

11th August 2017

Freight and Supply Chain Inquiry  
Department of Infrastructure and Regional Development  
GPO Box 594  
CANBERRA CITY ACT 2601

Email: [freightstrategy@infrastructure.gov.au](mailto:freightstrategy@infrastructure.gov.au)

Dear Sir,

**Re: Inquiry into National Freight and Supply Chain Priorities**

The Northern RDA Alliance (NRDAA) comprises of eight RDA's whose regions make up Northern Australia. This network, representing the Gascoyne in Western Australia to Gladstone in Central Queensland, has been collaborating and providing input to the Australia Government on the development and delivery of the White Paper on Developing Northern Australia. Our aim is to inform and support policy development and its implementation, and to prioritise investment opportunities to ensure the sustainable development of Northern Australia.

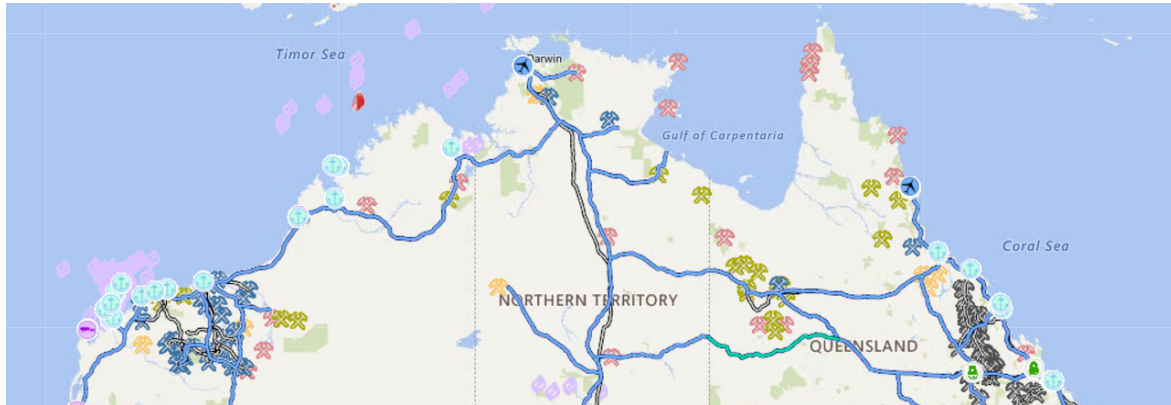
Key points about the RDA's in the Alliance:

- Independent, apolitical, not for profit organisations.
- Funded by the Australian Government to deliver regional economic development activities and outcomes.
- Facilitate activities across government boundaries and portfolios.
- Committee members and staff have been appointed on the basis of their extensive networks across government, industry and communities.
- Regularly contribute to regional planning in partnership with key stakeholders and advocate for outcomes in Northern Australia.

Key points about Northern Australia as detailed in the Office of the Chief Economist's economic overview of Northern Australia:

- Northern Australia encompasses 52.7 per cent of Australia's land mass and contributes 11.7 per cent of Australia's GDP, despite only accounting for 5.5 per cent of the Australian population.
- Northern Australia is located in the heart of the Asia-Pacific, with Southern China and South East Asia only a 3 to 5 hour flight from Darwin.
- Northern Australia accounts for 54.4 per cent of Australia's sea exports worth approximately \$119.5 billion.
- The region accounts for most of Australia's iron ore and gas production, around half of Australia's coal production and a large share of Australia's zinc, copper and bauxite production.





*Key Freight Route Map – Department of Infrastructure and Regional Development*

The NRDA continues to assist the Australian Government's policy delivery on Northern Australia. Our focus is to drive the key reforms and investments needed to secure the North's future through the implementation of initiatives in the White Paper on Developing Northern Australia, catalysing new innovative ideas and solutions.

In this capacity, the NRDA is pleased to make this submission to the Department of Infrastructure and Regional Development's Inquiry into National Freight and Supply Chain Priorities.

As highlighted in the Inquiry's Discussion Paper, "The Strategy is being undertaken in the context of a growing Australia ..... This growth is being driven by Australia's growing populations and from increasing demand for Australian resources and produce, especially in Asian markets." With the North's proximity to Asia, strong export resources reserves and potential agricultural growth, a National Freight and Supply Chain Strategy will clearly need to address freight and supply chain issues across the North.

With the need to focus on the North, we are making our contribution and comments in regards to a number of the Consolidated Questions:

## **2.1 What is moving where, why and how?**

Northern Australia has a number of key resource regions and significant agricultural production which provide a large portion of the freight task across the North.

