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Sophia Everett
Ross Robinson

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SUPPLY CHAIN INEFFICIENCIES: REGULATION MISDIRECTED? An examination of Queensland’s Dalrymple Bay Coal Terminal

Dr Sophia Everett and Dr Ross Robinson*

INTRODUCTION
Deregulation of transport infrastructure and the privatisation of ‘natural monopolies’ has brought about a regulatory regime which seeks to ensure equitable access and pricing. Recent developments at the Dalrymple Bay Coal Terminal indicate that regulation is constraining supply chain efficiency. Regulator overhaul has been called for but this paper argues that while this will expedite the regulation process per se it is unlikely to resolve the bottleneck at the port/ship interface. The question is raised whether the objectives of privatisation have been realised or do we have a hybrid, ostensibly privatised model, unable to be unshackled from public sector control and the regulator?

PART 1: GOONYELLA COAL SUPPLY CHAIN
Coal market growth
Australia’s coal exports totalled 208 million tonnes (mt) in 2004/05. In that year 160mt was exported from Queensland’s Bowen Basin which is divided into three systems – the Goonyella system exporting through two terminals in the port of Hay Point – Dalrymple Bay Coal Terminal (DBCT) and the Hay Point Coal Terminal (HPCT); the Newlands system exporting through the port of Abbot Point; and the Moura/Blackwater system exporting through the port of Gladstone (Figure 1).
The Goonyella system is complex operationally with demand for coal outstripping supply and serviced by a rail and port network unable to handle growing export tonnages. At the port of Hay Point congestion has been growing visibly in particular at the terminal/ship interface. This is a result, in part, of supply chain disparity with a number of links in the chain each with different capacities. Coal exports, for example, exceed 90mt; the combined throughput capacity at the two terminals is approximately 87mt; and the rail network has a carrying capacity of approximately 86mt. Congestion and bottlenecks occurred as a result particularly at the terminal/ship interface – up to 50 vessels queued at any one time in April/May 2005 for approximately 21 days at a demurrage cost of $2m/day (Productivity Commission 2005).

Congestion is likely to increase as a spate of new mines comes on stream. At present expansion of 16 committed projects with a value of $4.8b is underway and further projects valued at $2.8b are in the planning stages (ABARE 2006). Demand for coal, particularly from China and India, is growing. Mining companies, enjoying the resources boom, are receiving as much as US$130/tonne and ABARE forecasts that 2005/06 exports will increase from 208mt in 2004/05 to 245mt in 2005/06(Ibid).

Coal terminals

The corporatised port of Hay Point is owned by the Queensland government and the two coal terminals are privately owned. HPCT has been privately owned and operated from the outset. Built by the American coal miner, Utah, in the 970s, it was sold – together with Utah mines – to BHP Pty Ltd in the 980s and is owned, at present, by the BHP/Mitsubishi Alliance (BMA).

DBCT, on the other hand, was built by the Queensland government and operated by Ports Corporation Queensland (PCQ) until it was privatised in 2001 when the terminal was leased to Babcock and Brown Infrastructure (BBI). BBI, an infrastructure investment company, contracted the operation of the terminal to Dalrymple Bay Coal Terminal Pty Ltd (DBCTPL).

Although the two terminals are adjacent in the port of Hay Point, they are subject to different regulatory oversight. HPCT, as noted above, is BMA owned and is vertically integrated with BMA mines, servicing company mines exclusively and is independent from price regulation. DBCT, on the other hand, while being privately owned, is a common user facility and declared for third party access. This means that BBI must negotiate with all parties seeking access to the terminal on conditions of access.

In addition, DBCT, being a ‘natural monopoly’ is price regulated. Under this model BBI must negotiate with its customers on changes in its pricing structure. In the event that agreement cannot be reached between the parties, the regulator determines coal loading charges.

Rail operator

All coal in the Goonyella system is carried to the port by rail. Although rail has been deregulated in Queensland as in other Australian states and the market is contestable, at present QRNational (QRN) is the sole operator. QRN is upgrading its rolling stock...
and QR Network Access is upgrading and extending the track and associated infrastructure – e.g. the development of the ‘missing link’ – a section of the track that will link the Goonyella and the Newland systems and allow north Goonyella mines access to Abbot Point (Figure 1).

