# SUBMISSION TO INFRASTRUCTURE AUSTRALIA

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TRANSPORT & FREIGHT LOGISTICS INFRASTRUCTURE



### THE FIRST – INTERMEDIATE & LAST MILE OF NATIONAL ECONOMIC GROWTH –TRADE & SUSTAINABILITY



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This submission has been developed in the context of projected increased demand on NSW transport networks, a growing freight task driven by increased volume and product diversity of exports to domestic and international trade markets, declining productivity growth across the economy and escalating construction costs within a tight economic environment.

The A.I.D. proposal put forth for consideration focuses upon the re-vitalization and expansion of existing NSW state owned assets. The details of this submission provide a valuable insight into the proposal to reopen, regenerate and expand upon the existing network and the fundamental role it can perform in establishing an unprecedented benchmark in the level of efficiency, coordination, reliability and capacity.

The portfolio of core A.I.D. projects summarised herein are the result of detailed technical analysis, research and consultation with local area governments, peak industry bodies, environmental groups, shipping companies and prospective end users.

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# TOMORROW'S FUTURE TODAY'S RESPONSIBILITY

#### **Executive Summary**

Population growth, traffic congestion together with the magnitude of the freight task overlapping with inter-competing land-uses have collectively conspired to reduce the operational capacity and efficiency of eastern capital seaports.

Additionally, at a national level, different rail gauges' have resulted in fragmented operations due to the inability to quickly and efficiently move rolling stock between networks, resulting in higher operating costs due to suboptimal utilisation and minimal investment in other interrelated infrastructure. Legacy breaks in rail gauges and the problems they have created for rail transport in Australia have been well documented.

These inefficiencies and other short comings coupled with branch line closures during the latter half of the  $20^{th}$  Century have fuelled the growth rate of an unstainable and costly national road freight system.

The crux of this submission relies upon the regeneration and expansion of the NSW gazetted Port of Yamba and the NSW regional country rail network.

The fully integrated freight logistics model, summarised throughout this submission, is made possible through the development of an east west rail corridor linking Port Yamba with the existing Great Northern Railway at Glen Innes and the soon to be developed Melbourne-Brisbane inland rail corridor at Moree.

Well documented reports in conjunction with short to long-term forecasts reveal the impact of population, trade and subsequent freight growth and its unprecedented demand on Australia's existing shared passenger transport and freight logistics infrastructure networks.

Australian Infrastructure Developments (A.I.D.) applauds the initiative of the Australian and NSW State Governments aim to reform existing land-side freight logistics infrastructure to support the expansion of Port Botany and eliminate congestion and infrastructure gaps within the Sydney metropolitan and interstate network. While we acknowledge these initiatives as necessary, it must be noted that they will only provide an interim measure due to anticipated trade growth through Port Botany and subsequent freight demands.

As you will note from reading the contents of this submission, the proposed A.I.D. infrastructure plan is focused upon the regeneration of existing NSW State owned assets. The development plan will show how these assets can be effectively integrated within the national transport and freight logistics grid. A fundamental component of this plan is the integration of the NSW rail network within the national freight grid. This alignment is made possible through the construction of the Melbourne-Brisbane inland freight rail corridor.

A seamless integrated and unconstrained network of port and national rail infrastructure, the inauguration of this project is both justifiable and compelling. The proposed infrastructure network will provide and deliver increased cargo handling efficiency, productivity and capacity in readiness for the anticipated doubling of the freight task by 2025 and beyond.

It is important to note that the structure of the proposed development will be a "common user" system fully integrated with the existing state rail, road and port networks.

The portfolio of core infrastructure and ancillary projects outlined herein provide and offer a sustainable opportunity to substantially increase capacity and operational efficiencies between the port gateway and the national rail and road freight grid resulting in timely unconstrained access to both eastern capitals and regional economic growth centres located throughout South Eastern Australia.

This submission accentuates the pivotal role of N.S.W transport infrastructure within the framework of the national economy.

The cornerstone of eastern Australia's transport and freight logistics network, NSW infrastructure carries approximately 60% of all interstate cargo activity. The portfolio of integrated infrastructure and interrelated projects proposed by A.I.D. represent a synergy of developments that will assist to deliver the required increase in capacity, productivity and efficiency to support sustained national economic growth with particular emphasis placed on regional Australia.

The establishment of a seamless unconstrained integrated port and national railway network in concert with strategically positioned intermodal facilities will perform a pivotal role in shifting modal-share from road to rail by upwards of 75%.

It is foreseen that the A.I.D. development will provide the catalyst for greater economies of scale whilst also providing major improvements in the environmental sustainability of Australia's national transport and freight logistics industry.

#### PORTFOLIO OF CORE INFRASTRUCTURE PROJECTS PROPOSED BY A.I.D.

Port Regeneration & Expansion Project - Clarence River Yamba NSW

#### Pacific West Rail Project

NSW Regional Country Rail - Network Upgrade & Expansion Project

Lithgow - Western Sydney - Dedicated Rail Freight Corridor Project

#### **Portfolio of Projects – Targeted Outcomes:**

- Provide a sustainable platform on which to develop a seamless fully integrated, unconstrained transport and freight logistics network that embraces shipping ports and the national rail network;
- Provide open access to a seamless world-class fully integrated freight logistics system comparable with world-best-practice and standard;
- Reduce NSW infrastructure gaps;
- Increase eastern seaboard port capacity;
- Set a new benchmark in the efficiency of both freight handling and movement of goods to and from the port gate to new and existing economic growth centres through the provision of a seamless connection to Australia's primary rail and road freight corridors;
- Increase the average speed of freight rail by 100%
- Deliver a modal-shift from road to rail by upwards of 75%;
- Reduce the current dependency on long-haul road transport operations;
- Reduce greenhouse gas emissions and its detrimental impact on the environment;
- Reduce the impact of heavy vehicle movement on both the social fabric and environment;
- Increase efficiencies, capacity and reliability of essential metropolitan passenger rail services;
- Reduce freight costs via improvements in freight handling efficiency, capacity and reliability;
- Reduce capital city traffic congestion via the separation of urban freight and passenger transportation;
- Reduce the national reliance on fuel consumption.

#### **Snapshot of (BITRE) Container Trade Growth Across Australian Ports**

The Bureau of Infrastructure, Transport and Regional Economics ("BITRE") has given governments and the transport and logistics industry another hefty reminder that container trade growth never sleeps and will not let up.

In its third port-trade forecast in eight years, BITRE's *Containerised and non-containerised trade through Australian ports to 2032–33* report foresees a near-tripling of container traffic in the next 20 years. Total containerised trade is seen growing at 5.1% a year, from 7.2 million 20-foot equivalent units (TEU) in 2012–13 to 19.4 million TEU in 2032–33.

Driven by "the continuing positive economic outlook for Australia and its major trading partners", it is forecast to increase 6.2 % annually in Brisbane, 4.5% in Sydney, 4.8% in Melbourne, 5.4% in Adelaide, 5.8 % in Fremantle and 5.1% across all other ports.

By 2032–33, the total volume of containerised trade is projected to reach to 3.6 million TEU in Brisbane, 5.2 million TEU in Sydney, 6.4 million TEU in Melbourne, around 1.0 million TEU in Adelaide, 2.1 million TEU in Fremantle and 1.2 million TEU across all other ports.

