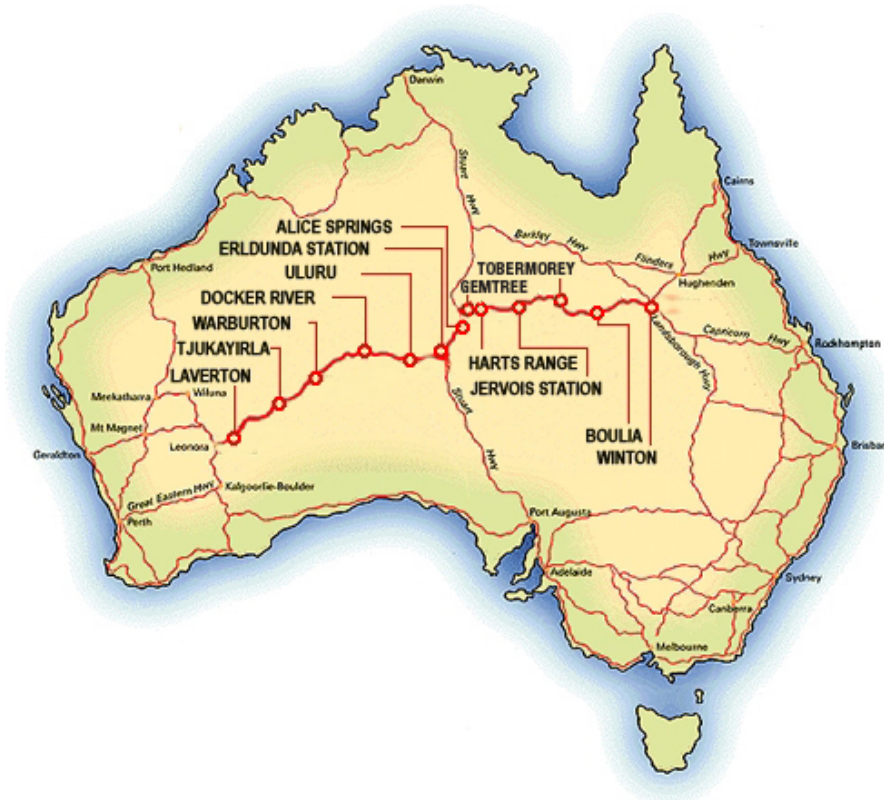


# Joint Select Committee on Northern Australia Development- Inquiry

## Outback Way Submission



OUTBACK WAY = OPENS NORTHERN  
AUSTRALIA  
& CLOSSES THE GAP

## A Summary

The Outback Way is included in the Coalition's Northern Australia Policy which is highlighting a significant vision for Australia's future. The Outback Way project is not just a road- keeping it open for business addresses some critical policy areas - productivity for a consolidating mining/freight sector, diversifies market access for the cattle industry, indigenous access & equity, and a new adventure self-drive tourism route. With the \$66million being spent on the Outback Way from 2014-15- 2016/17, for both upgrading and sealing there will be significant improvements in all sectors throughout, feeding into the development of Northern Australia.

## MINING

The reduced distance between WA & Qld due to the Outback Way will facilitate: Inter linkages between the nation's two largest mining areas in Queensland and in Western Australia, accounting for over 73% of Australia's output, saving companies \$1million/ shift for emergency equipment replacement and \$16,000/mining movement one way. Further infrastructure development is being worked on for West Musgrave mining interests and Metals Ex Wingellina project, as they look to start production - which will add value to the Adelaide to Darwin railway- increasing mining exports out of Darwin.

## CATTLE INDUSTRY

The Outback Way is a critical route for road trains- last year we saw significant cattle movements along the Plenty Highway and Donohue Highway into Qld due to dry conditions and producers adjusting to a decline in live export. This month cattle movements are going back into the territory. With the Outback Way upgrades and sealed, WA markets would be a viable alternative, diversifying access to markets and agistment for central Australian producers and also enable live exporting to go out of Alice Springs through to Darwin from both WA & Qld.

## CLOSING THE GAP FOR INDIGENOUS COMMUNITIES

The Outback Way winds through the land for 13 indigenous communities, it is the service road for 39 communities in the surrounding lands and 7 rural and remote shires. The upgraded Outback Way will enable the delivery of essential fresh food replacing the processed and frozen food which will increase health outcomes amongst the communities. Reliable access to communities will improve education and health services enabling continuity of service delivery which will enable longer term relationships between provider and clients, creating trust and a change in lifestyle choices- making a real difference on the ground- closing the gap.

