



MINISTER FOR TRANSPORT AND INFRASTRUCTURE

PARLIAMENT HOUSE
STATE SQUARE
DARWIN NT 0800

GPO BOX 3146
DARWIN NT 0801
TELEPHONE: (08) 8901 4162
FACSIMILE: (08) 8901 4165

27 MAY 2005

Mr Paul Neville MP
Committee Chair
House of Representative Standing Committee on Transport
and Regional Services
Parliament House
CANBERRA ACT 2600

Dear Mr Neville

Thank you for your letter dated 4 April 2005 which was sent to the Chief Minister. As the Minister for Transport and Infrastructure, I provide the attached submission to your inquiry into the Integration of Regional Road and Rail Networks and their Connectivity to Ports.

The submission highlights the poor regional connectivity to the Port of Darwin resulting from seasonal and periodic closure or weight restrictions on feeder roads due to a lack of flood immunity. These feeder roads provide a vital, and in some cases, the only, connection for regions to the Territory's arterial highways and the AustralAsia rail network, and therefore export markets. This poor regional connectivity impacts greatly on important Northern Territory export flows from regional operations associated with the bulk minerals sector and the pastoral industry.

The recently completed rail link between Alice Springs and Darwin has increased the interest in both mineral exploration and mine development close to the rail corridor and in using the rail as an avenue for land-bridging freight and an alternative export conduit for existing operations. Further development of the feeder road system within the Northern Territory and development would open up the enormous and as yet largely untapped potential of the regions.

The contact officer within the Department of Infrastructure, Planning and Environment is Mr Steve Sanderson, telephone (08) 8924 7114 or email steve.sanderson@nt.gov.au.

Yours sincerely


CHRIS BURNS

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| Secretary: <i>J. L. Moore</i> |
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| HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON TRANSPORT AND REGIONAL SERVICES |



Inquiry into

**The Integration of Regional Road and Rail Networks
and their Connectivity to Ports**

The Role of Australia's Regional Arterial Road and Rail Network in the National Freight Transport Task

From a Northern Territory perspective the arterial road network, until the recently commenced operations of the AustralAsia Railway, has been the major supply channel for the NT domestic economy along with some limited support from coastal shipping. That has recently been augmented by the completion of the AustralAsia railway. The connection of Darwin and the central Australian corridor to the national rail network has seen the emergence of some marginal bulk resources as new export opportunities for the territory, the emergence of an embryonic land-bridge trade for international cargo and a realignment of the distribution channels in northern Australia particularly for bulk fuels and lubricants.

The Relationship and Co-Ordination Between Australia's Road and Rail Networks and their Connectivity to Ports

Historically the development of road infrastructure in the Territory was based on defence and primary industry needs. However, tourism and freight transportation are now the major impetus for new developments with an increased emphasis on the need to have all year road access rather than suffer severe disruption during the monsoon season - the principle constraint to export flows are through seasonal access issues associated with monsoon season affected feeder roads. The road and rail access to the Port will, over time and as demand warrants, require enhancement with road-rail grade separation and new or upgraded feeder roads, particularly those connecting the Port of Darwin's East Arm wharf area with the downstream processing and affiliated greenfield industrial and manufacturing development associated with the LNG plant currently being established.

In its first full year of production, the 3 million tonne per annum Wickham Point LNG plant will produce approximately \$600m in export revenue. Although gas-based manufacturing industries require competitively priced gas and large injections of capital, greenfields projects are also faced with providing their own basic infrastructure including port facilities, road access, power and water services and waste disposal. Industrial estate investment sites around the world typically provide this infrastructure to attract such projects. In 2005-06, exports are forecast to increase by 4% as LNG production late in the period more than offsets the continuing decline in oil production. Imports are forecast to increase marginally, and remain at a high level, as work on major projects continues.

Policies and measures required to assist in achieving greater efficiency in the Australian transport network

Major transport infrastructure developments offer the potential for the Territory to develop into a major regional transport hub. Development of the land-bridge concept based on the Adelaide to Darwin rail link and the integrated rail/port infrastructure in the Port of Darwin is expected to see freight volumes through Darwin increase significantly over time. Further out, potential resource developments, as well as gas-based manufacturing, have the capacity to boost exports of oil and gas, although there is still some uncertainty regarding the likelihood and timing of such projects.

The Road Network

The road element of the National Land Transport Network in the Northern Territory includes one main arterial, the Stuart Highway, supported by the Victoria Highway, branching west to the Kimberley Region in Western Australia from Katherine, and the Barkly Highway, branching east from Three Ways (near Tennant Creek, NT) to Mt Isa in Queensland. These links provide a good standard of access to connect to adjoining States and are the primary arterials conveying product to the Port from within the Northern Territory. Their principle deficiencies are flood immunity standards on the Stuart Highway south of Alice Springs and the Victoria Highway from Katherine into Western Australia. These problems have been identified and are planned for upgrading on the Auslink program.