Over the next 20 years, real GDP is forecast to increase by an annual average of 2.7 % a year for Australia, 2.5 % a year across the OECD, 1.3% a year in Japan, 2.3% a year for the United States and 6.7 % a year for China.

"This is below average trend growth experienced in Australia, USA and China and slightly above average trend growth experienced across all OECD countries and Japan over the past two decades," the report states. "Consequently, these assumptions will broadly act to lower containerised and non-containerised import volume growth through Australian ports compared to the historical trend. "Thus, the Port of Melbourne, which has increased by 5.9% a year over the last 14 years, is projected to increase by 4.8% a year over the next 20 years to 6.4 million TEU in 2032-33".

"The slightly lower rate of growth projected over the forecast period is due to the lower import growth forecast resulting from projected lower future economic growth in Australia and the assumed depreciation of the Australian dollar against the US dollar".

Full container exports and imports are forecast to grow annually by 4.3 and 5 % over the next 20 years to 2-3 million TEU in 2032-33, respectively.

The reduction is to be sharper in Sydney where throughput rose 6.5 % per year over the last 14 years to 2.1 million TEU in 2012-13. It is projected to rise 4.5 % a year over the next 20 years to 5.2 million TEU in 2032-33.

Full container exports and imports are to rise 3.4 and 4.6 % a year, respectively, over the forecast period.

#### AUSTRALIA'S MARITIME INDUSTRY.

Australia is the third most important maritime trading nation in the world by distance covered and tonnage carried. Consequently, Australia's ports represent critical infrastructure for the nation's future security.

#### PREPARATION FOR INCREASED TRADE GROWTH THROUGH PORT BOTANY.

In preparation for increased trade growth, Port Botany underwent a major expansion of its container port facilities to cater for long term trade growth. While this expansion was one of the largest port projects ever to be undertaken in Australia in recent decades it neglected to deal with the significant land-side impediments that face existing operations as well as future freight throughput projections. Sydney's burgeoning population pressures have become particularly acute in the inner-city region surrounding Port Botany and there is now very little opportunity to avert the consequences of these pressures, road congestion, competing land-uses, environmental impacts and distance to intermodal distribution centres. <u>"A failure to adequately identify, preserve and enable the development of long term transport corridors will compromise the ability to increase capacity across port, road and rail networks".</u>

#### **MOOREBANK INTERMODAL FACILITIES**

The Moorebank intermodal plan has been evaluated and a number of serious shortcomings and inadequacies are evident.

See - <u>www.transportmodelling.com.au/Intermodal/MoorebankIntermodal\_BetterOptions.pdf</u> www.transportmodelling.com.au/Intermodal/MoorebankIntermodal\_BetterOptions.pdf

## PRIVATE ENTERPRISE INVESTMENT

#### **Rationale for Increased Transport & Freight Logistics Infrastructure**

Australian Infrastructure Developments (A.I.D.) and associated partners are committed to investing in Australia's infrastructure as a key enabler to employment growth, productivity, economic growth and national prosperity. Private enterprise investment in this respect is targeted to economic infrastructure including port facilities, railways and interrelated land-side freight networks.

## PORT REGENERATION & EXPANSION YAMBA NSW

The Port is uniquely placed to serve as a major east coast port facility and trade hub. Its location is surrounded by extensive areas of land that could be potentially suitable for future port related growth such as commercial and industrial centres, residential and agribusiness growth.

#### Port Regeneration & Expansion – Clarence River – Yamba N.S.W.

To be known as ("**EASTGATE PORT**") this segment of the development entails the regeneration and expansion of the existing northern NSW declared Port of Yamba. Geographically well positioned through its interface with the north south shipping lane and the national freight network in conjunction with its largely underpopulated and undeveloped location, the integrated port development will provide a critically important hub for the entire national freight system. The development allows an abundant scope for expansion both land-side and port-side. Preliminary investigations indicate there are no insurmountable environmental or engineering impediments for future expansions.

The redevelopment of the port has been designed to not only work in synergy with the existing NSW freight grid, but also allows for its seamless integration with the national freight network. This will be made possible through the development of a new East-West rail alignment linking the port with the Western Inland Rail Corridor at Moree. The A.I.D. proposal brings with it a whole suite of economic, environmental and social benefits. These benefits would include but not be limited to:

- Sustained regional employment growth;
- Direct and ancillary regional business investments;
- Reduced transit time and costs;
- Increased freight handling efficiencies through technological innovations;
- Increased port capacity and trade throughput;
- Direct connection to the national rail and road freight grid with emphasis on rail transport;
- Expanded freight access to regional economic production centres;
- Direct access from the port gate to the national rail grid allowing a modal-shift from road to rail upwards of 75%
- Major reductions in CO2 emissions;
- Support for decentralisation programs, policies and initiatives;
- Significant environmental protection initiatives through management and offsetting strategies, and
- The provision of increased local community amenities throughout the entire development area.

The development timing coincides with the forecast increase in trade growth and heightened freight demand across the network. The port will be perfectly positioned to also provide an important stop-gap function in alleviating the consequences of freight congestion throughout eastern seaboard capitals.

A unique and significant piece of transport infrastructure, the ports underlying potential to become a large-scale, multicargo import-export facility that would provide for bulk, general cargo, Ro Ro and containerised trade, has significantly increased in recent years. The locations unique characteristics remove the significant operational and capacity constraints currently afflicting all major eastern capital seaports.

Under the A.I.D. development plan, the port would be transformed from its limited domestic operational status into a globally significant "common-user" shipping hub capable of accepting a wide-range of vessel types ranging in size to include, but not limited to, Post Panamax and Cape Size vessels.

The port could potentially provide capacity for up to 4 million TEU's and upwards of 50 million tonnes of additional import/export cargoes. These cargos could include, but not be limited to, agricultural, manufactured products and machinery. It is envisaged that Stage 1 and 2 of the port development plan will open for trade by 2023 with stages 3 and 4 completed and in full operation by 2030.

It is foreseen that cargo throughput could rapidly increase from 2030 onwards.

The opportunities arising from the integrated port development are global in scale and have the potential to strengthen regional based economies. This development in conjunction with the foreseeable emergence of support based industries will combine to play a pivotal role in fostering decentralisation, regional economic growth and employment opportunities in keeping with the NSW 10-year plan to rebuild the economy, provide quality services, renovate infrastructure and strengthen local community environment.

The A.I.D. development strengthens the economic goals as outlined in the NSW 2021 plan:

- Improve the performance of the NSW economy;
- Rebuilding state finances;
- Drive economic and employment growth in regional NSW;
- Increase the competitiveness of doing business in NSW, and
- Strengthen NSW skill base.



Figure 1. A preliminary port and industrial precinct development plan

#### Well Balanced Planning

A.I.D. is committed to delivering a sustainable environmental plan that has built-in priorities and actions to balance environmental, social and economic needs of the Clarence Valley and all regional LGA's within the development zone. In the past, environmental and socio-economic goals have often been pursued in isolation from one another. We recognise that the long-term well-being of the LGA's within the development area depends as much on the promotion of a strong, vibrant society and the ongoing nurturing of its environment, as it does on the pursuit of economic development.

