION POLICY REVIEW

Final Report

March 2015

Professor Ian Harper
Peter Anderson
Su McCluskey
Michael O'Bryan QC

Recommendation 5 — Cabotage — coastal shipping and aviation

Noting the current Australian Government Review of Coastal Trading, cabotage restrictions on coastal shipping should be removed, unless it can be demonstrated that the benefits of the restrictions to the community as a whole outweigh the costs, and the objectives of the government policy can only be achieved by restricting competition.

The current air cabotage restrictions should be removed for all air cargo as well as passenger services to specific geographic areas, such as island territories and on poorly served routes, unless it can be demonstrated that the benefits of the restrictions to the community as a whole outweigh the costs, and the objectives of the restrictions can only be achieved by restricting competition.

Introducing an air cabotage permit system would be one way of regulating air cabotage services more effectively where necessary.

Rail freight

In the rail sector, the NCP reforms focused on the structural separation of the interstate track network from above-rail operations. This included forming the Australian Rail Track Corporation and developing access regimes and regulatory bodies. Networks have been declared under the National Access Regime or equivalent state-based regimes. Open access was also applied sporadically to related rail assets, such as bulk handling assets, intermodal terminals, coal ports and grain export facilities.

At a national level, the objectives set by the original NCP have been largely met. The application of price controls and the oversight of regulators appear to have addressed concerns about possible monopoly pricing. Regulatory regimes have generally promoted competition and entry has occurred in some access-dependent markets.

Issues raised in submissions include: the complexity of access issues, with some above-track operators having to contend with multiple access regimes to provide a single rail service; that structural separation has been imposed in areas where above-rail competition has not and is unlikely to emerge; and that vertically integrated railway operators can discriminate anti-competitively against above-rail competitors.

In relation to access regimes, Asciano notes:

> Asciano operates its above rail operations under six different access regimes with multiple access providers and multiple access regulators. This multiplicity of regimes adds costs and complexity to rail access for no benefits, particularly as many of the access regulation functions are duplicated across states. (DR sub, page 7)

The value of structural separation of track from above-rail operations is more contentious. Aurizon considers that costs of structural separation may pose an additional impost in an industry that struggles to compete with road transport. Aurizon notes:

> The fundamental economic problem for the interstate rail network is a lack of scale, which manifests as an inability to compete effectively with road transport. (sub, page 39)

While rail track may be considered a natural monopoly, intermodal competition can act as an effective constraint. This has reduced the need for heavy-handed regulation in much of the rail sector.

However, other stakeholders contend that important parts of the rail freight industry are not competitively constrained by road. Asciano notes:

> Rail networks predominantly carrying coal, for example, in the Hunter Valley and Central Queensland, are not competitively constrained by road. The nature of the product (i.e. volume and weight) means that the freight task cannot be met by road. In this situation the track providers have significant unconstrained monopoly power. (DR sub, page 10)

And

> ... a constant concern is the lack of constraint upon the vertically integrated monopolist's ability to anti-competitively discriminate against its above rail competition such as Asciano. (DR sub, page 11)

Australian Rail Track Corporation considers:

> Structural separation has been successful at promoting competition on the interstate network, since the reforms of the 1990's there has been around 25 operators enter the market, three have exited and 15 have consolidated into four main operators. (DR sub, page 2)

The Panel's view

Rail reform has been relatively successful and proceeded at a reasonable pace. Many rail freight tasks face significant competition from road freight, which has made efficiency-enhancing reforms relatively palatable.

Structural separation of track from above-rail operations has increased competition and innovation in the sector, improving rail's efficiency to the benefit of consumers. However, regulators and policymakers should be pragmatic about structural separation of railways, recognising that on some low-volume rail routes vertical integration may be preferable. This may be particularly so where road freight offers effective competition.

Policymakers should look to reduce the number of access regimes and regulators in the rail sector as far as possible as excessive complexity imposes costs on users.