## INDIGENOUS TRAINING INITIATIVES

The Outback Way project will be initiating (RJCP) Remote jobs and communities programme Or link in with the Indigenous employment programme for both the road development and tourism projects along the route.

- Indigenous Training College at Yulara

The Outback Way is working with the ILC and the ITC to provide tourism collateral information, tourism projects for students and potential business opportunities along the Outback Way.

## TOURISM

An upgraded Outback Way will see traveller numbers quadruple through Outback Qld, Central Australia and Australia's Golden Outback in WA. The upgrade of the Outback Way will quadruple tourism numbers.

It is an adventure route of note and offers an extraordinary experience with the World's longest geocache trail – or treasure hunt! It enables tourists to ZIG ZAG the nation for the first time.

## **DEFENCE**

The Outback Way links all over the horizon radars from WA to Qld, Pine Gap in the NT and the road/rail links to the rail hubs at Kalgoorlie, Alice Springs and Winton for mobilisation and distribution of equipment, personnel and supplies, across Australia.

**COST BENEFIT:** The combined cost benefit analysis of the route is \$4.80. Having the Outback Way as part of the development of Northern Australia makes continuity of freight deliveries and services possible, improving business potential, industry efficiencies, tourism opportunities, and quality of life for the people who live in these regional and remote communities.

## **Responses to the Terms of Reference**

- **Examine the potential for development of the region's mineral, energy, agricultural, tourism, defence and other industries;**
- **MINING**

### **PROSPECTIVE NEW MINING DEVELOPMENTS**

The Central and Western Desert areas of Australia have been under explored and under developed for mining in the past. A great deal of exploration has been taking place in recent years revealing very substantial mineral resources in the vicinity of the Western Arm and in the area along the Plenty Highway in the Northern Territory. Mineral exploration along most sections of the Outback Way to be upgraded has been intense in recent years.

### **Western Australia**

#### **Nickel & Other Minerals**

Exploration in recent years has seen the whole Musgrave Ranges area from Warburton across through Wingellina into South Australia emerge as a major prospect for mine development, especially of nickel. The major prospective mines in the area are as follows.

#### ***Nickel – Musgrave Ranges***

West Musgrave (Nebo Babel deposit) (BHP) – 120 km east of Warburton near Jamieson community.

Wingellina/Claude Hills deposits (Metals X) – 240 km east of Warburton (Claude Hills across the border in South Australia). Derry Hills and Mt Woodroffe (Musgrave Minerals) – further east in South Australia.

**MetalsX** Nickel & Cobalt project is situated on the NT, WA & SA borders, south of the Outback Way it has completed its Phase 1 Feasibility Study (+/- 25%) which defined a robust project with a minimum 40 year mine life at an average annual production rate of 40,000 tonnes of nickel and 3,000 tonnes of cobalt. The Feasibility Study assumed a nickel price of US\$20,000 per tonne nickel, US\$40,000 per tonne cobalt and an A\$/US\$ exchange rate of 0.85, resulting in an estimated NPV(8%) of \$3.4 Billion at a production cost of US\$3.34/lb after cobalt credits.

A landmark mining agreement for the Wingellina project was signed on 15 July 2010 with the Traditional Owners of the Yarnangu Ngaanyatjarra Lands through their representative bodies. The agreement provides the right to mine and develop infrastructure within the agreement area subject to regulatory approvals and for the grant of a mining lease

In September 2012 Metals X signed a memorandum of understanding with Samsung C&T Corporation which will see the parties collaborate to complete an updated Detailed Feasibility Study (DFS) and move the Wingellina Nickel-Cobalt project into production. Samsung C&T will provide its technical expertise in engineering, feasibility studies and construction to assist Metals X in completing the study.

Metals X is now looking at the road link to load onto the Adelaide Darwin railway and export out of Darwin. Traffic movements are anticipated at 15 triples per day carrying 400 000 mt sulphur prill to the mine and backloading 200 000 mt of nickel concentrate from the mine (in 1 mt bulka bags in containers). The supply of sulphur prill has been one of the high risk components of the project. However, one possibility would be to work with the owners of the Nebo Babel deposit which is nickel sulphide to extract sulphur to process Wingellina's nickel laterites..