Not only is it apparent that these issues cannot be separated, but also it is equally clear that better outcomes can be realised through a holistic approach. To that end, and to complement other strategies, A.I.D. is developing an Environmental Sustainability Strategy (ESS) that provides for a consistent, cohesive and prioritised approach to decision making and activity implementation to achieve environmentally sustainable outcomes.

The ESS will create business strategies and activities that will meet the needs of enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future.

#### The focus areas of the strategy are:

- Renewable Energy Utilising State-of-the-Art Energy Conservation Technology
- Carbon Neutrality
- Total Resource Recovery
- Land Use: Planning and Environmental Management
- European & Indigenous Heritage Protection
- Community Wellbeing
- Human Resources
- Environmental Education Community Centres

Preliminary environmental information indicates that the proposed site represents probably the best option for such a development on the entire east coast.

A significant part of the development proposal will include extensive ongoing environmental monitoring as well as a wide range of innovative environmental offsets that will include large-scale replanting of native vegetation on presently degraded agricultural landscapes to act as buffer zones and corridors for wildlife conservation.

#### **Initial Advice Statement**

An Initial Advice Statement ("IAS") is currently being prepared by Ecological Australia to provide preliminary information about the physical, ecological and socio-economic environment in relation to the proposed port development and associated land-bridge infrastructure (Road and Rail Corridors). The purpose of the IAS is to provide supporting material for an application to the NSW Government Statutory Department of Planning and Infrastructure ("DPI") for the project to be classified as a State Significant Infrastructure ("SSI") Project on Schedule 3 of the State and Regional Development ("SEPP") State Environmental Planning Policy.

If approved then an Environmental Impact Statement will be prepared and submitted for consideration under the NSW Environmental Planning and Assessment Act, 1979 ("EP&A Act).

#### **Ecological Australia Preliminary Review**

An initial review of the proposed Port Yamba regeneration and expansion development indicates that:

- No internationally or nationally important wetlands will be impacted by the project. The majority of referrable wetlands are avoided by the proposed development processes.
- The locations of watercourse crossings and proposed construction methods have been carefully selected to minimise impacts to both riparian vegetation and bank profiles.
- Field assessments will ground truth areas of interest identified during desktop searches and help determine the distribution, likely impacts and potential additional avoidance options for threatened species, ecological communities, referrable wetlands and essential habitat.

Considering the relatively low environmental and social sensitivities directly impacted by the project and the proposed low impact construction approach, we believe that, subject to the proposed detailed ecological survey, cultural heritage assessment, transport study to be considered in the EIS, the environmental and cultural heritage impacts of the project can be effectively minimised and proactively managed.

#### **Clarence River Channel Entrance**

A rock reef, reported to be of cultural importance, is located around 1,000 metres upstream from the eastern most point of the breakwater. This reef has been listed on the Register of the National Estate and the NSW National Parks and Wildlife (NWPS) Cultural Places Register.

Since the late 1800's, all significant historical records reveal the extent of past degradation to the lower reaches of the Clarence River system. A rehabilitation program will also form an integral part of the development project providing significant environmental improvements throughout the entire lower Clarence River system. Details for environmental improvement initiatives will be detailed in the EIS documentation.

#### **Indigenous Participation**

A comprehensive investigation will be undertaken of all culturally significant heritage sites and issues. This process will involve all indigenous stakeholders from the outset.

#### **Prior Clarence River Improvement Assessment Proposal**

A proposal to deepen the mouth of the Clarence River to eliminate siltation caused by the construction of the tidal walls and breakwaters at the river mouth was tabled for attention in the 1990's.

The findings of the investigation carried out estimated that the breakwater constructions of decades past had severely impacted the natural functioning of the river not only through trapping vast amounts of sediment, but also extending the duration and the severity of flooding episodes. It was estimated at the time that some 200 million tonnes of silt and sand had been deposited on the river bed which, in the absence of the walls, would have been flushed well out to sea during flooding events. To address these problems a proposal was put forward to undertake a range of engineering works to facilitate the deepening of the river mouth mainly through dredging of the excess sand and silt from the mouth to Goodwood Island and beyond.

In support of this objective a wide range of studies were undertaken as part of an Environmental Impact Study, which in turn included a follow up assessment of the EIS and related issues by the then NSW Department of Urban Affairs and Planning and the associated Government Departments.

The initial studies and the follow up Department assessments considered a wide range of engineering, hydrological, physiographical, archaeological, social and biological issues.

Although the project did not proceed, it was clear that with the appropriate safeguards there were no compelling reasons for not undertaking the improvements sought in the EIS.

As a result of the deferment to finally complete the river head works implementation plan and design, the port has lacked the physical capacity to keep pace with the rapid change and progress as witnessed in other sectors of the national transport network.

At the onset of the project development a comprehensive scope of works will be activated.

This will include detailed geomorphological, biological, ecological and sociological investigations which will form the intellectual framework for the entire project development. Such studies will include the detailed assessments of the entire terrestrial and marine landforms and biota. The scope of works will also include a full biological inventory and ecological assessment of the entire environment of the Clarence River system.

To guide this essential development, we are intending to fully assess the (archaeological, indigenous and European) environment, as well as a fully integrated sociological assessment of the Project Development Zone. These essential investigations and others will form a vital component of the project development to guide the complex engineering and design phases of the project from the outset.

#### **Principal Studies**

The principal studies that will be undertaken are:

- Environmental studies and impact assessment (Flora and fauna)
- Hydrology and hydraulic studies and design
- Coastal engineering investigations
- Coastal processes modelling and impact assessment
- Marine and coastal environment assessment
- Geology and geomorphological assessments
- Climatological and weather systems assessments
- Dredging impact studies
- Commercial fisheries investigation
- Statutory approvals
- Detailed engineering and design reporting
- Construction contract packing and tender

### **Clarence River Entrance - Maintenance Dredging**

A review of environment factors was prepared by Eco Logical Australia for the NSW Waterways Authority in 2003. The objective of this review was to consider the objectives and justification of proposed maintenance dredging at the channel entrance of the Clarence River.

#### The review revealed:

During 2001 the entrance channel into the Port of Yamba, seaward of the breakwaters, experienced a rapid accumulation of sediment. The result of the accumulation was a significant decrease in the draft allowance and limitations to the size of vessels able to safely navigate the Port entrance. This type of sand accumulation has not been recorded previously, however, due to the potential effects on the port activities, should such an accumulation occur again, it is desirable to have the appropriate approvals in place to enable the accumulation to be removed and allow safe passage.

- Restriction in the ability of local commercial fishing vessels to safely negotiate the entrance to the Port of Yamba has the potential to result in serious accidents involving potential loss of equipment, fishing vessels and human lives.
- An inability to either enter or leave the Port of Yamba due to reduction in depth or an inability to safely navigate the entrance could cause significant delays in shipping and impose additional costs on shipping companies utilising the Port of Yamba as their Home Port
- Further depth restriction to the Port of Yamba or unreliable passage due to sand accumulation could have negative impacts on the use of the Port by commercial shipping operators. Unreliable delivery timing by existing commercial shipping operators' due to unreliable access to and from the Port has the potential to negatively impact most on new or recently established export markets. Loss of these markets may have flow on negative economic impacts for commercial shipping operators and export industries, the local community and the north coast region over the long term.