Where rail operators are vertically integrated, access regimes need to have strong non-discrimination provisions and effective compliance and enforcement to promote competition in above-rail operations.

Road transport

Australia is highly reliant on its road network for the efficient movement of goods and people both in cities and the regions. More than 70 per cent of domestic freight is transported by road.[308]

Australia's road transport industry has historically operated in a diffuse regulatory and funding framework, which has imposed significant costs on some road users. Government involvement in the road transport sector covers licensing, access rules, safety regulation and road construction, maintenance and safety.

The pace of road reform in Australia has been slow compared to other reforms of transport and utilities. This is partly due to roads and road transport being traditionally administered through

308 Australian Trucking Association 2013, *A Future Strategy for Road Supply and Charging in Australia* Canberra, page 3.

Information sheet 34

Australian Government
Department of Infrastructure, Transport, Regional Development and Local Government
Bureau of Infrastructure, Transport and Regional Economics

Road and rail freight: competitors or complements?

Where and how do road and rail freight compete with or complement each other?

Up until the early 1960s, railways dominated all but the shortest land-based freight task. Since then, vast improvements in road vehicle productivity and road infrastructure quality, the gradual removal of regulations restricting road freight carriage and the exponential growth in interstate trade has broadened the range of freight tasks for which road is better suited than rail.

Yet both road and rail—and also sea and air—continue to play important roles in transporting Australia's diverse freight task. Each mode has attributes that render them more suitable, and generally less costly, for particular transport tasks. For example, the flexibility of road transport for urban goods distribution is unassailable; equally, the scale economies of rail over longer distances and for bulk commodities advantage it, over road, for these tasks.

There is a middle ground where both road and rail are used for carrying some goods, in some cases competing for freight and in other cases being used together as part of integrated 'logistics' operations. 'Intermodal' freight is one such area where road and rail work together, with road transport providing local pick-up and delivery (PUD) to and from the rail terminal.[1] Such 'intermodal' freight services are said to be 'complementary', in the sense that if the demand for one falls demand for the other also falls. However, such intermodal road–rail freight tasks can often be substituted by road-only freight services. Intercapital non-bulk freight is a prime example where road and rail (and also sea) compete for some freight traffic.

So where do road and rail compete for freight, and where do they provide complementary services? How large is the market in which road and rail compete in absolute terms and relative to the size of the total domestic freight task? This information sheet attempts to answer these questions—providing an overview of the role of road and rail (and, peripherally, sea and air) in domestic freight transport, the factors influencing mode choice, the responsiveness of road and rail freight demand to cost and service quality, and the implications for future freight growth.

1. Intercity rail freight is also commonly referred to as 'intermodal' freight.

Box 2 Grain transport

Road and rail both directly compete and operate cooperatively to transport Australian grain produce. Grain destined for bulk export, or supplied to local mills, is generally first consolidated in regional bulk storage facilities, with road handling movement from farm to storage facility. Rail is used for bulk haulage from regional storage sites to market.

Road and rail competition is more likely for existing branch line grain haulage, where relatively lower traffic volumes provide rail with less cost advantage over road freight.[7] Larger truck combinations have reduced average road haulage costs, and it has become cheaper to consolidate branch lines, replacing rail services with road transport, so that, in many cases, rail heads have become fewer and closer to ports. Additionally, the trend towards separate storage and handling of the increasing variety of different grain types grown in Australia also adds to road's relative attractiveness (GIAC 2004, Transport SA 2002).

Non-bulk freight

Long-distance non-bulk freight, predominately carried by rail for the first half of last century, has since largely shifted to road. Within urban areas, rail is an option for some port–terminal freight movements, but otherwise road is generally the only feasible transport option. Urban road freight accounts for around 28 per cent of all road freight — Sydney and Melbourne together account for almost half of total capital city road freight (see Figure 2). Outside urban areas, the relatively low volumes and dispersed nature of most freight tasks preclude rail from exploiting any scale-induced cost advantage, and in many cases road is the only available freight transport option.