The 'fly-in/fly-out' workforce of 500 will fly to an airstrip at Wingellina. The construction phase of the mine would employ a workforce up to 1500 over 2 years.

Obviously, there would be substantial opportunities for employment at excellent wages among local Aboriginal community residents. Higher income among the existing community and additional workforce in the area would substantially increase the flow of vehicles along the Outback Way route including residents' and workers' vehicles but also of vehicles providing community support.

The project involves a large element of road haulage - approximately 600 km of road haulage (one way) and about 11.0 - 17.5 million road train kilometres a year. A saving of 0.30 cents per vehicle km from upgrading to all-weather gravel km and a speed difference of 70 - 90 km per hour would result in annual savings, at 25 - 40 road trains a day, of \$6.6m - \$10.5m pa. for vehicles carrying concentrates alone

#### *Other - Warburton/Musgrave Ranges Area*

Handpump (gold) (Beadell Resources) - 75 km east of Warburton.

Skirmish Hill (nickel, platinum, copper, gold).

Old Warburton Historic Copper Mining Area (Rubican Resources).

Tollu (copper, nickel) (Redstone Resources) - south of Wingellina.

The prospective development of this major prospective mineral field area has major potential ramifications for the development of the Western Arm of the Outback Highway.

## West Musgrave Nickel Project

BHP's (formerly WMC's) West Musgrave Nickel project (Nebo Babel deposit) is located on Aboriginal lands 120 km east of Warburton in the vicinity of the Jamieson community (see **Map 13**). The West Musgrave complex is widely regarded as a highly prospective "Greenfields" province for nickel sulphide and base metal mineralisation. Massive nickel/copper sulphides have been identified. The deposit is regarded as one of the largest nickel sulphide deposits in Australia. The deposits could form part of the future strategy of BHP Billiton's Nickel West. Nickel West is the world's third largest producer of nickel-in-concentrate with all operations including mining, smelting and refining based in Western Australia. Nickel West uses the port of Esperance to import reagents and export products.

Based on 2003 latest information available, if mining proceeds, it is likely to involve:-

- A 25 year mine life.
- Mining of 10- 15 million tonnes of ore per annum.
- Onsite concentration.
- Shipment of 450,000 to 700,000 tonnes of concentrate a year via the Outback Way east of Warburton to railhead at Malcolm, west of Laverton, and by rail to Kalgoorlie Nickel Smelter.
- Final output 25- 40,000 tonnes of nickel metal and 25 - 40,000 tonnes of copper metal with approximate current value (Dec 2009) of about AUD \$537m (Ni) and \$218m (Cu), Total AUD \$755m.

Transport impact from mining operations is forecast to increase heavy traffic by :-

- 25- 40 road trains carrying concentrates a day.
- Other heavy support vehicles a day.
- Light vehicles.

Estimated movements are 90 heavy and 10 light vehicles a day.

Employment generated is estimated at 500 mine jobs and 2,000 additional jobs. The construction period would require more jobs.

Obviously, there would be substantial opportunities for employment at excellent wages among local Aboriginal community residents. Higher income among the existing community and additional workforce in the area would substantially increase the flow of vehicles along the Outback Way route including residents' and workers' vehicles but also of vehicles providing community support.

Clearly, movements on this scale would justify the upgrading of the Laverton - Warburton section of the road. The project involves a large element of road haulage - approximately 600 km of road haulage (one way) and about 11.0 - 17.5 million road train kilometres a year. A saving of 0.30 cents per vehicle km from upgrading to all-weather gravel km and a speed difference of 70 - 90 km per hour would result in annual savings, at 25 - 40 road trains a day, of \$6.6m - \$10.5m pa. for vehicles carrying concentrates alone. Thus, road transport costs are likely to be a significant cost element in the project and decisions about whether the Outback Way is upgraded to all-weather gravel or not could have an impact on decisions about whether the project would go ahead.

## Musgrave Minerals

Musgrave Minerals was formed through agreements between a number of companies to create the largest exploration land holding in the Musgrave Range area.

Musgrave Minerals have two potential nickel deposits east of Wingellina, all in South Australia on Aboriginal freehold (APY) lands at Derry Hills and Mt Woodroffe.