Much of the rest of the Territory is remote with sparse and often poor quality unsealed roads forming the majority of feeder roads which provide regional connectivity onto these main arterials, and ultimately into the Port of Darwin. The feeder roads, range from unsealed gravel roads, low strength sealed beef roads (built in the 1960s), to higher standard arterials (built in the 1970s and 1980s). They do not currently support all-year round access for regional product (mainly live cattle and bulk solids from the resource sector) to be delivered to the Port of Darwin for export. This is primarily the result of seasonal and periodic closure or weight restrictions due to flooding of creek or river crossings and low lying areas. The Territory Government has committed an additional \$10m over 2004-05 and 2005-06 years to the upgrading of beef roads.

These feeder, or rural arterial, roads in the Northern Territory extend over approximately 4000 kilometres, with slightly over 50% being sealed and the balance only formed or gravelled. Around half of the sealed arterials were constructed in the 1960s as low strength single lane loop roads built to "dry season" access standards. As a developing jurisdiction, significant upgrading of this network, except in the very long-term, is beyond the financial capacity of the Northern Territory Government.

The Northern Territory has been disadvantaged under the initial Roads to Recovery Program. It is estimated that the Territory has been under-funded by \$20m throughout this program due to the 9 000 km of roads in unincorporated areas of the Territory being excluded from the funding distribution. This has seriously disadvantaged remote Territory industries compared to their counterparts in other states. Various Commonwealth Ministers have said they would address this anomaly. However, the \$20m under-funding remains outstanding. This is despite the unanimous support for a motion in the Northern Territory Legislative Assembly calling for the restoration of these funds. The terms of this

motion have been conveyed to the Commonwealth Minister in a joint letter from the Territory Minister and Shadow Minister for Transport and Infrastructure.

Agricultural Exports

Live cattle exports is the key market for the pastoral industry in northern Australia and Darwin is Australia's pre-eminent live cattle export port. It offers the highest price for cattle in the region, and in the north and west there is very limited competition from other cattle and meat markets. Live cattle are shipped from one of three wharves in Darwin and there are similar export facilities interstate at Wyndham, Broome, Karumba and Townsville. In 2003-04, 214 000 Territory sourced live cattle were shipped out of Darwin and 19 606 Territory live cattle were exported from Western Australian ports. The major destination was Indonesia followed by the Philippines. A further 8411 interstate sourced cattle were exported through Darwin. This figure is considerably down on the average due to drought conditions interstate restricting available export cattle numbers.

In contrast around 300 000 head of cattle were sent interstate from the Northern Territory in 2003-04; more than double that of the previous year, the result of properties, especially in the Barkly Tablelands, holding cattle movements back in 2002-03 due to drought conditions in eastern Australia, the fall in demand for live cattle exports in 2003-04 and increased demand for cattle for the meat trade. The resupply of store cattle interstate is another key aspect of the Territory cattle industry, and use of feeder roads in regional areas, as is the movement of cattle through this feeder road network to regional interstate ports such as Karumba in Queensland.

The value of Northern Territory cattle production for 2004-05 is estimated at \$250 million, up marginally from the previous year. The pastoral industry is a major contributor to incomes in rural areas and provides considerable flow-on benefits to other industries, particularly transport. In 2004-05, cattle production is estimated to have accounted for more than 50% of the total value of rural industries production. In 2003-04, almost 539 000 cattle were turned off Territory pastoral properties (up 32% from 2002-03) of which 56% went to interstate markets, 43% were exported live and 1% were slaughtered locally. On average, over the three years to 2003-04, around half of all cattle produced in the Territory go to the live export trade.

In the Territory, many of our export horticultural industries are in remote areas where roads are generally of a lower standard, unsealed and experience interrupted access at various times throughout the year due to periodic flooding and load restrictions. Currently, a considerable volume of produce is transported via road to Sydney, Melbourne and Brisbane to be sold at markets or to be exported on international flights, the whole system being inefficient in both time and cost. Road infrastructure for these industries, as with live cattle, needs to be capable of carrying triple trailer road trains as this configuration is necessary to minimise the cost disadvantage of being remote from markets. Unsealed roads impose increased transport costs due to increased depreciation and repairs and maintenance on vehicles, as well as increased transport times and disruptions to services.

Resource Exports

Other users and potential users of these roads are the mining, processing and related activities that occur across the length and breadth of the Territory. Mineral exports from the Territory include gold, bauxite (and alumina), manganese, lead, zinc and uranium with

the gross value of production in 2004-05 estimated at \$932 million and minerals manufacturing at \$463 million. Exploration typically occurs in remote areas and mining occurs in locations with varying levels of infrastructure development. Several locations with well developed infrastructure were poorly endowed prior to mine development and both public and private investment has led to the current situation where the benefits of infrastructure provision are felt across the community.