#### **Clarence River Entrance Flow Modelling**

The subtropical Clarence River estuary is the largest estuary in South Eastern Australia. It comprises one of the largest fresh water river catchments in Australia, including extensive flood plains, channels, islands, marshlands and coastal lagoons that are all subject to periodic wide scale flooding events. The system has been subject to extensive past modelling for the purposes of flood mitigation, nutrient dynamics, sediment loads and hydrological energy dynamics. Various modelling has been used to guide the planning of economic and social function of the lower Clarence estuary in particular, and has been found to have very high reliability overall. Some of this modelling has indicated that the Clarence estuary is highly complex in its functioning at all levels, in particular the impact of nutrients on the biology of the estuary but the river flow dynamics are straight forward and well understood.

The proposed realignment of the breakwaters will of course require some fairly sophisticated modelling, however the overall scientific and professional opinion on hand would suggest that such modelling represents no insurmountable obstacle to the development.

#### Eco Logical Australia - Scope of Works

Eco Logical Australia has been engaged as the Principal Environmental Consultants. A leading Australian and distinguished environmental consultancy organisation, the company has worked with A.I.D. since the projects inception. The scope of initial works is as follows:

- Providing input into the framework for project governance and management arrangements to monitor and steer the project as a whole
- Provide management of the environmental impact assessment (EIA) and approvals for the project
- Management and co-ordination of the specialist EIA Sub consultants, co-ordination of input and management of EIA document assembly and publication.
- Provide a technical co-ordination role on the Project Steering Group (PSG), co-ordinating input from Port and Rail PD specialists, the TSG and SEG. For example, co- coordinating with AURECON and HATCH on the coastal/estuarine processes, hydrological and hydraulic studies.
- Provision of data management services co- ordination of spatial datasets for the project. Provision of base mapping and delivery of final mapping products for the EIA.
- Development implementation and fulfilment of the Approvals Handling strategy, including managing lodgement and liaison with the regulator, as part of and on behalf of the PSG, supported by the political connections in AID and the broader PSG.



*Figure 2. Indicative re-engineering of the Clarence River entrance* 

#### **Indicative Re-engineering of the Clarence River Entrance**

The key objective of this reengineering work is to restore the original flow direction of the Clarence River through the repositioning of the northern breakwater to a distance of some 60-80 metres north of its current location to reduce sediment build-up in the harbour entrance and so provide sufficient navigational water depth.

#### **Breakwater Construction Materials**

Materials used in the reconstruction of the two new breakwaters would consist of specially positioned rows of individual precast reinforced special purpose marine concrete (60-80 tonne) interlocking block structures. These concrete structures will be designed with sloping sides from the baseline to the surface to allow for current-flow and efficient sediment shift.

The northern breakwater would also be designed to include embedded petroleum distribution pipelines to allow for the importation and exportation of petroleum products. Both breakwater structures would also have provision to facilitate embedded offshore treated water disposal outlets to relieve the townships of Iluka and Yamba of treated effluent loads. Inspection and maintenance access points would be positioned in strategic locations with gated security entrances. The pipeline would be contained within a series of interlocking watertight precast concrete block tunnels. Other features of the tunnel would include electricity, lighting and air ventilation to assist maintenance works.

#### **Indicative Breakwater Dimensions**

*Northern Breakwater*: Shoreline to north eastern tip 1500 metres, overall surface width 50 metres, baseline breadth 80 metres.

*Southern Breakwater*: will run parallel to the existing breakwater with the integral design remaining the same as the northern breakwater but with a lessor overall length of 1,000 metres. Construction depth and height of both breakwater structures will depend on seabed levels and calculated measures in predicted sea level rise.

#### **Community Recreation and Tourism Offsets**

An integral part of the wide-ranging Clarence River Harbour Entrance Plan is to leverage all possible opportunities to connect the modernised harbour entrance to the regional community, visitors and tourist trades. In order to achieve this objective a selection of additional development characteristics have been considered.

These additions would include but not be limited to, the development of a world-class deep-water marina and boutique shipping passenger terminal at the eastern end of the Iluka breakwater with inclusions on the Yamba breakwater to include a 5-star rated international hotel, world-class restaurants, arts and cultural centre, museum, cinemas and conference centre. With an excess of over 2,500 metres of fully accessible landscaped offshore breakwaters, locals, visitors and tourists alike will be able to relax in an atmosphere that is uniquely, Yamba.

These characteristics will provide for sustainable year-round tourism offsets, value-adding to existing tourism experiences and provide a significant stimulus for future investment in the north coast region at all levels of enterprise. This section of the development will require a separate component of the projects EIS and details will be provided in the final engineering documentation of the EIS.

#### **Clarence River Entrance Subsurface Remodelling Works Program**

The Clarence River estuary has had a number of engineering structures placed in positions which have in part, significantly changed the flow and sedimentation patterns near the river entrance. Additionally, this has now resulted in a different basal sediment structure, and the exposure or submergence of small areas of bedrock (*Figure 3*) that may require removal and/or modification to allow safer navigational depths, significantly improve tidal flow as well as positively influence nutrient load dissipation.



Figure 3. Different Basal Sediment structure



Figure 4. Illustration of cascade effect of current flowing over the subsurface rock formation

#### **Indicative Counterfort and Revetment Material Estimates:**

- Goodwood, Chatsworth and Harwood Islands counterfort length approximately 6,200 metres
- Indicative rock revetment wall length approximately 8,000 metres
- Dredged river material approximately 100 million tonnes

Providing the Entrance River and Breakwater Works Program meets with approval and the decision made to dismantle the current estimated 60,000 cubic metre breakwater structure, this breakwater material will be recycled for use as revetment material along the areas shown in the above diagram.

Any additional supply of rock based revetment material will be sourced from interrelated project development sites located west of Grafton.

#### **Dredged Material Recycle Program**

Dredged river base material will be offloaded onto adjacent shorelines at strategically placed processing areas for later consolidation works across the port development zone. Any additional material required will be sourced and transported from interrelated project development sites within the AID development zone.

An indicative estimate of the landfill required to elevate port lands above known recorded flood levels is in the order of approximately 225.6million cubic metres. This landfill will consist of dredged river base rock and sand as well as materials sourced from interrelated construction areas from within the development zone.

Projections for expected sea level rise of between 80 centimetres to 1.2 metre rise from climate change over the next 50 to 100 years has also been considered in the engineering and structural integrity of the entire complex. This will allow continuous operation in all but the most extreme flooding and sea level rise scenarios and ensure that operations can expand if necessary to compensate for even more extreme climatic based events should they occur.

The above structural contingency plan places the port in a unique position to adapt to severe coastal conditions that will affect the seaboards over the coming decades. It has been recently suggested by climate scientists that a sea level rise approaching 1 metre maybe well underway within the next 30 years therefore we have undertaken engineering and design considerations in our forward planning to ensure a seamless operation for the long term.

## PACIFIC WEST RAIL PROJECT

## LINKING PORT YAMBA & THE NSW REGIONAL RAIL GRID WITH THE INLAND RAIL NETWORK

Well documented facts besieging the role and performance of the NSW state rail grid reveal the network has and continues to be one of the <u>key disconnects</u> within the national freight rail system. Increasing the share of general freight hauled by rail, especially import-export freight remains a significant challenge. The contents of the A.I.D. Port – National Rail Network proposal outlined herein provides a detailed synopsis of the

intended interconnected projects that are considered appropriate to meet national freight task reform objectives.