In addition, they have the Moorilyanna copper prospect off the highway between Kulgera and Maila in South Australia.

Current status of the projects has not been ascertained in full. However, proximity to the Adelaide - Darwin rail would almost certainly see outward transport of output and inward transport of inputs via roads, probably from Chandler or Kulgera Sidings.

## Other – Warburton Area

### ***Redstone Resources Limited***

Redstone Resources is concentrating its exploration in two regions, the Musgrave Block in Central Australia and the Amazon Craton in South America. Redstone Resources holds an exploration portfolio of 9 exploration licences in the Western Musgrave Region of Australia covering an area of 2,200km<sup>2</sup>.

Six of the exploration licences comprise the Baggaley Hills Farm In Joint Venture which is an exploration joint venture for nickel, copper, platinum group elements & iron oxide copper gold with HJH Nominees Pty Ltd. A further two exploration licences are part of the Blackstone Range Farm In Joint Venture with Resource Mining Corporation for copper, nickel, platinum group elements and gold. The remaining exploration licence is wholly owned and operated by Redstone and comprises the Tollu Copper Nickel Project.

All three projects are located south of the area between Jamieson, Blackstone and Wingellina communities.

### ***Beadell Resources Limited***

Beadell Resources is a gold development company. Its primary asset is the Tucano gold project, located in Brazil.

Beadell also has an extensive portfolio of key gold exploration tenements throughout Australia and Brazil, including the prospective Tropicana East Project located 350 km north-east of Kalgoorlie and the West Mulgrave Project located 75 km east of Warburton. The West Musgrave Project includes the Handpump prospect and in December 2009 Beadell heralded the discovery of a potential new gold province at Handpump intersecting significant gold mineralisation.

The other prospect for the West Musgrave Project is Skirmish Hill. An Option and Joint Venture Agreement has been entered into with Anglo American. Anglo American can elect to exercise the Option and earn an initial 51% equity in the project by the expenditure of \$1 million within 3 years and earn an additional 24% by the additional expenditure of \$2 million in an additional 4 year period.

The Skirmish Hill project covers an area of 560 km<sup>2</sup> and is considered highly prospective for nickel sulphide, platinum group elements, and copper-gold mineralisation.

Anglo American is planning an extensive geophysical survey in the form of a regional airborne electromagnetic (EM) survey using the highly successful proprietary "Spectrem" EM system. This will be the first time the Spectrem EM system has been flown in Australia. The survey is planned to cover most of the Skirmish Hill tenure in search of geophysical anomalies that may represent metal sulphide bodies.

### ***Strzelecki Metals Limited & Tortuga Advisors Limited Joint Venture***

Strzelecki Metals' West Mulgrave Project comprises of eight exploration licenses covering over 600 km<sup>2</sup> with another 300 km<sup>2</sup> under application.

The West Mulgrave Joint Venture is with Tortuga Advisors Ltd, an unlisted Victoria company, and is over traditional land covered by the Ngaanyatjarraku Land Council. Tortuga can earn an 80 percent interest in the tenements by spending \$4 million on exploration within 5 years. Tortuga has already earned a 15 percent interest and is the manager of the joint venture.

The tenements are prospective for gold, copper, nickel, platinum group elements and uranium.

### ***Rubicon Resources Limited***

Rubicon has title to approximately 1 050 km<sup>2</sup> of exploration licences adjacent and to the east of the Warburton Township and incorporating the historic Warburton copper mining areas. In the September 2011 quarter Rubicon entered into a joint venture with Traka Resources Limited on the Caesar Hill prospect. The Caesar Hill prospect is contiguous with tenure currently being explored by Traka Resources. The tenement is prospective for vanadium, titanium, gold, platinum and palladium.

### ***Traka Resources & Cazaly Resources***

Traka Resources & Cazaly Resources are carrying out exploration for copper, nickel and other metals around the BHP Nebo Babel prospects.

### ***Other Companies Active in the Warburton Area***

Other companies exploring in the area include Tyson Resources, Loded, Troy Resources, Holocene, Hinkley Range, Galaxy Resources, Polaris Metals,

The Outback Way will be a critical route for servicing these mining developments in the future.

## **CURRENT MINING -**

### **Northern Territory**

#### **Petroleum**

Central Petroleum has discovered oil at Kintore close to the Western Australia border, west of the Mereeni Field and is producing 380 barrels a day from its Surprise 1 Well. Although this is well north of the Outback Highway and will be serviced by other roads, the company has exploration tenements right down to the Outback Highway area and discoveries in that area are likely.