The need for infrastructure varies between industries. Gold for example is high value and low in weight and so infrastructure needs are largely about fuel, other consumable supplies and equipment imports. Several industries produce high volume/low value concentrates which generally require close access to rail or port facilities. Other high volume mineral concentrates rely on road haulage to port and have adopted innovative large road trains to achieve economically viable road transport costs.

Typically road access is the main infrastructure support requested by mining and mineral processing companies to support development. The rationale for seeking Government support for road access is generally the common user nature of the infrastructure and the benefit that will be gained from future development. Road issues are generally about initial provision, standards of maintenance and all weather access.

One strategic regional road that has been identified is the Central Arnhem Road connecting Katherine with Gove. This road will support the expanded Alcan alumina plant, Trans-Territory Pipeline (gas) and a range of existing and future businesses in the Gove region. Other mooted road upgrades with potential multi-use benefits include the Arnhem Loop (Gove to Ngukurr), the Savannah Way (Gulf of Carpentaria hinterland), the Tanami Road (Alice Springs to Kimberley) and the Outback Highway (Cairns to Kalgoorlie). These roads, if upgraded will enhance regional connectivity to ports by promoting mineral exploration, mining development and live cattle exports. The upgraded roads will also provide a range of benefits to the tourism industry and the wider community through increased mobility and improved access to healthcare and education by indigenous Australians.

The Rail Network

The rail network consists of a single main connector line from Darwin's East Arm Wharf through Alice Springs to Adelaide and the national rail network. There is no regional rail network. Whilst the new railway provides connectivity into the national rail network and the new Port at Darwin's East Arm facilitates adequate inter-modal functions currently, the poor regional feeder road network and lack of regional rail significantly and at times completely diminishes the connectivity of the road and rail network to the Port facilities.

The recently completed rail link between Alice Springs and Darwin has increased interest in mineral exploration and mine development close to the rail corridor, as well as interest in using the rail as an alternative export conduit for existing operations. The exploration potential within a corridor of between 50 to 100 kilometres either side of the rail has been significantly enhanced by the building of the AustralAsia railway. Over time, the operational phase of the AustralAsia railway is expected to generate increased international trade opportunities.

The Federal Government has recently announced that it will fund a feasibility study into a \$3 billion project to build a freight rail link between Melbourne and Brisbane, completing

the rail network linking the mainland state capitals. The proposed new line would intersect with the main Sydney-Perth railway, which then links up to the Adelaide-Darwin line. However, the renewed interest in the east coast railway does not appear to include consideration of establishing a regional rail-link between the existing rail head at Mt Isa in Queensland to Tennant Creek on the north-south rail line in the Northern Territory. This rail-link would integrate the east coast interstate rail freight network with the trans-continental north-south railway and enhance regional connectivity to ports both in Queensland and the Northern Territory.

Ports

The Northern Territory has one main general export port – the Port of Darwin. A number of regional port facilities exist that range from barge landing sites to purpose-built wharf and loading/unloading facilities specifically constructed to meet the requirements of pastoral or resource industry developments. Other significant exporting ports include Bing Bong (near Borroloola) and Gove (Nhulunbuy – on the north-east Arnhemland coast) which export large tonnages of raw and processed minerals. The Alcan Gove operation at Nhulunbuy on the Territory's north-east coast is a typical example with the G3 Alcan Gove expansion adding significant new capacity to the port facilities at Gove. The NT Government has recently invested \$200m in new port facilities at East Arm in the Port of Darwin. This investment, in conjunction with the construction of the AustralAsia Railway has taken place primarily to position the Port of Darwin as Australia's Northern Gateway and take advantage of other, established ports in Australia and the South East Asian region being pressured by urban developments.

Darwin's new port has been developed on a large (some 1700 hectare) "greenfield" sight approximately 15 kilometres from the central business district of Darwin. The new port is not constrained by Darwin city commercial development and is readily accessible by rail and road (road-trains included). The inter-modal facilities being developed at the Darwin Business Park adjacent to the Port provide rail-front (with direct rail access) properties and the new bulk loading facilities currently being developed.

In the built-up areas near port facilities in Darwin, road infrastructure is becoming increasingly important. Transit times for feeder and distributor road freight business are important to overall logistics transaction costs and this is being addressed in Darwin where congestion is not yet a significant problem as it is in the major capitals. In the vicinity of Darwin's East Arm, several road infrastructure initiatives have been announced to streamline port related and other traffic. These initiatives include an extension of Tiger Brennan Drive, a major link between Darwin and the satellite city of Palmerston which passes the port. At some stage a number of rail overpasses and road overpass/connection to the main arterial connector roads feeding the port will be required. The investment in this infrastructure will be based on demand and congestion levels being experienced or anticipated.