#### **Double Height Container Rail Operations (Eastern Australia)**

The possibility of increasing clearances to enable double height container operations on railways throughout eastern Australia has been under consideration for some time. However, constraints associated with overhead electrification, tunnels and road bridges built across tracks at single stack clearance height in metropolitan areas, have, in past years, placed this goal beyond short-term reach on most corridors.

In recent years, a demographic change in eastern capital land-use zonings has seen a number of prior constraints eliminated. This change has occurred through the shift of business centres to more accessible peripheral locations paving the way forward for the development of eastern seaboard double height rail operations without the need for significant reconstruction of metropolitan rail infrastructure.

Diagram 1 provides a concise overview of the planned A.I.D. integrated seamless transport and freight logistics infrastructure model.

#### Railway Design and Standards across the Proposed Rail Network Development.

Railway developments will apply a uniform design and engineering standard across the entire freight rail network. Track engineering and civil engineering designs meet the principals of Australian Rail Industry Safety Standards. **Design & Engineering:** 

#### • Double track (all corridors)

- Rail size: 60 kg/m
- Sleeper type: Concrete, with resilient fasteners
- Sleeper spacing: 600 mm average
- Ballast depth: 200 mm under the sleeper
- Ballast shoulder: 250 mm
- Overhead clearance heights- 7.3 metres
- Elevation 1-100 grade
- Radial curves of not less than 1000 metres
- Appropriate passing loops, sidings, marshalling yards, maintenance facilities and all-weather access roads.



Diagram 1. Planned A.I.D. integrated seamless transport and freight logistics infrastructure model

To be known as ("Pacific West Rail"), this development will establish a direct high-speed unconstrained rail corridor linking Port Yamba to be known as ("EASTGATE") with the western inland railway corridor at Moree. The project entails the construction of a new 300-kilometre rail section between Port Yamba and Inverell and a full restoration of the existing 148 kilometres of closed line between Inverell and Moree.

Three significant nation building projects, the combination of the Pacific West Rail, Inland Rail and Port Yamba developments will deliver a totally integrated seamless freight network that has the potential capacity to service eastern Australia's forecast freight task. A significant outcome will be the reduction of existing freight bottlenecks and limitations to capacity and reliability currently plaguing eastern freight networks.

The strategic importance of the Pacific West rail corridor in tandem with the Port Yamba expansion cannot be understated.

Benefits would include but not be limited to:

#### 1) Operational

- A marked increase in port rail port cargo transfer efficiencies;
- A major shift in modal-share from road to rail by upwards of 75%,
- A marked increase in national rail network coverage, productivity and capacity;
- Increased economies of scale for above-line rail operators and industry end-users, and
- Reduced freight costs

#### 2) Employment

- 3) Decentralisation
- Skilled workforce and apprenticeships opportunities.
- Sustainable decentralisation and regional expansion.
- 4) Environmental
- Significant reductions in CO2 emissions;
- Improvement of environmental amenity via a marked reduction in long-haul road transport operations, and
- Significant environmental offsetting via the creation of protection strategies including extensive vegetation plantings, waterway protection initiatives, noise and other pollution controls, visual screenings and the integration of wildlife corridors.

#### 5) Advanced Australian Defence Force Capability

- The total seamless integrated development will also provide additional support based infrastructure for the Australian Defence Force (ADF);
- In addition to the above the Pacific West corridor could also provide multifunction capability to include energy, water and telecommunications facilities.

Comprehensive mapping and preliminary construction costs have been completed.

### Port Yamba – Western Sydney High Speed Freight Rail Link

#### **Restoration & Expansion Works**

This will underpin the resurgence of the N.S.W. transport & freight logistics network.

A major feature of the A.I.D. plan is the reopening, restoration and expansion of certain sections of open and closed lines within the NSW regional country rail network.

#### Central Rail Corridor: (Glen Innes - Werris Creek)

- Total corridor reconstruction between Glen Innes Armidale;
- Track duplication;
- Corridor realignment: Ben Lomond, Black Mountain, (Woolbrook to Limbi Moonbi Ranges) (see mapping for details);
- Passing loops;
- Bridges and culverts as and were required;
- Overhead road bridges as and were required;
- All weather access maintenance roads;
- Maintenance facilities, and
- Fencing.

#### Werris Creek to Lithgow via Binnaway, Merrygoen, Gulgong, Mudgee and Rylstone

- Complete corridor restoration;
- Track upgrade to double track configuration;
- Corridor realignment Rylstone and Wallerawang; (see mapping for details);
- Passing loops and rail sidings;
- Bridges and culverts as and were required;
- Overhead road bridges as and were required;
- All weather road access;
- Maintenance facilities, and
- Fencing.

Desktop mapping and preliminary construction costs are attached.

#### A Catalyst for Rural Investment and Sustained Economic Development

The strategic significance both economically and operationally of the intended program of works cannot be underestimated. The development will allow the eventual connection of currently underutilised and effectively isolated sections of the NSW country rail freight network creating significant improvements in both capacity and efficiency. The revitalisation of the network will stimulate the opportunity to unlock the productive economic potential of the wider rural areas of NSW. The development will enable rural areas that are presently disconnected from major centres of economic growth to achieve major improvements in both there socio-economic and environmental amenities.

#### Yamba to Western Sydney Corridor Segment

This segment will comprise of Class 1C heavy duty, stand gauge rail line with a minimum built-in clearance height of 7.1 meters to provide for the timely and cost-efficient conveyance of double stacked containers and over height rail rolling stock between the two centres.

#### Port Yamba to Moree

The configuration of this corridor will vary from the Port Yamba to Western Sydney corridor by having the track alignment separation extended from 4.3 to 6 meters to accommodate the transportation of over dimensional cargoes.

#### **General Arrangement of the Western Rail Access Corridor**

Both of the above rail corridors include and provide for a number of overpasses and underpasses to allow for pre-existing road ways and services, as well as strategically placed habitat connected structures such as overpasses and underpasses to allow for unimpeded wildlife movement and continuation of agricultural use where appropriate.

Although rail maps depict a number of rail tunnels between Buccarumi Range and Glen Innes, the final number and location of tunnels is contingent upon detailed engineering assessment on a site by site basis. Some of the tunnel locations may not be able to meet the height required for double stack rolling stock in a cost-effective manner. In such cases tunnels maybe replaced by cuttings. Conceptual desktop planning, mapping, field research including estimated development costs have been completed on all sections of the proposed rail route and detailed engineering and construction plans will form part of the entire Western Rail Access Route EIS documentation.

#### Yamba Port to Banyabba Junction

The most northern section of the proposed Western Rail Access Route, Port Yamba to Banyabba Junction rail corridor comprises a distance of thirty-three (33) kilometres and will require the acquisition of 33 x 1.5kms (5,000) hectares of none prime rural land of varying topography ranging from gently undulating coastal foothills at Banyabba, eastwards to the coastal plain of Iluka - Yamba. The corridor will comprise a 1 x 4 lane Pacific highway overpass, an overpass over Iluka Road and a northbound off-ramp from the Pacific Hwy to access the port precinct via the Banyabba to Yamba overpass. In effect, the project will include the modification of the Iluka road and the Pacific Hwy intersection by the construction of this four-lane overpass with north and southbound onramps and off-ramps to allow ingress and egress to the port precinct. The port precinct will include approximately 30 kilometres of line access and sidings and associated infrastructure such bridges and culverts associated with the Clarence River system and estuary backwater crossings.