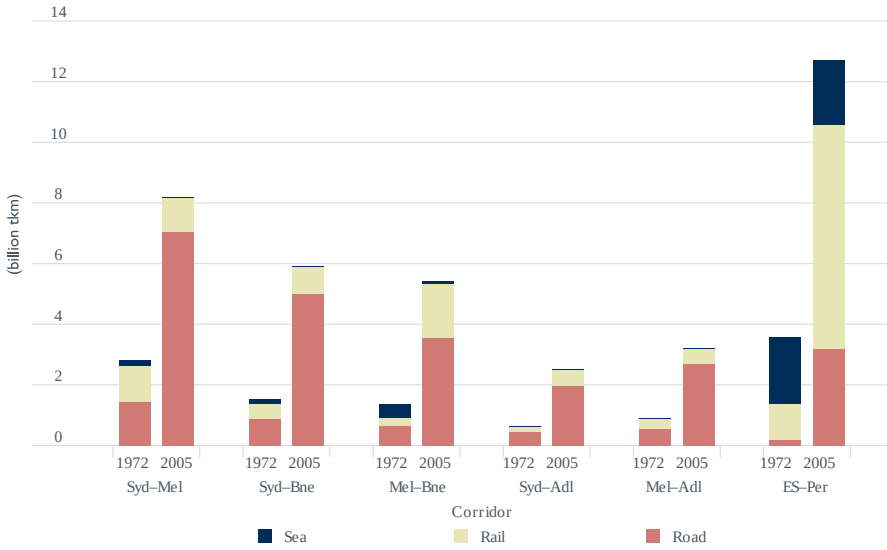
Non-bulk freight movements also exhibit significantly more diversity and complexity than bulk freight, in regard to distribution networks, packaging and delivery requirements. Non-bulk freight logistics chains can take many different forms—warehousing and some manufacturing activities can be combined with goods transport to varying degrees, and freight operations can be undertaken either in-house ('ancillary transport'), via direct contract, or through a freight forwarder. Most domestic non-bulk commodity logistics chains, because of the short distances involved and/or origin–destination requirements, only involve road transport.

Intercapital non-bulk freight

Apart from segments of the grain transport task (noted in Box 2), the principal market where road and rail compete is for carriage of non-bulk freight between capital cities. Figure 2 highlighted the relative size of the intercapital non-bulk freight task, between different capital city pairs with respect to other freight movements, and Figure 3 shows intercapital non-bulk freight volumes, by city pair, in 1971–72 and 2006–07, highlighting the strong growth in intercapital non-bulk freight over the last 35 years.

7. GIAC (2004) report that cost recovery on branch lines, at least in NSW, has been estimated to be 6 per cent or less, which would increase only to 9 per cent with line upgrade, so these lines would not be competitive with road in the absence of subsidisation.

Figure 3 Intercapital non-bulk freight task and mode shares, 1972 and 2005



Source: BTRE (2006).

Road is the predominant freight mode for most intercapital corridors. Rail is most significant on the long Eastern States–Perth corridor, where it currently moves around 57 per cent of total intercapital origin–destination non-bulk freight,[8] and the Melbourne–Brisbane corridor, where it has a 35 per cent share of intercapital non-bulk freight.[9] On other corridors, rail's mode share is less than 20 per cent, and less than 10 per cent on the two largest intercapital corridors: Sydney–Melbourne and Sydney–Brisbane. Additionally, a significant proportion of Sydney–Melbourne and Melbourne–Adelaide non-bulk freight is 'landbridged' freight through the Port of Melbourne in the case of Melbourne–Adelaide and Bass Strait freight in the case of Sydney–Melbourne (Ernst & Young 2006, BITRE 2007, Gheringhap Loop train sightings and BITRE estimates).[10]

While rail competes with road on the line-haul segment of long-distance non-bulk freight, it is reliant on road freight transport for the pick-up and delivery of freight to and from the rail terminal.

