

Economic Issues

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Darwin: A Gateway to Asia?

**Implications of the
Adelaide-Darwin Railway
and Port of Darwin
Developments for
Australian Trade**

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Director's Note

Project finance was determined only on the basis of shipments of goods for the domestic market. International goods trade business, including containerised and possibly bulk mineral and livestock exports, is a longer-term proposition. More immediate may be benefits from international tourism with the railway journey through the centre of the continent attracting foreign as well as local visitors to Darwin and Adelaide.

The railway, built and operated by the private sector in partnership with the South Australian, Northern Territory and Commonwealth Governments, is an historic development. Final completion of the north south line is seen by many as in the spirit of the great nation building projects of earlier times. Yet others are sceptical about the benefits of the development.

In response to this debate, this paper examines the railway and Darwin port developments and their implications for Australian trade.

2. A century old agenda

*... long term vision to open
up trade with Asia ...*

More than a century ago, notables in South Australia - then responsible for the administration of the Northern Territory - extolled the idea of a railway to Darwin as a means of unlocking trade opportunity with Asia. In 1878, the governor of South Australia, Sir William Jervois, declared that by connecting south and east Australia with the northern coast, the railway would stimulate commerce with “Java, Siam, India, China” as well as shorten “communications with Europe and America.”² The governor then turned the first sod in Port Augusta of what was to be the first stage of the line. Eleven years later, in 1891, the line, financed by the colonial government, reached Oodnadatta.

But no further(the)4.

Box 1 (continued): Railway reform in Australia

Historically, Australia's railways have almost all been the province of the states and the Commonwealth with public owned companies or authorities responsible for track and services. The exception has been lines operated by mining companies dedicated to bulk transport of their output

But fundamentally new approaches to railways were embraced after 1991 in response to inefficiencies of the existing systems, and government resistance to further subsidising operations as they stood, especially given competing demands for funds for other uses.

To improve railways, governments have in some cases privatised operations while retaining ownership of rail track and associate infrastructure. In other cases government continues to provide services but operating entities have been made to run along commercial lines. Third party access has also been introduced, as in other infrastructure sectors. This allows one or more other operators to provide services on a line where there is already an operator in order to encourage competitive conditions.

A true national railway system from the hitherto state focused systems is evolving through standardisation of the gauge in June 1995 between mainland capital cities with connecting lines to Whyalla, Port Kembla, Newcastle and Alice Springs. Total track runs to 9,690km with the completion of the Darwin link in September 2003. In 1998, the Commonwealth established the Australian Rail Track Corporation as a commercial entity to manage access and infrastructure on the interstate rail network.

In 1999, the Asia Pacific Transport Consortium (APTC), a partnership of Australian, United States and United Kingdom companies (see below) was selected from a short list of three groups to build and operate the project. More than 30 consortia had expressed interest in the project.⁴

The APTC achieved financial closure in April 2001 with funding from private and government sources. The private sector provided \$730 million, of which \$239 million is equity and the rest debt finance. private and government sources provided the remaining \$491 million. The APTC was a joint venture between the Australian Government and the private sector. It was established in 1999 to build and operate the Darwin to Adelaide rail line. The APTC was a joint venture between the Australian Government and the private sector. It was established in 1999 to build and operate the Darwin to Adelaide rail line. The APTC was a joint venture between the Australian Government and the private sector. It was established in 1999 to build and operate the Darwin to Adelaide rail line.

... financial arrangements
to secure construction.

The first freight trains ran from Adelaide to Darwin in January 2004 and the first passenger train in February. The total distance from Adelaide to Darwin is 3,000km. The one-way trip time is 43 hours.

APTC has a 50-year lease for the new segment as well as a 50-year lease for the old 830 km segment from Tarcoola to Alice Springs. The Commonwealth, through the Australian Rail Track Corporation, transferred the Tarcoola line to APTC at nominal rent. APTC also has a 50-year lease for container port facilities in Darwin.