### **Key Supply Chains**

**Bowen & Galilee basins** – The Bowen basin is a major coal producing region and contains one of the world's largest deposits of bituminous coal. It is home to 48 operating coal mines in Central Queensland. Coal exports are generally transported from the mining operations via rail where they are then exported via the ports of Hay Point, Abbot Point and Gladstone. Mining inputs arrive via the ports of Gladstone, Mackay and Townsville (and further afield) where they are generally transported via road to mine sites. Key east-west road transport routes include the Peak Downs Highway, Flinders Highway and Capricorn Highway.

A number of large scale mining developments are also planned for the Galilee basin and it is expected that these developments will use current freight routes, noting that less utilised east-west connectors



such as the Bowen Developmental Road and Clermont-Alpha Road will increase in importance as the northern and southern Galilee is developed.

The resources sector contributes \$7.3 billion to the Mackay region Gross Regional Product, and \$5.8 billion to the Fitzroy region Gross Regional Product.

**Pilbara** - The Pilbara is branded by its petroleum, natural gas and iron ore deposits which contribute significantly to Australia's economy. The Pilbara encompasses iron ore ranges, tin, manganese and gold deposits, solar salt fields and the North West Shelf oil and gas fields. It is primarily known for the iron ore and petroleum products and is responsible for 96% and 97% respectively of Western Australia's exports of these commodities. The Pilbara contributes \$27.9 billion towards Australia's GDP.

Whilst the economic engine room is the west Pilbara region and the major ports are recognised as the intensive activity hubs, the real activity occurs in the hinterland where the economic products emanate. There is far greater economic investment widely distributed across the Hamersley Ranges in the form of multiple mines, processing hubs and small and medium businesses that support the major mining operations. Mining in the west Pilbara will continue for decades as existing mining reserves are exhausted and new deposits developed to sustain the world demand for iron and steel. Smaller stranded mineral deposits, not only iron ore, are locked until the costs to develop and operate are viable. The assumption that gravel roads (built to facilitate mine construction) are suitable for ongoing very long-term operations and community use is flawed, and is inconsistent with wider regional Australia, particularly in the south west of Western Australia where sealed roads are prolific.

An example of this unsealed road infrastructure is the Karratha-Tom Price Road. The surfacing of the Karratha-Tom Price Road will provide a safer and more efficient route for those travelling between Karratha, Tom Price and Paraburdoo. It will reduce travel times by three hours for a one-way trip. The road will not only allow residents to easily commute but will provide a paved route that will increase economic productivity, reduce road safety risks and increase regional growth in tourism and business development in these regional towns.

**North West Minerals Province (NWMP)** – The North West Minerals Province is one of the world's most significant base and precious metals producers with 11 operating mines, two under development and a further 14 projects under development. The region also has significant energy resource potential - including renewable (geothermal) and non-traditional (tight shale) resources. Mount Isa is the hub of the mining activity and resources are transported predominantly by rail and also by road, to the Port of Townsville for exports to international markets. Prior to the closure of Century Zinc, Karumba was also an important port for exports of zinc. Mine inputs also rely on the Port of Townsville and the national, state and regional roads such as the Flinders and Barkly Highways and several Developmental Roads. In 2015-16, mines within the NWMP contributed \$1.7 billion to Gross Regional Product.

**Charters Towers** – Gold was discovered in the region in the late 19<sup>th</sup> century and continues to be mined to this day. Access to the Flinders Highway and Port of Townsville are critical. In 2015-16, mines within the Charters Towers local government area contributed \$56 million to Gross Regional Product.

**Diamantina Minerals Province** - Geologists have unearthed evidence that suggests Queensland may be sitting on a treasure trove of rare minerals that underpin 21st century technologies and are lying undiscovered in the remote North West of the state. The discovery, loosely being referred to as the Diamantina Minerals Province, covers an area from the copper, gold and platinum-rich Fifield in central New South Wales, through Queensland's north west country and up to the Merlin diamond mine in the Northern Territory, where one of Australia's largest diamonds was discovered. There is potential for this to become a major new production area for high value commodities and downstream processing and



exports. As most of the province is classified as very remote, with low investment into economic infrastructure to date, there will need to be investment into road access to open up mines and transport product.

**Northern Territory** – The Northern Territory has some of Australia’s largest deposits of uranium, zinc-lead, bauxite, gold, phosphate and manganese. It also has high potential for other commodities with exploration and development projects underway for copper, rare earths, vanadium, lithium, tungsten, mineral sands and potash. The Territory is also highly prospective for onshore oil and gas with the Amadeus-Darwin pipeline providing a critical link between the producing fields of Central Australia and Darwin.