#### **Banyabba Rail Junction**

The inland rail junction between Port Yamba and northern divisions of the Western Rail Access corridor, Banyabba Junction will comprise of passing loops, sidings, crossings, maintenance and marshalling yards. ARTC's Advanced Train Management System ("ATMS") would be the logical control system for the entire network.

#### Koolkhan to Banyabba Track Alignment

Early consideration has been given to avoiding total convergence with the existing main north south line between Koolkhan Junction and Banyabba due to the sections single track arrangement.

To eliminate any form of line congestion YPR rail engineers and environmental consultants are currently researching alternative track alignments. Two possible options have been identified and put forth for further planning and final consideration.

**Option** (1) – is for the western line to converge with the main north south line at Koolkhan then track north to Banyabba via the development of a second track in parallel to the existing track.

**Option** (2) – is to construct a new track alignment to the west of Summerland Way and pass over the main north south line at Banyabba via an overpass.

The second of these options would be best suited so as to ensure uninterrupted scheduling of above-line train operations and service integrity.

#### **Railway Alignment Design Standards**

Throughout the entire design stage, ARTC standards have been used and applied were practicable.

Development of design standards for the Pacific West rail corridor assumed that different levels of work would be required, and different standards would be followed to suit the geographic terrain and landscape and/or the condition of existing infrastructure. In the case of the undeveloped alignments, design standards were adopted to suit the physical terrain, minimum grades and radius curves in order to maintain an acceptable level of speed through mountainous regions.

#### **Grafton Rail Bypass**

#### Koolkhan Junction to Chambigne Junction

This section of the Pacific West rail route extends from Koolkhan Junction to Chambigne Junction allowing for the necessary deviation around Grafton City. The deviation will comprise of 12 kilometres of new track and the construction of a new Clarence River rail bridge at Koolkhan.

#### Western Rail Access Route

#### Chambigne Junction to Moree via Glen Innes and Inverell.

The Western Rail Access Route between Banyabba Junction and Moree will require the use of approximately 55,000 hectares of semi-rural, forestry and non-prime agricultural land with virtually no prime agricultural lands required for the project.

Informal discussions with the then Forests NSW, (now the Forestry Corporation of NSW) indicated that with appropriate agreements in place, any use of State forestry lands along the preferred route should present no significant impediments to the project. Further discussions are to be scheduled when project is instigated.

#### **Corridor: Land Use and Acquisition.**

An initial costing for property acquisition and related agreements where necessary between Banyabba and Moree is in the vicinity of Aud\$165 million dollars. However, given that some of the route passes through, or will impact on some sections of Crown Land and State Forests, it may be necessary to enter into leasehold arrangements. The majority of the land to be acquired is freehold land that has a current market value between \$2,000 - \$3,000 per hectare.

The lands targeted for acquisition are currently a mixture of agricultural enterprises. It is important to appreciate that the agricultural functions of these lands will still be available during and following the project development and therefore it is reasonable to conclude that values will considerably increase as the project unfolds.

Opportunities to value-add to the land portfolio through various agribusiness initiatives have also been considered as strategies to offset and potentially profit from the initial acquisition cost.



Diagram 2. Rail line for passenger and goods



Diagram 3. Indicative Transit Time from Regional Based Railheads and Port Yamba



Diagram 4. Indicative economic growth areas resulting from the proposed expansion of North Eastern NSW freight rail corridors



Diagram 5. Indicative economic growth areas resulting from the proposed expansion of NSW freight rail corridors for Northern Inland



Diagram 6. Indicative economic growth areas resulting from the proposed expansion of NSW freight rail corridors for South Western NSW

#### **Melbourne Brisbane Inland Rail Development**

This submission supports the development and implementation of a national transport freight logistics network plan and commends the Australian Government's recent determination to develop the Melbourne - Brisbane inland rail route. The A.I.D. infrastructure development represents a vital synergy of transport logistics that makes possible the integration

of coastal transport linkages with the inland rail network. The materialisation of both projects will provide capacity to develop new industries across wider regions of NSW, Qld and Victoria. The potential to build multi-modal freight hubs, storage facilities and warehouse distribution centres along the length of the rail network will provide a much-needed surge in employment opportunities and resultant flow-on effects across the communities.

Better efficiencies of scale coupled with reduced lead-in times to national and global markets will result in greater market-share and increased bottom-line profit margins for regional industries.

The NSW State Infrastructure Strategy has identified that the freight costs to access existing major NSW seaports are the most expensive of any on the eastern seaboard. This has flow-on effects for regional NSW, Qld and Victoria both in accessing markets and inputs.

With increasing global demand for resources, existing inland road and rail infrastructure will be unable to cope. A national rail link built to future standards with timely unconstrained access to Port Yamba will assist in reducing this disadvantage and provide regional Australian producers with cost and timely access to national and global markets and capitalise on opportunities presented by new and emerging markets.

Regional Councils and local industry groups located within and bordering the A.I.D and inland rail development zone remain strongly supportive of a seamless integrated port and rail network and view the overall development as a catalyst for increased private sector investment in regional Australia.

A fully integrated structure of the like presented above provides a "once in a generation opportunity" to place the best interests of Australia's economy over vested interests that only serve to drive profits at the expense of the national economy.

#### SW Regional Country Railway Network Linking Rural & Urban NSW Economies.

NSW has the highest regional population and largest and most diversified regional economy of any State. Regional NSW supports world-class primary industries as well as important manufacturing and tourism enterprises. More than a third of NSW citizens live and work in regional NSW with some twenty-five percent (25%) of Gross State Product (GSP) produced across the regions.

The nature of the transport task to and from rural regions to both NSW airports and seaports logically suggests that rail should be seen as the principal means of conveying bulk mineral and agricultural products. However, the contraction of the NSW rail network over the last 50 years has resulted in an over-reliance on road transport and the increased use of High Productivity Vehicles, up to and including the potential use of B-triple trucks, on selected routes. Greater use of High Productivity Vehicles significantly increases road maintenance costs and is a safety concern for road users.

If this trend continues, governments of all persuasions must resign themselves to constantly increasing road maintenance budgets. A return to rail transport on lines where a positive business model can be established should be encouraged. A revitalised rail network would not only provide unprecedented economic benefits for rural NSW but also provide returns to the state government from currently disused assets.

The re-activation of currently disused rail lines, as summarised in this submission, we believe. deserve immediate consideration. The reopening, regeneration and expansion of the NSW regional country rail network in conjunction with the Inland Rail, Western Sydney Infrastructure Plan and the Badgerys Creek Airport development will not only represent an unprecedented scale of economic activity, but also provide the catalyst for sustainable decentralisation.

The combination of this significant high-end value infrastructure proposal demands a revisiting of the existing strategic framework for both the city of Sydney and greater areas of NSW.

The proposed Lithgow to Western Sydney Rail Freight corridor represents a key component in linking this chain of developments.