APTC partners include:

- Australian RailroadGroup, a venture between Australia's Westfarmers (50 per cent) and US freight operator, Genesee & Wyoming (50 per cent);
- John Holland, a subsidiary of Australia's Leighton Holdings;
- Macmahon Holdings of Australia;
- Braclay Mowlem of the UK;
- Kellog Brown & Root, a subsidiary of Halliburton of the US;
- National Asset Management;
- Colonial First State Investments; and
- Northern and Central Land Councils.

The consortium established ADRail to construct and maintain the railway.

FreightLink was established as the operating company for freight operations including both rail and port operations in Darwin.

... third party access for freight, tourism and new ventures.

APTC is obligated under third party access provisions in trade practices law to allow other operators to use the railway infrastructure at appropriate fees. The passenger Ghan service, run by the Great Southern Railway⁵, operates under these conditions. It would be possible, for example, for a mining company to run its own bulk freight operations on the AustralAsia railway.

4. Freightlink: What's offered

Freightlink acts as a wholesale provider of transport freight services from rail terminal to rail terminal and, in the case of international shipments, onto and from the Darwin port. Freightlink contracts with freight forwarders, which, in turn retail their services to end customers. It also deals directly with large-scale customers.

FreightLink uses Pacific National's existing terminals at Adelaide and Alice Springs. Pacific National, a joint venture between Australian transport companies Toll and Patrick, also operates Freightlink's terminals in Tennant Creek, Katherine and Darwin.

Initially there are five freight services in each direction each week, increasing to six as customer demand increases. Each freight train is able to handle 250 double-stacked containers.⁶

FreightLink has contracted P&O to operate the container port terminal at Darwin.

5. At the railhead: Darwin East Arm Port and Business Park

... new deepwater container port, business park and transport hub ...

The railway terminates at the new deepwater container port under development at the East Arm in Darwin Harbour, a 1,000 sq km² body of water, more than double the area of Sydney Harbour. There is direct rail to ship access and terminal yard at the port for temporary holding of containers. A short distance inland is the railway's domestic freight terminal.

The shift of commercial facilities to the East Arm, apart from cruise ship and navy vessel docking, from the old port at the foot of Darwin city means there are no land constraints for expansion. The East Arm west of the Darwin city peninsular is an extensive "green fields" site. There are few, if any, land constraints for expansion. Forty hectares are reserved initially for development of a business park adjoining the East Arm Port and domestic freight terminal. This Darwin Business Park offers land for storage, distribution and freight forwarding. The first major commitment to the park has been made by leading Australian transport and logistics company, Toll, which has built a \$17 million consolidation and distribution warehouse for the domestic market.

The port with a 14-metre depth at low tide is able to handle the larger container vessels now operating to and from Australia, although not the very largest vessels now in international container shipping. There is sufficient depth without dredging deeper channels for the port to handle what are known as Panamax or third generation container vessels with capacity of up to 3,000 twenty-foot equivalent container units. (TEU)⁷ (*Box 3 – International container shipping and port trends*)

The first \$200 million stage of the port development provides a 754 metre common user continuous berth. Freightlink has priority access to 200 metre of the wharf. There is one crane with provision for two more. The Port's master plan includes 1.5 km of continuous berth space and extension of the container storage yard and rail sidings. Bulk handling facilities may also be developed depending on demand.

*... logistics as a source of
competitive advantage.*

*... automotive suppliers and
implications for South*

***Box 2 (continued):
Logistics and the changing character of Australia's transport sector***

7. Longer term business: Northern Territory's economic prospects

... while still small in size, continued strong growth prospects ...