**Kimberley** – The region is very prospective for minerals, oil and gas and has potential for geothermal energy developments. The Browse basin north of Broome is one of Australia’s richest hydrocarbon reserves and is comparable to the North West Shelf. As it develops, the Browse basin area can be serviced from Broome and Derby, which have port and air facilities.

The Kimberley is well situated for shipping products overseas with the deepwater port of Broome, ports of Derby, Koolan and Cockatoo Islands, and Wyndham. Minerals and other resources are being shipped through Koolan and Cockatoo Islands and Wyndham with mineral sands to be exported through Derby.

### **Cape York – Peninsula Development Road and Weipa Port**

The progressive seal of the Peninsula Development Road to Weipa as part of the \$260.5M Cape York Region Package (CYRP), will drive increased connectivity and open economic development opportunities for Cape York and the broader region - including tourism. Once the CYRP is complete in mid-2019 there will remain approximately 200km more of the PDR to be sealed.

Further investment in the complete seal of the PDR to Weipa is required to secure a variety of economic opportunities for Cape York and the broader region. The Port of Weipa is the only deep water, western facing port in Queensland, not located adjacent to the Great Barrier Reef, giving it significant potential for expanded mineral export, live cattle and other agricultural product export. The RAAF Base Scherger is located 26km east of Weipa and is flagged for future investment under the Defence White Paper. Strategically located, the Base would be well served with a fully sealed PDR, connecting Weipa to Cairns (via Laura and Mareeba).

Improvements in the PDR to date have already led to increased tourism traffic and improved connectivity to the expanding West Cape minerals sector (Rio Tinto Amrun and Weipa mines and other smaller bauxite operations). The Weipa Port currently services the Rio Tinto Australia (RTA) Weipa mine shipping more than 26 million tonnes a year to international markets including China, with the majority of product supplied to Queensland Alumina Limited and Rio Tinto Aluminium Yarwun refineries, both located in Gladstone.

**Agriculture** – Northern Australia is a key supplier of agricultural exports. Key exports include beef, grains, sugar, horticultural product and aquaculture product. CSIRO have developed a TraNSIT modelling tool to analyse both small and large scale investments in the agriculture supply chain, with current applications covering almost all Australian agricultural logistics. This tool was used in the Northern Australia Beef Roads Programme assessment process and is a great example of using supply chain data to maximise the productivity benefits of infrastructure investment decisions. The Northern RDA Alliance supports the engagement process used to inform the priorities under the Northern Australia Beef Roads Programme as well as the use of the CSIRO TraNSIT model.



A key challenge identified within agricultural supply chains are the first and last mile access to key freight and processing facilities. Significant proportions of northern Australia's agricultural market are not serviced by any other freight option than road. These road options are most often single lane graded local government owned roads eventually moving to state controlled sealed roads of varying width. The compilation, weight distribution and other legal requirements for a vehicle carrying agricultural stock, commodities or freight, will often have to change several times across state and territory boundaries, across road zoning and into the last mile to access export or processing facilities. This inefficiency results in higher freight costs, more impact on roads and greater time delays getting products to market. The lack of rail options across northern Australia and the lack of intermodal facilities mean that a large component of the freight task is continued to be done by road.

In Queensland five RDA committees (including the four in northern Queensland and NRDA) are partners in the Inland Queensland Roads Action Plan (IQ-RAP) project. This project has done a network wide review, analysis and plan - prioritising investment into the freight and tourism route network - to improve productivity on supply chains as well as improve outcomes for safety, resilience and connectivity for communities and broader economic and social benefits. The NRDA has endorsed and supported the IQ-RAP. The IQ-RAP Working Group will also be making a separate submission to this Inquiry. For more information, visit: <http://rdanwg.org.au/iq-rap>

**General Freight** – With a significant general freight task between southern ports and Northern Australia population centres, north-south connectivity is also critical for Northern Australian development. Current north-south freight routes include coastal shipping, roads and rail. Key road freight transport routes include the Bruce Highway and Gregory Highway in Queensland, the Stuart Highway in the Northern Territory and the North West Coastal Highway in Western Australia. It is critical that there is continued investment in mitigating flood risk on these key north-south road links in Northern Australia as they are often the lifeblood of regional population centres. As mentioned in the agricultural commentary the quality of road links across Northern Australia are varied. Significant portions of road in WA, NT and inland Queensland are unsealed. We note the Northern Australian Roads Programme and Northern Australia Beef Roads Programme funding from the Australian Government is being used to upgrade some of these key unsealed freight routes e.g. sealing of the Tanami Road linking the Kimberley to southern Australia, which will have a significant economic boost for the region particularly around freight movement, however further investment tranches are required to ensure that the potential of Northern Australian industry is maximised.