Port congestion has recently been an issue for live cattle exports and other general shipping, due to a combination of factors including wharf constructions, and project cargoes for construction activity for the LNG plant, pipelines, oil and gas field development and associated offshore activities. This situation will soon change following completion of the new wharf extensions and completion of amour-rock dumping on the Bayu-Undan pipeline, however, future gas based resource development may cause similar congestion problems. Congestion at the Port of Darwin is a long term issue of

strategically balancing investment in capacity with projections of port demand and the associated probability of these projects. Flexibility to deal with alternative demand situations (e.g. multi-use wharves) is part of the answer. Enhancement to regional roads and rail lines/spurs in the Northern Territory are largely dependent on the type, scale and location of specific projects in the resource sector or the volumes of cattle transported.

The Port of Darwin is experiencing a period of growth, with some port infrastructure requirements already identified in order to avoid future bottlenecks. The Port, with currently one container crane (with a second needed to service the projected future expansion in land-bridge trade generated by the AustralAsia Railway) and the burgeoning bulk minerals export trade, will be pressured for available berth space and berthing delays may be experienced by shipping. To alleviate this problem, and specifically facilitate the Bootu Creek Resources Pty Ltd (BCR) manganese mine, located approximately 900 km south of Darwin, and other bulk mineral developments, the Territory Government has committed to building an \$11million bulk minerals unloading, stockpiling and ship-loading facility at the Port of Darwin. Other mineral operations in South Australia are also considering trial shipments of mineral products including uranium oxide (trial already commenced) lead, zinc and copper via rail for export out of Darwin. The use of rail by mineral developments such as these demonstrates the leveraging that can be achieved to expand in industries not considered in the business case for justifying the initial infrastructure investment.

Capacity and operation of major ports

With growing congestion in the major Australia ports a difficult and costly problem to address, greater consideration should be afforded to identifying and developing alternate trade corridors like the AustralAsia Trade Route.

Movement of bulk export commodities

Supply chain alignment and coordination across all stakeholders is required, as too often competing agendas affect the movement of bulk exports. Commodity production at mines and sale of product is often not aligned with rail capability, or capacity, and the ability of the port to receive the rail deliveries. This is regularly seen with competing mines and commodities being received at the same port which impacts on the programming of loading and shipping at the port interface. The supply chain from production to delivery including shipping needs to be aligned to capability and coordinated to add value to the channel and avoid cost and delays.

The role of inter-modal freight hubs in regional areas

Similar problems exist for inter-modal freight hubs as described for the movement of bulk export commodities in relation to supply chain alignment and coordination across all stakeholders. In addition to the non-alignment of rail capability, or capacity, and the ability of the port to receive the rail deliveries, regional freight hubs are consolidation points and their integration and alignment with major trade/transport arterials and supply channels is an imperative for regional development and the success of regional

producers/products being delivered efficiently and cost effectively to domestic and international markets.

Opportunities for greater efficiency using existing infrastructure

Opportunities to achieve greater efficiency in the use of existing infrastructure is evidenced by the recent development of the BCR manganese mine and the Darwin Port Corporation's current development and operation of the bulk export facility to be located adjacent to the East Arm Wharf. The bulk handling capacity will facilitate industry investment in the Northern Territory and in particular the export of the BCR manganese ore, the first of several possible projects requiring such facilities.

FreightLink, the rail operators, have signed a five-year contract with BCR to haul 600 000 tonnes of manganese a year to Darwin's East Arm port and have indicated that this task will require an extra four train services per week and about 10 new train driver jobs for the NT. The mine is expected to generate \$70m a year in export earnings for the NT. The port's bulk handling facilities are due to be completed in August 2005. The manganese will be delivered to the East Arm Wharf by bulk hopper rail wagons via the Alice Springs to Darwin Railway line. The bulk handling facilities are to consist of a rail bottom dump facility, materials handling conveyor to stockpile, road train haul road to wharf, road train side dump facility and a ship loading facility at the wharf. The construction of bulk minerals unloading, stockpiling and ship-loading infrastructure in the future could have a marked impact on port congestion if rapid expansion in the trade occurs. Individual mineral projects can be expected to export 0.5 to 1.0 million tonnes or more, resulting in significant incremental use of port facilities.

Road transport linkages to the Port of Darwin continue to be disadvantaged by the Commonwealth \$20m under-funding of the initial Roads to Recovery Program. Unlike the situation in the states, some 9 000 km of roads in unincorporated areas of the Northern Territory were excluded from funding under this program. This has been to the detriment of regional industries, particularly the pastoral and mining sectors.