#### **Potash**

Rum Jungle resources has an active exploration program for potash in the Karinga Lakes area between Eildunda and Curtin Springs along the sealed section of the Lasseter Highway. Australia's potash needs of \$173m a year are currently imported.

### **Northern Territory – Uranium**

As in Western Australia, the exploration and prospects of developing uranium deposits has waned following Japan's tsunami and the effects on the Fukushima nuclear power station.

Companies had been active at Bigrlyi Napperby and Orazek deposits west of Alice Springs, the Angela and Pamela prospects near Alice Springs, the Amadeus Basin south of Alice Springs, and deposits in the Harts Range area.

Interest has tended to switch to phosphates that tend to occur in the same areas.

However, a return to interest in uranium in the future could see these prospects considered for development.

#### **Garnet Sands**

Olympia Resources Harts Range Garnet Project is located on the Plenty Highway approximately 140 km from the junction with the Stuart Highway (including 20km of unsealed road).

There have been two areas proposed for mining of garnet sands, Harts Range about 20km along the unsealed section and Spinifex Bore to the north east.

Australian Abrasive Minerals Ltd are proposing to open a mine at the Spinifex Bore location with a small workforce of 16 – 20 during 2012 involving open cut strip mining and onsite processing with product trucked to Alice Springs for rail to either Darwin or Adelaide. Mine life 25 years, resource 800,000 tonnes. Quantities are projected to start at 40,000 tonnes per annum and ramp up over a 5 to 10-year period to 100,00 per annum, ie. generating about 4 triple movements a day up to 9 over a 25-year mine life.

It is possible that of the order of 0.5 movements a day may develop eastward across the Eastern Arm if it was sealed.

Earlier proposals in relation to Harts Range envisaged production of 60,000 tonnes per annum and about 3 truck movements a day to a loading point on the Adelaide/Darwin railway.

### **Molyhil Magnetite, Scheelite (Tungsten), Molybdenum**

Thor Mining's Molyhil project is currently updating the feasibility study on its molybdenum, scheelite (tungsten) and magnetite deposit. The Molyhil project is located 230km east of the junction with the Stuart Highway and 27km north of Jinka Station on the Plenty Highway (about 90km along the unsealed section). Mine life would be a minimum of 3.5 years extending to 10-15 years. It is anticipated that annual production will be molybdenum (889 mt), scheelite (1511 mt) and saleable magnetite (100,000 mt).

Approximately 20,000 tpa of magnetite was proposed to be shipped to Queensland via the Plenty Highway. Molybdenum and scheelite will be transported to Adelaide via the Plenty Highway and then either road or rail to Adelaide. The Hatches Creek deposit near the Molyhil project would be progressed once Molyhil is in production.

A construction workforce of 60 would be employed over a 6 month period. The permanent workforce of 45 would be a mixture of DIDO and FIFO to an airstrip on site.

Consumables for a 400 000 tpa processing plant and power station are likely to be sourced from Alice Springs and Adelaide.

The project would greatly increase traffic movements carrying inputs and workforce on the first 90km of the unsealed section and generate 2 traffic movements a day over the remaining 560km of the Eastern Arm. The project is not yet committed and has not been specifically brought to account. Northern Territory Mines Department puts the project in the 1 to 3 years time frame for a possible start.

### **Jervois/Tobermorey Area**

**Nickel, Copper – Hucketta** - Methril Resources have been evaluating deposits of nickel, cobalt, copper and gold south of the Plenty Highway at Hucketta Station. They recently entered into an agreement with the Chinese owned company MMG who operate the major Century Zinc mine in the Gulf of Carpentaria to accelerate exploration.

It is still in an exploratory phase but reports are positive that the deposits could be substantial

There is a substantial amount of exploration activity taking place along the Outback Way from the Harts Range area, east to the Queensland border.

This area has a history of mining in the form of the old Jervois Copper Mine.

Arafura Resources also has an iron and vanadium prospect at Jervois on the Plenty Highway.

Reward Minerals was exploring the Jervois Range north of the Plenty Highway for copper, silver, lead, zinc and gold.

AusQuest has been assessing its Plenty River copper, gold, nickel and diamond prospect.