Longer term, railway operations should benefit from expected good economic growth in the Northern Territory. Consultants, Access Economics, projects Northern Territory's economy to grow by an average of four per cent per year for the decade from 2003-04 compared to an Australian average of three per cent per year.¹⁵ Demand assessments do need, however, to take into account the small size of the Northern Territory economy, which makes up just 1.2 per cent of the total Australian economy. Total population is only 200,000, of which 70,000 live in Darwin, and 26,000 in Alice Springs. (*Table 1*)

Table 1
Economic Forecasts for the Northern Territory

Year	Real GSP		Employment		Population	
	\$m	% change	('000)	% change	('000)	% change
2002-03	8,974		98.3		197.3	
2003-04	9,280	3.5	98.5	0.3	200.3	1.5
2004-05	9,855	6.1	103.5	5.0	202.6	1.1
2005-06	10,325	4.8	105.0	1.5	204.9	1.2
2006-07	10,503	1.7	102.8	-2.1	204.0	-0.5
2007-08	10,938	4.1	103.7	0.9	204.9	0.5
2008-09	11,489	5.0	105.9	2.1	207.3	1.1
2009-10	11,998	4.4	107.4	1.4	209.6	1.1
2010-11	12,489	4.1	108.6	1.2	212.0	1.1
2011-12	12,966	3.8	110.2	1.5	214.3	1.1
2012-13	13,433	3.6	111.7	1.4	216.5	1.1
10 yr av		4.1		1.3		0.9

... possible growth in defence and surveillance ...

Major resources projects in construction, planned and proposed include:

-

*... very extensive and large
scale resource and
construction projects
underway and proposed ...*

- A new mine to maintain uranium oxide production in the Alligator Rivers region 250 km east of Darwin may be developed by Energy Resources of Australia, a subsidiary of the Anglo Australian Rio Tinto. ERA, operates the existing Ranger mine, within the Kakadu National Park, a World Heritage Site. Along with Roxby Downs in South Australia, Ranger is the only operating uranium mine in Australia. ERA wants to develop the very large deposit at the Jabiluka mine, also within Kakadu. This will require Commonwealth and Northern Territory government approvals and is likely to be a politically controversial matter given environmentalists' opposition to uranium mining, especially in the Kakadu region.
- Other new mining projects underway include gold mines by Peko and Giants Reef Mining at Tennant Creek; planned gold mining by Newmont and garnet sand mining by Olympia Resources in central Australia: proposed expansion of the McArthur River zinc mine near Borrooloola, 400 km south east of Darwin, operated by Xstrata of Switzerland; and GEMCO's manganese mine at Groote Eylandt, 500km east of Darwin. Notable also is diamond exploration by majors, De Beers, Rio Tinto and BHP Billiton.

Whether major resources projects go ahead or not may have a disproportionate impact on the economy, given its small size, as noted above. Creating a broader economic base then is an important objective for the Northern Territory.

Manufacturing is a very small part of the economy, although it did benefit from supply contracts for the AustralAsia railway. The Northern Territory Government wants to encourage the sector through development of resources processing, taking advantage of gas in the Timor and Arafura Seas as an energy source. The tropical northern area also has abundant water supply. Land to host heavy industry is reserved at Glyde Point, north of Darwin where there would be a port facility and rail links. Darwin may become a more attractive site for manufacturing as a result of better international and domestic transport. The railway and port developments should improve supply chains for input components

*... major urban construction
and beautification projects
underway ...*

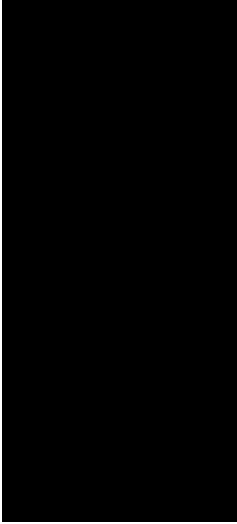


Table 3

Table 4
International Container shipping services to and from the Port of Adelaide

Australia Asia Alliance (AAA) – South East Asia

Frequency: Weekly

Members/Agents: OOCL, MOL, Pacific Asia Express, PIL, Asia World Shipping, ZIM, C Piesse & Co.MISC

Ports of call: Port Klang – Singapore – Jakarta – Fremantle – Melbourne – Adelaide – Fremantle – Port Klang