Due to the lack of terrestrial freight and transport infrastructure across large parts of Northern Australia, remote aerodromes and barge networks also play a key role in freight and transport networks. These critical infrastructure systems provide links between remote, island and coastal communities across the North. Continued investment into these systems is vital to support social and economic development of regional and remote areas – however, the challenge of demonstrating an attractive benefit to cost ratio is a major obstacle in regions where costs can be high, populations are low and development is in its early stages.

Key north-south rail links include the North Coast Line system in Queensland and The Ghan in the Northern Territory. A number of key challenges exist in our rail freight system with no consistency around rail gauges or axle load limits. This has a significant impact on the efficiency of general freight and bulk commodity movements. NRDA believes that a National Freight and Supply Chain Strategy will need to focus on integration of road, rail, air and shipping routes to ensure that productivity of freight movements is maximised.



### **3.1 Urban Growth Pressures**

Given the lack of economic infrastructure and population in Northern Australia, the region is perfectly positioned for longer term planning for infrastructure corridors to prevent future congestion issues. Infrastructure Australia have found that this longer term planning for infrastructure corridors can help to avoid cost overruns, delays and community disruption when delivering new infrastructure.

This is also important as we as a nation, seek to maximise the benefits of regionalisation and minimise the cost of congestion in our major cities. As detailed by the Regional Australia Institute (RAI)<sup>i</sup> *"as we confront the challenge of a 40 million population, for every 100,000 Australians who choose to live in growing small cities rather than our big five cities, the RAI estimates that an additional \$50 billion will be released into the economy in reduced congestion costs and increased consumption"*.

Given the economic benefits of decongestion highlighted by the RAI, we believe that investment in regional key freight infrastructure is critical in order to divert the freight task away from currently congested transport networks in our larger cities. This regionalised focus on infrastructure investment will also improve our regional economies and drive greater population dispersal across the country - further reducing the growing demands on our capital city based transport networks.

### **3.2 Port Corridor Pressures – Protecting Land, Sea and Air Connections**

As ship sizes increase in response to increased maritime cargo movements, the ports in Northern Australia will need to be able to accommodate these larger vessels. A number of ports in the North are constrained when it comes to larger Cape size vessels, and focus must be placed on ensuring that solutions to overcome these constraints are examined.

Given Australia's co-existing emphasis on sustainable economic and environmental outcomes, it is important to invest in the research necessary for a cost-efficient methodology for environmentally friendly land disposal of dredge spoil, that doesn't require re-handling. Currently the only way a cape sized vessel can enter some ports is with the additional dredging of material that under current legislation must be disposed of on land.

### **3.4 The Air Freight Market**

The air freight market is minimal across Northern Australia, however significant high value food product is produced in the North. This high value perishable product includes live coral trout, aquaculture product and horticulture from the regions of Gascoyne, Broome, Bowen/Gumlu, Burdekin, Tropical North Queensland and the Northern Territory. There is also the potential for future exports of rare metals and alloys by air freight due to their very high value and low volumes. For example, the current air freight export from Cairns comprises over 4,500 tonnes p.a. with a value of nearly \$140M including large volumes of live coral trout, other fish species, rock lobster and fresh/dried mango to Hong Kong. These high value perishable/non-perishable products are often transported via road to major markets/ports. However, as international air connections increase, an opportunity exists for initial underwing freight in current commercial passenger flights. This capacity can be utilised to develop exports markets before these freight routes have the capacity to stand alone as dedicated freight routes. The additional cost of quarantine and other services could prove problematic, and support from government may be required to catalyse this opportunity.

There may also be scope for the creation of a specific Northern Freight Airport Strategy to support the strategic development of a network of facilities to cater for more air freight. Given the vast area that encompasses the Northern Australian footprint and the wide dispersion of high value product being



produced across the north, a number of current airports across the north could play a key role in a Northern Freight Airport Strategy.

### **3.5 Changing Technology**

As technologies change, our road sector will face funding shortages due to the comparatively weak links between usage and charging. With the use of alternatively fuelled vehicles projected to increase, the fuel excise (which currently represents up to 46% of our average annual road bill per vehicle<sup>ii</sup>) will fall, exacerbating our road funding shortage issue. As road infrastructure providers (government) seek to remedy this funding shortage moving forward, any reform in road user charging will need to take into account regional and remote industry and communities to ensure that they are not unfairly disadvantaged.