PART 2: THE PLAYERS

BBI - the terminal owner

In order to meet growing demand, BBI, as the owner of DBCT, initiated plans for terminal expansion. BBI in 2001 won the tender process for DBCT with government issuing a 99-year lease at a cost of $630m. The loader at the time had a theoretical capacity of 45mt and expansion undertaken in 2003 increased this to 56mt. This will be further increased to 60mt in 2006. The next stage of expansion is a phased approach with Phase 1 increasing terminal capacity from 60mt to an estimated 68mt by July 2007. The next phase would increase the terminal’s capacity to 80mt by September 2008 (Queensland Government Mining Journal 2005).

BBI envisaged that the coal companies would fund any infrastructure upgrade. To this end the company began negotiations with port users in 2003 pursuing an increase in loading rates which would fund terminal expansion. BBI proposed an increase from $2.08 to $2.77/tonne. The port users, however, rejected this seeking a reduction to $.56/tonne. Agreement could not be reached between the parties and the regulator, the Queensland Competition Authority (QCA), in accordance with its charter, would determine terminal charges.

The QCA, after a lengthy process lasting almost two years, ruled that the loading rates would not be increased. Rather they would be reduced to $1.56/tonne. BBI, a publicly listed company and unwilling to invest further shareholder capital in the facility, halted the planned $850m terminal expansion. Despite the fact that the QCA subsequently revised the loading rates to $1.72/tonne, the planned expansion has not occurred (Dalrymple Bay Coal Terminal 2005).

An important issue associated with the Queensland government port policy is the responsibility for terminal expansion. Prior to Privatisation terminal expansion was the responsibility of the Queensland government. Leasing the terminal to BBI in 2001, however, transferred this responsibility from government to BBI. Indeed, when the coal terminal was privatised, the Queensland Treasurer announced to parliament that one of the benefits was that the state would not be required to invest in any infrastructure improvements (AM 17,3,2005)

Some ports have terms included in their leases as to when expansion will occur. In the port of Hong Kong (Robinson 1998) for example, and in the container terminals in the port of Melbourne (Robinson 1997), an obligation to expand is included in the lease which stipulates when the next round of expansion, determined by throughput, must occur. These conditions ensure that expansion occurs before congestion becomes a problem. In the case of DBCT, no such clause for expansion exists. The company does undertake an annual review of the DBCT Master Plan which is submitted to government for approval but lease conditions determining when expansion is undertaken do not exist.

DBCTPL - the terminal operator

A complex relationship between public and private sector bodies and the diverse and at times conflicting responsibilities of each has exacerbated a difficult problem. A number of options for solution have been proposed – unfortunately none of these address the fundamental cause of the problem (i.e. the cause of the bottleneck) – only the effect (i.e. the ship queue). Furthermore, some policies introduced suggest that the responsibilities for solution are not unlike a ‘pass the parcel’ approach.

Government, for example, transferred responsibility for expansion to its lessee. BBI having contracted the operation of the terminal to DBCTPL under an ‘operate and maintain’ agreement transferred the responsibility of solving the problem of the queue to the operator. DBCTPL has neither the resources nor jurisdiction to undertake terminal expansion and could focus only on the ship queue and how best to manage that queue.

The operator’s preferred option has been regulating that queue. A precedent had been set in October 2004 when Port Waratah Coal Services sought authorization from the Australian Competition and Consumer Commission (ACCC) for its proposed medium-term Capacity Distribution System (CDS) to operate from 1 January 2005. The objective of the CDS was to reduce the imbalance between the demand for coal loading services at the Port of Newcastle and the capacity of the Hunter Valley coal chain (Port Waratah Coal Services Ltd 2004).
DBCTPL adopted a similar strategy and, in April 2005, lodged an application with the ACCC for authorization of a Queue Management System (QMS) under Sections 88(t) and 88(t) of the Trade Practices Act 1974 (TPA). The QMS would address the ‘imbalance between the demand for coal loading services at the terminal and the capacity of the Goonyella coal chain to meet this demand’ (DBCT 2005).

The objective of the QMS was to address the ‘economic inefficiency’ arising from the current disconnects in the Goonyella coal chain until System Capacity could be expanded throughout the coal chain. The mechanism of the QMS was to directly link a ship’s call with the mining company’s contractual obligations. Each mine was allocated tonnage on a pro rata basis and under this system users cannot exceed their allocated tonnage.