Urban freight

In urban areas, the combination of often dispersed origins and destinations, comparatively short distances and small shipment volumes means freight is most effectively carried by road. Consequently, rail freight is a negligible share of urban freight movements. However, with stevedoring firms, port authorities and governments planning to increase the use of rail transport between capital city ports and major terminals for a range of reasons including relieving road congestion,

8. Or approximately 80 per cent of total east-west non-bulk land freight, i.e. excluding sea freight.
9. Intercapital non-bulk rail freight share estimates exclude steel freight traffic.
10. International container ships limit port calls according to freight volumes, and a significant proportion of Adelaide-based import/export freight carried by rail to/from the Port of Melbourne, primarily on trains operated by stevedores. Stevedore-operated landbridging rail services comprise approximately half all Melbourne–Adelaide badged freight trains.

Table 1 Freight time-sensitivity market shares

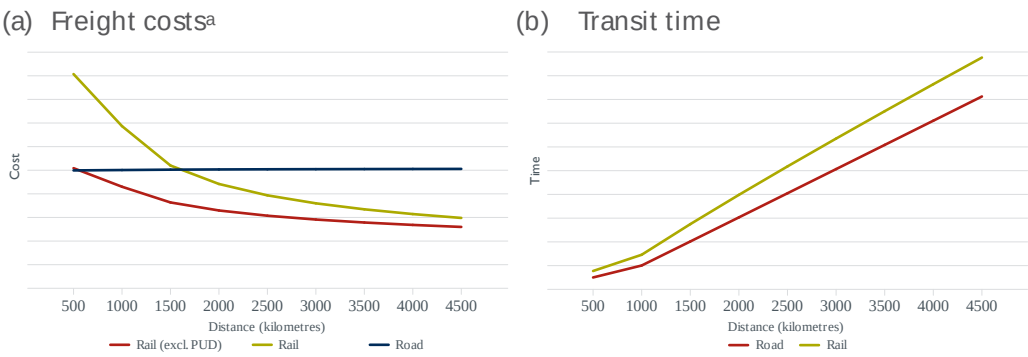
Freight type	*Syd–Mel*	*Syd–Bne*	*Mel–Bne*
		(per cent)	
Express	*5*	*5*	*5*
Availability and reliability sensitive ('Economy')	*70*	*70*	*60*
Price sensitive ('General')	*25*	*25*	*35*

Source: Ernst & Young (2006).

Freight transport costs and service attributes

Modal cost structures and market volumes are also significant factors in mode choice. Figure 4 shows the general relationship between average freight costs and haulage distance (panel a), and between average transit times and haulage distance (panel b) for intercapital road and rail freight.

Figure 4 Average freight costs and transit times for Australian intercapital road and rail freight



a. Rail freight costs excluding pick-up and delivery.
Note: Average freight costs for oil prices at approximately US$30–50 per barrel.
Sources: BAH (2001, Appendix C) and BITRE estimates.

Until the recent surge in world oil prices, to over US$100 per barrel in 2007–08, road freight was the lowest cost mode for low volume shipments over shorter distances. Ignoring differences between forward and back-haul rates, the average per kilometre road freight cost is more or less constant with respect to distance. Rail generally has lower line-haul costs than road, especially for large volumes and over longer distance, but pick-up and delivery and rail terminal costs add significantly to the average door-to-door cost of rail, particularly for short-haul freight. Consequently, average rail costs decline with increasing freight volumes and distances, such that rail is lower cost for door-to-door freight hauls above 1000 kilometres. With world oil prices averaging almost US$100 per barrel in 2007–08, three times average prices prevailing in 2000–01, however, rail temporarily experienced an absolute price advantage over road across almost all intercapital corridors (ARTC 2008).