The project will entail the construction of a new 127-kilometre rail link between Lithgow and Western Sydney. Connecting with the NSW country rail network at Lithgow, the proposed line would track to the east via Hartley Valley, Mt. Tomah, Bilpin, Mountain Lagoon, Colo, Wilberforce and Windsor on through St Marys to termination at the planned Badgerys Creek Airport site, Western Sydney.

There are substantial but not insurmountable environmental constraints when developments potentially impact on world heritage and national park estates. Using world-best-practice engineering and environmental management strategies we are confident that the project will have no significant impact on any environmentally sensitive areas.

A comprehensive set of environmental and engineering studies and investigations will be undertaken by Eco Logical Australia and associated entities.

Preliminary mapping and development costs have been completed.

		R	AIL vs MULT	IPLE	PORTS O	F CALL		
Graph 1 – break	down <mark>of op</mark> e	erational h	nours associated	d with	a vessel calli	ng multiple ports	s of call	
PORT					VOYAGE D	URATION	IN-PORT	
BRISBANE		BRISBANE					24 HOURS	
BRISBANE		SYDNEY			48 HC	URS	24 HOURS	
SYDNEY		MELBOUR	RNE	48 HOURS		12 HOURS		
		Total operational hours involved in Multiple Ports of Call		156 hours				
PORT VOAGE DURATION			CONTAINERS		IN-PORT			
РОПТ УАМВА НИВ			4000		40HRS			
PORT OF ORIGIN	DESTINATIO	ON PORT	SEA MODE TRANSPORTATI	ON	PORT OF ORIGIN	DESTINATION	RAIL TRANSIT TIME	TIME SAVING
PORT BRISBANE	SYDN	SYDNEY 96 HOURS			YAMBA	SYDNEY	52 HOURS	44 HOURS
PORT BOTANY	MELBO	LBOURNE 156 HOURS		YAMBA MELBOURNE		55 HOURS	101 HOURS	

Graph 1. Operational hour breakdown of multiple port vessels

The above graph 1 shows the significant difference between rail transit times to destination compared to the existing method of multiple ports of call.

#### **Climate Change**

Climate change is also emerging as a key challenge for the freight logistics sector.

As climate change gathers momentum, the responses of government, the market and the elements will all converge to fundamentally reshape the operating environment of Australia's national logistics chain.

The key challenge is to plan solutions that can readily adapt and assist to lower pollution emissions within the freight logistics sector. With freight emissions now contributing to some four percent (4%) of Australia's national emissions total and with forecasts predicting freight emissions to more than treble to 13.5% by 2020, it is imperative that we act immediately and in a decisive manner to arrest the situation.

#### MODELLING AND SIMULATION SUPPORT

As requested by the Department of Transport and Ports in our 2014 presentation, we were requested to obtain independent modelling and simulation of proposed A.I.D. projects. The University of Western Sydney – Operations and Supply Chain team is currently undertaking this task.

Dr Prem Samaranayake Senior Lecturer School of Business University of Western Sydney Locked Bag 1797 Penrith NSW 2751 Australia Tel: +61 2 96859457 Fax: +61 2 96859598 http://uws.edu.au/staff\_profiles/uws\_profiles/doctor\_premaratne\_samaranayake

#### **Employment Growth**

It is envisaged that the portfolio of core and interrelated projects together with other ancillary investments that will be attracted to the development will assist to strengthen Federal and State Government policies aimed at expanding regional employment-based economic growth.

It is envisaged that in excess of 500,000 employment opportunities both directly and indirectly will be generated during the construction phase of the listed core projects.

The proposed portfolio of A.I.D. infrastructure developments come at a time when reports issued by the Bureau of Infrastructure, Transport and Regional Economics ("BITRE"), Infrastructure Australia ("IA") and Engineers Australia reveal an infrastructure deficit in excess of AUD \$470 billion.

#### Unemployment Rises to 9.7% in December - Under-employment at record high

January 04, 2016

Finding No. 6622

Topic: Unemployment Press Release

Country: Australia

This Roy Morgan survey on Australia's unemployment and 'under-employed'\* is based on weekly face-to-face interviews of 463,173 Australians aged 14 and over between January 2007 – December 2015 and includes 3,125 face-to-face interviews in December 2015.

Now 2.69 million Australians (20.7% of the workforce) are unemployed or under-employed in December as students hit the jobs market. A record 13,007,000 Australians are in the workforce (up 106,000 since December 2014) and 11,751,000 Australians are employed (up a large 252,000 since December 2014).

Currently 7,387,000 Australians are employed full-time – down 178,000 since December 2014.

However, a record 4,364,000 Australians are employed part-time (up a large 430,000 since December 2014); of concern is the record 1,434,000 Australians under-employed – working part-time and looking for more hours or a full-time job: 11% of the workforce – up 188,000 (or 1.3%) since December 2014.

As school-leavers seek jobs unemployment has increased for the third straight month to 1,256,000 Australians: 9.7% of the workforce - down 146,000 since December 2014 with the unemployment rate down 1.2%.

Currently a record 2,690,000 Australians are unemployed or under-employed: 20.7% of the workforce – up 42,000 (up 0.1%) since December 2014.

This month's increase from 9.2% to 9.7% means the latest Roy Morgan unemployment estimate is now 3.9% higher than the figure currently quoted by ABS for November 2015 (5.8%).

The portfolio of seamless integrated infrastructure and interrelated developments will assist to guide Australia through the intricacies associated with the requirements of the national transport freight task.

They represent a broader and deeper vision at a time of critical need. The portfolio of *key* NSW centred infrastructure projects is designed to underpin productivity growth and greater efficiencies in the handling and movement of import/export and domestic orientated cargoes.

The scale and complexity of the overall development necessitates its organisation into a number of stand-alone and interrelated developments. These stand-alone projects will be coordinated to ensure that they are undertaken simultaneously to meet time critical requirements of the entire development. The projects individually and collectively-particularly working in synergy-will positively contribute towards cementing the foundation for long-term sustainable socio-economic growth within this century and beyond.

## **NSW - OPEN FOR BUSINESS**

#### Extract from the NSW 2021 Decentralisation Plan -

The Decade of Decentralisation is the NSW Government's overarching policy to <u>ensure that regional NSW plays an</u> <u>even greater role in the future of the State.</u>

The contribution of regional NSW to the prosperity of the State is vital.

Moreover, there is considerable potential for regional economies to grow, diversify and become even more productive. Recognition of this potential underpins the NSW Governments Decade of Decentralisation agenda.

Unlocking this potential is a joint challenge for Government, regional business and communities.

The NSW Government's 'whole of State' development approach is presented in NSW 2021, the strategic plan for NSW. The NSW 2021 Plan commits Government to working toward steady and strategic growth in regions through a focus on regional infrastructure and job creation. It also commits the Government to supporting balanced population growth across the State, invigorating regional economies and relieving congestion pressures within Sydney by increasing the population of regional NSW.

The portfolio of infrastructure projects we believe will strengthen each of the stated objectives featured in the NSW 2021 Plan.

Proposed A.I.D. Infrastructure Primary LGA Employment & Economic Growth Development Areas

Northern NSW Coastal Districts: Tweed Heads, Ballina, Byron, Richmond Valley, Lismore, Casino, Kyogle, Clarence Valley, Coffs Harbour.