In February 2006 the ACCC approved the application and authorised that the QMS would be in place until 2008. Authorisation provides exemption from some restrictive trade practices provisions and provides immunity from legal proceedings in respect of a breach of the TPA.

Arguably, linking export tonnages to ship calls had the desired effect as in February 2006 the queue had been reduced to approximately 25. There is disagreement between the terminal operators and users as to the efficacy of the system, however. DBCTPL argues that no company is disadvantaged by the QMS. Some mining companies, on the other hand, argue that they are likely to be disadvantaged by being restrained from maximizing export tonnages with the reduction of ‘port entitlement’ (Macarthur Coal Ltd 2005). In any event the QMS seeks to manage the queue; it does little to resolve the cause of the queue or provide a long term solution.

The mining companies

What was the position of the mining companies in this furor? The US Energy Information Administration (EIA) forecast an increase in Australian coal exports to approximately 260mt by 2025 (US Energy Information Administration 2003). Booming demand and record prices for coal had led BHP Billiton to reveal its plans of almost doubling its metallurgical coal output to some 100mt by 2010 (Courier Mail 3.9.2004). The company announced that ‘...most of the new production will come from Queensland’s Bowen Basin coalfields. The raft of mine, rail and port expansions involve the investment of hundreds of millions of dollars and the creation of thousands of jobs between now and the end of the decade. Australia’s coal industry simply cannot mine coal fast enough at present.’

Shortly after this announcement a ship queue began to emerge at the port of Hay Point. As noted above, up to 50 vessels were anchored at any one time at DBCT. They were queued for an average of 21 days and as most coal contracts destined for Asia are on a Free-on-Board basis, incurred a cost to the mining companies of $2m/day or approximately $550m/annum (DBCT 2005). At the time the Australian Treasurer suggested that Queensland’s Dalrymple Bay Coal Terminal was the ‘worst bottleneck in the country’ and urged the State Government to spend money on it now or risk losing vital coal market share to international competitors. An upgrade of the terminal was being held up pending a QCA decision on loading charges between mining companies and the operators (Courier Mail 15.2.2005). It was further reported that

‘The queue of 50-odd bulk carriers waiting to load from the DBCT is likely to lengthen and escalate shipping charges now costing Queensland miners almost $600m a year. DBCT urgently needed a third rail head to de-bottleneck the port so it could cope with contracted tonnage. My biggest concern would be that we only make Band-aid decisions when clearly at this time we, the industry, has to make big decisions for our short term and long term future.’ (Courier Mail 24.3.2005)

The Federal Treasurer urged the Queensland government to take action. But it was no longer the responsibility of the Queensland government – this had been transferred to BBI upon privatization. BBI, however, would only undertake expansion if it was funded by the mining companies by way of increased loading charges. And the mining companies, in their submission to the QCA, had argued that rather than an increase as requested by BBI, the rate should be reduced to $1/tonne.

At that time coal prices for metallurgical coal had increased from less than A$80/tonne in 1999 to almost A$180/tonne by 2005 (DBCT 2005); production was at record levels and mining companies called for a reduction in loading rates. A gross calculation of demurrage at the rate of $2m/day is approximately $1.15/tonne. The mining companies opted to pay demurrage rather than the additional loading rates to fund expansion – action that was essential if contracts were to be filled. It was not only a matter of congestion, however. There was also an issue of goodwill because, apart from failing to meet contractual obligations, ship queues did little to enhance Australia’s reputation as a reliable provider. Nor did it enhance the reputation of the Australian waterfront – although in this instance disruption was not caused by militant waterfront unions.

One possible explanation to this riddle was the belief that if they, the mining companies, held out, government would fund expansion. Government receives large royalty payments from the coal industry each year and a strategy may have been to force government to invest some of those payments in additional infrastructure. Government, with the exception of HPCT, had been responsible for infrastructure provision in the past and the belief may have prevailed that it would do so again in response to sufficient pressure. In any event the mining
companies were reluctant to invest their resources in upgrading the facility. The coal industry is highly volatile, characterized by peaks and troughs in demand. Upgrading infrastructure to meet current needs could represent surplus capacity in the future.