### **Phosphates**

Increases in the price of phosphate rock and fertilizers has renewed exploration interest for phosphate throughout the Georgina Basin area of the Northern Territory and Queensland.

NuPower Resources has Lucy Creek (phosphate/uranium), Arganara (phosphate/uranium) and Aileron (uranium) projects. Lucy Creek has the potential for a credible phosphate project based on securing an orebody targeting 20-30 million tonnes of higher grade material. Lucy Creek is accessed via the Plenty Highway in the Jervois Station section. If developed, it would involve 1 quad per day going east over the Plenty Hwy.

Rox Resources have a major deposit of phosphates at Marqua Station south of the Plenty Hwy with a turnoff about 100km west of Tobermorey Station. Development of the deposits seem likely to follow those of the North Georgina Basin that are better placed in relation to infrastructure, eg. Wonara on the Barkly Hwy. Development would be at least 10 years away but could involve 500,000 tonnes a year moving east. Nearest rail is at Duchess. This volume would generate 46 triple movements per day over this section of the Eastern Arm.



Uramet Minerals is a company active in grass roots exploration of its Marqua prospect (south of the Plenty Highway). Marqua is also prospective for copper, lead and zinc.

Close and to the east of Marqua is Toko which is prospective for uranium. North of the Plenty Highway is Box Hole which is prospective for lead and zinc. Nearby Wilora is prospective for uranium and Mt Skinner for copper. Access to the tenements is of extreme importance, particularly along the Plenty-Donohue Highway which can be in a poor state of repair even in favourable weather conditions. It is possible that should a mine be developed product flow could be through Mt Isa.

## **Queensland**

### **Base Metals**

Considerable interest appears to be developing in the Boulia area in the possibility of discovering rich deposits of base metals below the land surface, such as have led to the development of the Olympic Dam mining operations in South Australia. Gravity surveying maps indicate that an extension of the Mt Isa Inlier (one of the richest base and precious metal formations in the world) lies underground in the area around Boulia. Most past exploration activity has been targeted on the exposed areas of the formation around Mt Isa/Cloncurry. Exploration is now targeting possible underground formations in the Boulia area, including areas along or close to the Outback Way. Possibility of a mine developing in this area could be put in the uncertain scenario.

### **Petroleum**

Petroleum Exploration permits and applications are held over the area along the Queensland border just to the south of the Outback Way. The possibility of activity occurring relating to the Outback Way seems very low.

### ***'Agglomeration' Efficiencies***

The mining industry is highly integrated and uses a great deal of specialist equipment, technology and skills. There are very strong cross linkages between the mining companies operating in Western Australia and Queensland and the potential of the Outback Way to result in substantial internal efficiencies in the industry. For instance, an examination of 157 copper, silver, lead, zinc, gold and coal mines (operating and under exploration/development) in Queensland listed in the Register of Australian Mining 2007/08, Snowden Group, Perth, indicated that almost 50% were administered from WA, a further 10% had some form of operation in WA and 40% had no apparent connection with WA. (See details, Appendix 5.)

**Map 15** shows location of mining in Australia illustrating the key potential of an Outback Highway inter-linkage. While interaction between the mines themselves is of relevance to the Outback Way, of at least equal importance is the structure and location of companies that service and supply mining operations. Mining depends on a wide variety of operations often supplied by specialist operators and independent firms :-

- Mining & Earthmoving contractors.
- Testing & Assaying firms.
- Consulting Geologists.
- Engineering firms.
- Electrical contractors.
- Mining Equipment supply & servicing firms.
- Transport contractors.
- Transport Equipment supply & servicing firms.
- Education, Training & Employment services.
- Chemical, Explosives & Other Input suppliers.
- Building Material supplies.
- Communication equipment & service supplies.
- Business services.
- Surveying.

Many of these operations are very highly specialised and can be part of Australia-wide and world-wide operations.

Inquiries in the industry indicated a range of linkages between Mt Isa and the Perth/Kalgoorlie area. These included :-

- Branches/Operations in both areas, head office elsewhere.
- Head Office/Ownership in the other area.
- Specialised functions in one area or another (eg. a major national company with head office in Melbourne and operations around both Mt Isa and Kalgoorlie has its HR/Training section in Perth).