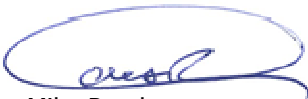
Once again, this is important in the context of the benefits of regionalisation, as the RAI identified decongestion benefits mentioned earlier in the submission will only be unlocked if the competitiveness of regional and remote industry and communities are maintained.

In relation to changing technology we also acknowledge that driverless vehicles are expected in the future, however they are not currently part of our regional supply chain.

Advancements in technology and tracking data means that it is now easier to calculate the movements across individual freight networks and to determine likely impacts and asset management projections going forward. NRDA believes that the gathering and utilisation of data is key across all freight networks to ensure that the benefits of infrastructure investment are maximised.

In closing, we welcome the Inquiry into National Freight and Supply Chain Strategies and believe that understanding the current and potential freight task across broader Northern Australia will be critical to the formulation of the National Supply Freight and Supply Chain Strategy that maximises the economic potential of Australian industry. If you have any questions in relation to this submission, please do not hesitate to contact Ben Wearmouth on 07 4957 6160.

Yours faithfully



Mike Reed  
Chair – Northern RDA Alliance



<sup>i</sup> Regional Australia Institute 2016, Deal or No Deal? Bringing Small Cities into the National Cities Agenda, viewed 31<sup>st</sup> July 2017, [http://www.regionalaustralia.org.au/home/wp-content/uploads/2016/04/Deal-or-No-Deal-Bringing-Small-Cities-into-the-National-Cities-Agenda\\_April-2016\\_FINAL.pdf](http://www.regionalaustralia.org.au/home/wp-content/uploads/2016/04/Deal-or-No-Deal-Bringing-Small-Cities-into-the-National-Cities-Agenda_April-2016_FINAL.pdf)

<sup>ii</sup> Infrastructure Australia 2016, Australian Infrastructure Plan, viewed 31<sup>st</sup> July 2017, [http://infrastructureaustralia.gov.au/policy-publications/publications/files/Australian\\_Infrastructure\\_Plan.pdf](http://infrastructureaustralia.gov.au/policy-publications/publications/files/Australian_Infrastructure_Plan.pdf)

<p><b>RDA TOWNSVILLE &amp; NORTH WEST QUEENSLAND</b>            Glenys Schuntner  <a href="http://www.rdanwq.org.au">www.rdanwq.org.au</a>            P: (07) 4410 3655            E: <a href="mailto:ceo@rdanwq.org.au">ceo@rdanwq.org.au</a></p>	<p><b>RDA FITZROY &amp; CENTRAL WEST</b>            Kalair McArthur  <a href="http://www.rdafcw.com.au">www.rdafcw.com.au</a>            P: (07) 4847 6503            E: <a href="mailto:eo@rdafcw.com.au">eo@rdafcw.com.au</a></p>	<p><b>RDA NORTHERN TERRITORY</b>            Kate Peake  <a href="http://www.rdnant.com.au">www.rdnant.com.au</a>            P: (08) 8941 7550            E: <a href="mailto:ceo@rdant.com.au">ceo@rdant.com.au</a></p>	<p><b>RDA FAR NORTH QLD &amp; TORRES STRAIT</b>            Jann Crase  <a href="http://www.rdafnqs.org.au">www.rdafnqs.org.au</a>            P: (07) 4041 1729            E: <a href="mailto:ceo@rdanfnts.org.au">ceo@rdanfnts.org.au</a></p>	<p><b>RDA MACKAY-ISAAC &amp; WHITSUNDAY</b>            Ben Wearmouth  <a href="http://www.rdamiw.org.au">www.rdamiw.org.au</a>            P: (07) 4957 6160            E: <a href="mailto:ceo@rdamtw.org.au">ceo@rdamtw.org.au</a></p>	<p><b>RDA MID WEST GABCOYNE</b>  <small>Including the Indian Ocean Territories</small>            Alan Bradley  <a href="http://www.rdamwg.com.au">www.rdamwg.com.au</a>            P: (08) 9964 5757            E: <a href="mailto:ceo@rdamwg.com.au">ceo@rdamwg.com.au</a></p>	<p><b>RDA PILBARA</b>            Diane Pentz  <a href="http://www.rdapilbara.org.au">www.rdapilbara.org.au</a>            P: (08) 9144 0651            E: <a href="mailto:ceo@rdapilbara.org.au">ceo@rdapilbara.org.au</a></p>	<p><b>RDA KIMBERLEY</b>            Chris Mitchell  <a href="http://www.rdakimberley.com.au">www.rdakimberley.com.au</a>            P: (08) 9192 2450            E: <a href="mailto:eo@rdakimberley.com.au">eo@rdakimberley.com.au</a></p>
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