The regulators
What was the role of the regulators in this debate? And what responsibility and jurisdiction did the regulator have in determining the loading rates of a privately owned company? Much of the Queensland government regulatory policy in relation to DBCT has its origins in the Hilmer (Report by the Independent Committee of Inquiry 1993) recommendations. Hilmer had found that the ‘greatest impediment to competition in many key sectors of the economy were the restrictions imposed through government regulation’ (Ibid).

Their removal posed a particular problem, however, as many of these key sectors were traditionally dominated by public monopolies such as ports. Prior to corporatisation, ports provided common user facilities and were regulated by the port authority and ultimately the Minister. When the ports were corporatised and the terminals privatised (Everett 2005) particular problems arose as these facilities invariably were ‘natural monopolies’ and, when deregulated, assurances were required to ensure access on ‘fair and equitable’ terms.

The regulatory mechanism proposed to ensure third party access was by declaration which gave access seekers the right to negotiate with the service provider, with provision for arbitration if those negotiations were unsuccessful (Productivity Commission 2001). Further consumer protection was assured because, in the event that the facility was a ‘natural monopoly’, price regulation would be set in place to ensure that monopoly powers were not abused.

Consequently, declaration ensured access to the terminal on a fair and equitable basis and ‘natural monopoly’ status meant that the regulator determined pricing strategies in the event that these could not be negotiated amicably between the access seeker and access provider.

(a) Queensland Competition Authority
Declaration for third party access could be under the TPA which would place the responsibility for regulation with the ACCC. The Queensland government chose not to relinquish its regulatory control over ports to the national regulator, however, and established a state-based competition authority, the Queensland Competition Authority (QCA). The QCA had responsibilities for
• Monopoly price oversight
• Competitive neutrality
• Third party access

DBCT, consequently, was declared under the Queensland Competition Authority Act 1997. It was a ‘negotiate and arbitrate’ model which meant that the access provider and access seeker had to negotiate on price and other non-price terms. The QCA became involved where agreement could not be reached and either party lodged the dispute with the Authority (Queensland Competition Authority 2005). BBI, as noted above, in its submission to the QCA requested the loading rates be increased from $2.08/tonne to $2.72/tonne. The mining companies, in their submission indicated that they would be willing to pay $1/tonne. As agreement could not be reached between the two parties, the matter came within the jurisdiction of the QCA.

At the end of a process that lasted almost two years, the QCA determined that the loading rates be reduced to $1.56/tonne. This decision led BBI to place its plans for expansion on hold and despite the fact that the QCA ruling was subsequently revised to $1.72/tonne, the planned expansion has not occurred (DBCT 2005).

(b) Australian Competition and Consumer Commission
The postponement of the terminal expansion and the emergence of the ship queue brought the ACCC into the debate. There is no overlap between the powers of the QCA and that of the ACCC. The ACCC operates in a state jurisdiction only, while the ACCC is a national body – a commonwealth statutory authority formed in 1995 to administer inter alia the TPA.

One of the principle objectives of the TPA is to prevent anti-competitive conduct. The Act does
recognise, however, that some of society’s broader objectives may not always be met by the operation of competitive markets and provides for exemptions from some of the restrictive trade practices provisions (ACCC 1999). In that event, a facility or business can be authorised as exempt from ACCC action in relation to practices that could be interpreted as non competitive under the TPA and breaching the Act.

Authorisation under the TPA and exemption from ACCC action was the avenue chosen by DBCTPL as the mechanism to solve the ship queue. DBCTPL, under ‘an operate and maintain’ contract, had the responsibility of managing the ship queue and the preferred option was by regulating it.

PART 3: IMPSASSE AND EMERGING ISSUES

This complex problem and relationship between public and private sector bodies each protecting vested interests has been difficult to resolve. The Queensland government has transferred its responsibility to BBI; BBI has halted expansion resulting in congestion and a ship queue; DBCTPL has the responsibility to manage the queue and has done so by linking contractual obligations directly with ship calls. This is a practical and workable solution in a market in which the bottleneck occurs at the terminal/ship interface or is a dysfunction between export tonnages and terminal capacity. But it is not solely a problem at the terminal/ship interface - it is a whole of the supply chain problem. In the case of the Goonyella system where congestion has occurred because all parties are pushing their capacity limits, the QMS is imposing a quota system and miners cannot exceed their quota. This is a constraint on exports.