**NSW New England Districts:** Glen Innes, Inverell, Armidale Dumaresq, Gwydir, Tamworth and Tenterfield

Liverpool Plains: Werris Creek, Quirindi and Murrurundi and Gunnedah and Boggabri

NSW Upper Central West Districts: Binnaway, Merrygoen, Gulgong and Collarenebri

**Central Western Districts:** Gulgong, Mudgee, Lithgow, Dunedoo, Dubbo, Narromine, Parkes, Forbes, West Wyalong and Condobolin.

Blue Mountain Districts: Hartley, Bell and Bilpin.

Western Sydney.

Northern NSW Western Districts: Narrabri, Moree, Warialda, North Star and Boggabilla

Murray/Riverina Districts: Wagga Wagga, Griffith, Leeton, Narrandera and Shepparton

Queensland: Goondiwindi, Yelarbon, Inglewood, Warwick, Toowoomba, Lockyer Valley, Granite Belt and Scenic Rim Districts

Diagram 8. Proposed growth development areas

#### Letters of support are attached in the appendices

- Clarence Valley Council
- Kevin Hogan Nationals Candidate for Page
- Queensland Bauxite Ltd
- Regional Development Australia Northern Inland (RDANI)
- National Farmers Federation
- Moree Plains Shire Council
- Shenzhen Port Authority (China)
- New City Group Ltd (China)
- Inverell Shire Council
- Glen Innes Severn Council
- Armidale Dumaresq Council
- Tamworth Regional Council
- Gwydir Shire Council
- National Farmers Federation (NFF)
- Senator the Hon. David Johnston (Shadow Min for Defence)

#### **Population Growth**

The below listed Councils have identified an adequate capacity and/or surplus of available infrastructure to accommodate future population growth within their LGA's (Tweed Heads, Clarence Valley Council, Lismore Shire Council, Richmond Valley Council, Coffs Harbour City Council and Kyogle Council. The chart provides current population numbers in each of the listed LGA's together with projections for a minimum number of new dwellings and estimated construction costs.

Region	Current Population as of 2012	Indicative Population Growth to 2035	Indicative Population at 2035	Additional Residential Dwellings	Average Construction Cost Per Unit Aud\$200,000
Tweed Shire	114,000	36,000	150,000	15,652	\$3,130,400,000
Richmond Valley	41,943	15,000	56,943	6,552	\$1,310,400,000
Clarence Valley	56,000	20,000	76,000	8,696	\$1,739,200,000
Ballina Shire	60,000	20,000	80,000	8,696	\$1,739,200,000
Lismore Shire	46,884	14,000	60,884	6,087	\$1,217,400,000
Byron Shire	29,709	10,000	39,709	4,348	\$869,600,000
Kyogle Shire	2,553	8,000	10,553	3,478	\$619,600,000
Coffs Harbour	71,667	25,000	96,667	10,870	\$2,174,000,000
. ~	422,756	148,000	570,756	107,272	\$12,799,800,000

Diagram 9. Population growth potential

#### Note: Computations: 2.3 people per household / Build cost \$200,000

#### **Pacific Trade Coast**

The wider Northern Rivers region is poised to experience the highest level of regional growth in NSW.

The expansion of Port Yamba and its associated rail and hub infrastructure is expected to encourage significant industrial and other commercial investments in all major centres. The expected increases in population growth due to intra and interstate as well as international migration will fuel major investments throughout the regional economy to meet essential services demands.

North NSW Coastal Region Development Zone	Potential Industrial Development Opportunities	Indicative Development Timeframe
Tweed Heads	Light Industrial Manufacturing Commercial & Service Industries	2018 - 2025
Murwillumbah	Heavy / Light Industrial Commercial & Service Industries	2018 - 2025
Ballina	Heavy / Light Industrial Commercial & Service Industries	2018 - 2025
Lismore	Heavy / Light Industrial Commercial & Service Industries	2018 - 2025
Casino	Heavy / Light Industrial Commercial & Service Industries	2018 - 2025
Kyogle	Heavy / Light Industrial Commercial & Service Industries	2018 - 2025
Yamba	Port Development Heavy / Light Industrial Commercial & Service Industries	2018 - 2025
Grafton	Heavy / Light Industrial Commercial & Service Industries	2018 - 2025
Coffs Harbour	Heavy / Light Industrial Commercial & Service Industries	2018 - 2025

Diagram 10. Industrial growth potential

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A significant aspect of the A.I.D. north coast regional development proposal includes the reopening and reconstruction of the Casino to Murwillumbah regional rail. The reconstruction will include expansion to dual track function with capacity for both passenger and freight services. It will also include a branch line to Ballina and the reopening of stations along the route to facilitate regional growth plans.

A possible extension to Coolangatta airport is technically feasible in order to allow services to the Gold Coast and beyond to Brisbane. A rail connection between south eastern Qld and the Northern Rivers region of NSW has been a long-held vision of both business and the general community. Its absence as well as the retrograde closure of the Casino to Murwillumbah service has severely limited economic growth in the entire Northern Rivers region.

Diagram 12. Northern River and SE QLD rail alignment proposal



The advent of the Port Yamba development represents the catalyst for heightened regional socio-economic growth. Major beneficiaries of the A.I.D. infrastructure proposal will be the Northern Rivers region and south-eastern Qld through the inclusion of strategic passenger and freight rail service.

#### Moree - Great North-West Freight Hub

Located on the junction point of the planned inland rail and the proposed east west rail corridors, Moree is set to become a nationally renowned place for transport and logistics based enterprises servicing economic centres Australia wide.

Already a recognised transport hub with immediate connections to the Newell, Gwydir and Carnarvon Highways, these multi-combination heavy vehicle freight routes provide a high standard of road access between neighbouring LGA's and major city centres in addition to allowing large volumes of produce from grain receivers and cotton gins located in the Moree Plains Shire and neighbouring local government areas.

Converging at Moree, the aforementioned highway routes would provide expedient access to proposed rail network. The inland rail in conjunction with the proposed development of an east west high-speed double stack rail corridor between Moree and Port Yamba would provide regional-based industries and rural production centres the opportunity to gain cost efficient, reliable and unconstrained access to eastern seaboard export gateways for on-shipment to Global markets.

Additionally, the consequential economic development along each of the intended rail routes will be, to say the least, considerable.

The combined nature of the proposed developments would provide the catalyst for:

- Unlocking the productive potential of north western NSW rural regions;
- Sustained employment and economic growth throughout the wider rural regions of south eastern Australia;
- Improvements to social infrastructure and amenities;
- Sustained decentralisation



Diagram 13. Moree Development Area

#### Appendices provided in hard copies

#### **Ancillary Joint Venture Projects:**

- Nation Building Australia (Trans Regional Amalgamated Infrastructure Network)

#### Joint Venture Documentation:

- Asia Capital Resources Development Ltd

#### **Letters of Support:**

- NSW Regional Councils
- National Farmers (NFF)
- Australian Government Ministerial
- Regional Development Australia (RDANI)
  - Queensland Bauxite (End User Expression of Interest)
  - Letter from Premier & Cabinet
- Response Letter to: NSW Premier & Cabinet: Unsolicited Proposal
- Preliminary Rail Network Development Costs
- Heads of Agreement: (A.I.D. & Cronus Resources Group Ltd)
- Eco Logical Australia
- Shenzhen Port (Proposed Sister Ship Port Alliance Letter)
- New City Development Group Limited (China) Letter of Intent