Feeder services to other South East Asia, South Asia, North East Asia, Middle East, and Europe ports

Australia Asia Express (AAX) – South East Asia

Frequency: Weekly

Members/Agents: P&O NedLloyd, ANL Containerline, NYK Line, APL, Djakarta Lloyd

Ports of call: Port Klang – Singapore – Fremantle – Brisbane – Sydney – Melbourne – Adelaide – Port Klang

Feeder services to other South East Asia, South Asia, North East Asia, Middle East, East Africa, s b8.8(A)19.5(

Table 5
Comparison of transit times (Days)

	Adelaide			Melbourne		
	Existing Shipping transit time	Land bridge Transit time	Minimum saving	Shipping transit time	Land bridge transit time	Minimum saving
Export (To)						
Jakarta	13	6	7	14	7	7
Singapore	9	7	2	13	8	5
Hong Kong	17	8	9	17	9	8
Yokohama	15	9	6	12	10	2
Import (From)						
Jakarta	12	6	6	14	7	7
Singapore	9	7	2	11	8	3
Hong Kong	18	8	10	15	9	6
Yokohama	19	10	9	17	11	6

shipping lines. There are frequent direct connections to a large number of other ports. The major ports also have more frequent railway and road transport connections. All this gives importers and exporters greater flexibility to match their production, stock and distribution schedules to container vessel arrivals and departures.

For example, should there be a delay in dispatching goods for export from the factory, resulting in a missed shipment to say Singapore, then another shipping service may be available soon after. But for an exporter or importer using the Darwin corridor as it stands now, missed shipping would result in much longer delay given the few sailings per month between Darwin and Singapore.

... competitive advantage needs to be established combining time savings, lower charges and world class logistics ...

The existing port hubs have the advantage of being part of proven supply chains. If all is working well, how readily will an importer or exporter shift to the Darwin corridor even if there are time saving advantages and lower freight charges? Reliability may outweigh cost savings if uncertainties surround a new supply chain. For example, where manufacturers, such as motor vehicle companies, only keep relatively small inventories at production sites covering perhaps only a week of production, interruptions to the finely tuned supply chains could be disastrous. On the other hand, more rapid transit times translate into savings of million of dollars a year for companies importing large quantities of components. (*Box 2 - Logistics and the changing character of Australia's transport sector*).

Currently, there are two shipping services connecting Darwin to Singapore operated by the UK based Swires Group. Northern Territory company, Perkins Shipping, also runs a service to Dili in East Timor and one to Singapore via Dili. Swires added one service late in 2003. Swires provides four sailings a month to Singapore, one of which calls also at Surabaya and Jakarta in Indonesia and Port Klang in Malaysia. (*Table 6*).

Table 6
International container/general cargo shipping services to and from Darwin

<p>New Guinea Pacific Line – Swires Shipping Frequency: Every 14 days Ports of call: Brisbane – Auckland – Tauranga – Sydney – Newcastle – Brisbane – Gladstone – Townsville – Darwin - Benete Bay – Surabaya – Jakarta - Port Klang – Singapore - Papua New Guinea - Solomon Islands - New Zealand - Brisbane.</p>
<p>Northern Territory Express – Swires Shipping Frequency: Every 15 days Ports of call: Singapore - Benete Bay – Darwin – Dili - Singapore. Feeder services to Jakarta and Port Klang</p>
<p>Perkins Shipping Frequency: Every 14 days Ports of call: Singapore – Dili – Darwin – Singapore</p>
<p>Perkins Shipping Frequency: Weekly Ports of call: Darw Pooaoaom.72(T)13.4(o)-4.1(w)18.ow17(P)-IB5ow</p>

... importance of direct services to China ...