There are a number of apparent anomalies in this case study that require further unravelling.

Overhaul of regulators?
The issue of regulation and associated constraints is a sensitive one and has been raised both in relation to the number of regulators and the delay incurred in the regulatory process. In recent times, in fact, and particularly following the ship queue at DBCT, rationalisation of regulation regimes has been called for. The incumbent Federal Minister for Transport in May 2005 called for the transfer of all Australian ports to a national regulator suggesting that the commonwealth government should have ‘control over the planning and regulatory control of the major ports’ (Australian Financial Review 20.5.2005). This recommendation was seen as the means of reducing both the process delays and the queue. This position was supported by the Prime Minister who argued that the ‘delays at the Queensland port were unacceptable and required a single regulatory authority to help smooth operations’. It was further argued that ‘most decisions about pricing and access at ports should be decided by commercial negotiation between the port owners and users but that where regulation is still thought appropriate, regulators, or at least the rules they operate under, needed to be rationalised’ (Australian Financial Review 2.6.2005).

In February 2006, COAG, addressing industry concerns that poor regulation was limiting growth and curbing exports, agreed to a regulatory overhaul by unifying and imposing pricing principles to govern access to ports and railways as well as gas pipelines, electricity networks and water supplies (COAG 2006).

While rationalisation of the regulation regimes will expedite the process, it is unlikely to resolve the ship queue. It will, hopefully, avoid a repeat of the QCA’s two year delay in delivering its findings in relation to DBCT coal loading charges. The ship queue, however, is a result not only of terminal constraints but of the imbalances throughout the supply chain – the mines, rail and terminal all with different capacities. Regulator rationalisation will do little to integrate the supply chain and coordinate capacities throughout the chain – the aspect that is urgently needed for a long term solution.

Transferring responsibility for increasing capacity

The QMS set in place by DBCTPL is only one solution – albeit a band-aid – to the ship queue. Other considerations have included suggestions of transferring export tonnages to other ports and the construction of the ‘missing link’.

Diverting Goonyella coal to another terminal, such as Gladstone and Abbot Point, is transferring the responsibility for increasing supply chain capacity to another player – in this case to other ports. But constraints also exist in these options. Access to the port of Gladstone on an ongoing basis is not a sustainable alternative although some south Goonyella coal is exported through Gladstone from time to time. Gladstone terminals are also capacity constrained and undergoing expansion to meet an estimated growth of some 25mtpa over the next two years*. In addition there is a cost impost of higher rail charges over longer distances to the Gladstone terminals. Some Goonyella coal is also exported through Abbot Point from time to time. Similarly, this is not a viable alternative for large tonnages as access to Abbot Point is via the north coast line which is already heavily congested with general freight and can carry relatively small tonnages only.

A viable option is by providing access to Abbot Point by linking the Goonyella and Newlands systems with the construction of the ‘missing link’. This is a 72km rail section linking the two systems and providing north Goonyella mining companies access to Abbot Point. While this will reduce the congestion at DBCT, it is doing so by transferring the responsibility from BBI to QRN – from the terminal owner to the rail operator and ultimately the Queensland government and the Queensland taxpayer.

Monopoly pricing practices – ‘take or pay’ contracts

Arguably this is an agreeable solution for BBI as it removes the responsibility for infrastructure expansion to other service providers in the chain – to
rail and other ports. Transferring coal to an alternate port is of no material significance to BBI under existing contractual obligations. BBI has its revenue guaranteed by way of ‘take or pay’ contracts. ‘Take or pay’ contracts are an historical curiosity and a vestige from the past when DBCT was publicly owned. When the Queensland government agreed, in the 1970s, to construct a coal loader for a number of mining companies in the Goonyella system it did so on the condition that throughput tonnages were guaranteed. This was in order to minimize risk exposure for the Queensland government. The practice of guaranteed tonnages and payment for contracted tonnage, persisted however, after the terminal was privatised.

Arguably, this contractual and historical curiosity impacts on the efficiency and competitiveness of the terminal and its users. BBI revenues under this system are assured and mining companies under ‘take or pay’ contracts with BBI make payment for contracted tonnages irrespective of whether the service is delivered. This means that coal companies are contractually tied to paying for an agreed tonnage irrespective of whether that service is required or whether the operator can deliver the service.

Privatisation and deregulation is about risk taking – it is about exposure to the forces of the market. The existing contractual obligations are such that the mining companies are the sole risk takers. They are obliged to pay for the contracted tonnages irrespective of whether the service is required or delivered. Indeed, BBI at present receives payment for loading tonnages which DBCTPL is unable to deliver. BBI has contracts with the mining companies for an annual throughput of 60mt while the terminal is incapable of delivering this. Indeed since the loss of the reclaimer in 2004 actual throughput tonnage has been restricted to approximately 5mt. Despite the fact that the terminal is unable to deliver the 60mt contracted service, the mining companies nevertheless must meet payment for 60mt throughput.

DBCT a ‘natural monopoly’?
A major issue in the current dilemma is the regulatory price oversight of the QCA. This is on the basis that DBCT is a ‘natural monopoly’. But is it? And should it be? DBCT ostensibly has ‘natural monopoly’ characteristics as coal exporters have no viable alternative export facility. But is that the case or is it a spurious argument?

Some Goonyella mines do have access to terminals at the ports of Abbot Point and Gladstone. As noted above, at present neither are options for large tonnages on a sustainable basis. One apparent solution to this dilemma is the construction of the ‘missing link’ which will connect the Goonyella and Newlands systems.

Another possible option is the declaration of HPCT. This terminal, adjacent to DBCT, is owned by BMA and services BMA mines exclusively. Under existing

Australian regulatory regimes, however, private ownership does not ensure exclusivity. A precedent for declaration of a privately owned facility is the November 2005 National Competition Council (NCC) draft determination in support of Fortescue Metals Pty Ltd to have BHP’s Mt Newman track declared for third party access. Under this ruling, BHP must provide access to its privately owned line in the Pilbara relinquishing part of its critical assets and competitive advantage to its competitor.

If a similar avenue was pursued and HPCT was declared, the rationale for DBCT being a ‘natural monopoly’ would no longer exist. In that event the rationale for price regulation would also disappear. This would remove the role of the QCA as price regulator and terminal loading rates would be determined by the market on a competitive, rather than a regulated, basis.

CONCLUDING COMMENTS
The issue of regulator overhaul, while expediting the regulatory process is not likely to resolve congestion at DBCT and is not a substitute for export infrastructure expansion. This is not a terminal problem per se: It is a problem of the whole of the supply chain – one which is likely to be exacerbated with the growing demand for Queensland coal. Mining companies are producing at record levels and export tonnages are exceeding both terminal and rail capacities.

The QMS is smoothing the bottleneck at the terminal but is not the panacea to the supply chain constraints. The construction of the ‘missing link’ is a viable solution and will alleviate congestion but completion is not expected until 2008. Declaration of HPCT can provide a viable alternative in a relatively short period of time. This would remove the ‘natural monopoly’ status of DBCT and generate competition between the facilities. It would also remove the regulator as price setter and the loaders would operate in response to market rather than regulator forces.
The purpose of this paper has been to untangle a complex operational supply chain problem – one that has been exacerbated by the Queensland regulator. The purpose also is to raise some issues for debate and to expose some constraints and non-competitive impact of the regulatory regimes on the efficiency of the supply chain. Is Privatisation delivering what was intended? Or do we have some hybrid, ostensibly privatised model, unable to be unshackled from public sector control and the regulator? Is deregulation as proposed by Hilmer delivering expected outcomes? Or are we seeing former government commercial operations responding to the dictates of the regulator, rather than responding to market forces?

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Footnotes
i Initially held by Prime Infrastructure and transferred to BBI
ii Actual throughput was reduced following the collapse of a reclaimer in April 2004. This upgrade will include the replacement of the reclaimer which will have a higher operating capacity and increase the nominal capacity to 60mt
iii While the mining companies cannot exceed their allocated tonnage, they can either swap surplus tonnage or purchase unused tonnage from other companies
iv FOB means that the mining companies are responsible for the cost of ship delays in the event that coal parcels are not ready when the ship arrives
v Confidential discussion BMA
vi Confidential discussion with Gladstone Port Authority
vii Confidential discussions with DBCTPL, BMA and QRN
viii This ruling is now subject to appeal

*Dr Sophia Everett and Dr Ross Robinson are from the Australian Centre for Integrated Freight Systems Management