In order to foster containerised freight trade through Darwin, the challenge then is to attract more shipping services connecting Darwin to South East Asian and North East Asian ports. China is an especially important target given China's dramatic economic growth, reflected in increasing trade with Australia. A great gain for Darwin and the AustralAsiar inec(shippin)24.3serv1(ic5(to Chi,4()TJT*0.0207 Tc070002 Twe thr

Box 3 (continued): International container shipping and port trends

In turn this encourages concentration of a country's and a region's major container trade flows at a few ports. Land based transport and shipping supply chains from other smaller ports connect to these major hubs. In some cases, the

Box 3 (continued): International container shipping and port trends

Established hub ports with volume, scale, transport links and logistics systems in place have powerful advantages. But these are not necessarily fixed as Malaysia's Tanjung Pelapas container port at Johore at the tip of the Malay Peninsular facing Singapore Island shows. The port, which opened in 2000, is competing successfully with Singapore, attracting the world's largest container shipping operator, Maersk-Sealand to shift from Singapore. Maersk was offered lower charges, dedicated terminals, and a 30 per cent stake in the port.

Feeder ports also can become destinations for the larger vessels of major

*... imports rather than
exports may be the initial
key.*

Table 6
Major container ports in Asia Pacific by throughput
2001 (million TEU)

Hong Kong	China	17.83
Singapore	Singapore	15.57
Pusan	South Korea	8.07
Kaohsiung	Taiwan	7.54
Shanghai	China	6.34
Los Angeles	United States	5.18
Shenzen	China	5.04
Long Beach	United States	4.46
Port Klang	Malaysia	3.76
Tokyo	Japan	2.80
Manila	Philippines	2.80
Qingdao	China	2.64
Yokohama	Japan	2.40
Laem Chabang	Thailand	2.34
Tanjung Priok (Jakarta)	Indonesia	2.22
Kobe	Japan	2.10
Tanjung Pelapas	Malaysia	2.00
Melbourne	Australia	1.29
Sydney	Australia	0.99
Bangkok	Thailand	1.07

international carriers serving Adelaide and Darwin. For example, visitors attracted to the train journey are likely to only make one way journeys, that is, arriving by plane either in Darwin or Adelaide for example to begin the train trip and then returning home by plane from Adelaide or Darwin.¹⁸

10. Impact on South Australia

South Australian suppliers should benefit from the railway as it provides

*... Darwin can become an
important gateway for
Australian international
trade with Asia ...*

Domestic freight is a different story. A switch to rail is already evident as there are immediate benefits for southern suppliers over the truck haulage of the past. There are clear cost and time advantages shipping by rail rather than road. And the domestic demand in Darwin and the Northern Territory should grow strongly in coming years, driven by resources, construction and infrastructure, and defence projects, and tourism.

There has also been criticism of public funding support for the project, with argument that money could be better spent elsewhere. Eastern states interests argued that their railways, facing the country's heaviest traffic were more in need of Commonwealth funding than construction of the Alice Springs to Darwin railway. Government funding and support are significant. But if they have encouraged the much larger private sector investment that would otherwise not have happened, and, in so doing brought about a project that fosters longer term economic development, then the public funds are justified. The extent of private sector investment in the project under build, own, operate and transfer conditions is certainly unprecedented in Australia's railway history. Another reason for Commonwealth funding is the value of the railway to support deployment of major elements of Australia's military forces in the Northern Territory.

Attitudes towards the railway and the concept of Darwin as a gateway to Asia perhaps reflect different views about development in northern Australia. Many in Australia's dominant southeastern states continue to see the Northern Territory as a remote frontier and Darwin as a last outpost. Yet the railway and other projects underway and planned point to the Northern Territory and Darwin becoming more economically dynamic and sophisticated over the next decade. And this may well provide opportunities for new commercial and other relationships with Asia. As Australian writer, Ross Terrill, a Harvard based China expert, says: "We cannot extend our role in Asia until our north is dotted with cities, railways, natural gas pipelines and world-class holiday resorts."¹⁹

*... the vision of a railway
link is now the reality. New
challenges over the next
decade ...*

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End Notes (continued)

¹⁸ Darwin may be able to attract services from among the array of budget