A search of companies in Mt Isa listed in the yellow pages of the Telephone Directory under the headings of mining and quarrying equipment &/or supplies, mining contractors, mining companies and mineral exploration in 2003, indicated that 45% were also operating in WA. Some of those without operations in WA were selling brands of parts/equipment that were also available through other distributors in WA. It was also clear that for the industry in WA, NT and QLD, there are a number of key major servicing centres, including Perth, Brisbane, Kalgoorlie, Mt Isa, Townsville, Alice Springs, Mackay, Emerald and Rockhampton.

Inquiries in the industry, indicated substantial existing movements between QLD and WA that would be greatly facilitated by the upgrading of the Outback Way resulting in substantial secondary benefits to the industry from resulting efficiencies and cost savings.

A good case in point was a supply and servicing firm handling advanced specialised mining equipment imported from overseas that had major offices in both Mt Isa and Kalgoorlie. They needed to make a decision in advance as to whether to ship equipment via east coast or west coast ports and have problems of holding unwanted stocks if they make the wrong choice. The Outback Way will simplify this process enabling transfer of excess stocks from one branch to the other at reasonable cost.

Other efficiencies indicated related to movement of personnel. Given restraints on the number of daily air services from Kalgoorlie to Perth and Brisbane to Mt Isa, it can take two days for personnel to move between the two centres with overnight stays involved along the way.

An upgraded Outback Way will allow personnel to drive between Kalgoorlie and Mt Isa in a little over 24 hours driving time with advantages of being able to take with them significant amounts of parts, documents etc. The upgrading of the Outback Way will facilitate mining industry personnel from Kalgoorlie and Mt Isa holding meetings midway in Alice Springs.

Further efficiencies related to the situation where specialised equipment becomes surplus to an operation in one area. With the Outback Way upgraded, the reduced cost of transporting equipment from one area to another means that it can be offered to a national instead of a local market only, with likelihood of returns from the sale being higher.

To quantify the internal efficiencies within the mining sector and the large supply and service sector attached to it, would be difficult and require a great deal of research among a wider variety of firms. With the value of mining in Queensland and Western Australia at about \$100bn a year, internal efficiencies of only 0.05% (ie. \$50m) would result in a stream of annual savings with a NPV of \$868m at 4% discount rate, ie. enough to pay for the road from this source of savings alone.

### ***'Hot shot' Emergency Deliveries***

Research for this report has also indicated that sealing the road will have a major impact on reducing 'shut down' times due to break downs and the need to urgently bring in replacement equipment and parts from suppliers. Movements identified are especially from Perth and Kalgoorlie to supply mines in the Northern Territory and Queensland's Mt Isa area and the Central Queensland coalfields.

The transport industry refers to these emergency transport operations as 'Hot Shots' and research indicates that of the order of 420 per annum are taking place each year from Western Australia to Northern Territory and Queensland mines.

The cost savings from being able to bring replacement equipment through the much more direct Outback Way route can be dramatic. The transport time saving from Perth to mines in the Northern Territory and Queensland can be of the order of 12 – 15 hours. In one example, the need to replace a generator with a new one out of Perth was costing the company \$1m a 12 hour shift. The saving to the company in that case in reduced shut down time would have been about \$1m. This is on top of the saving in the actual transport cost over the shorter route.

## **Current Mining in the Road Region**

### **Laverton**

Although there are large nickel and other mining operations near Laverton, they are to the south and west and would not be significantly affected by the upgrading of the Outback Way.

### **Northern Territory**

#### **Mereenie**

The Mereenie Gasfield operations are to the west of Alice Springs at Palm Valley (Santos) on the Mereenie Loop Road (Magellan Petroleum). Upgrading the Outback Way unsealed sections would not directly affect operations. However, as noted in Section 12.2, Tourism, upgrading the Outback Way would enhance the case for sealing the remaining unsealed sections of the Mereenie Loop Road.

#### **Harts Range - Gem Fields**

Some information on gem fossicking activity at Harts Range on the Plenty Hwy is given in the Tourism section. The upgrading of the Outback Way would have significant impacts on the movement of fossickers between major Australian gem fossicking fields, especially to and from Queensland. However, the section of the Outback Way providing access to the gem fields from the Stuart Hwy and Alice Springs is already sealed.

#### **Harts Range – Vermiculite**

This is a small vermiculite mine operated by Imerys' Vermiculite (Mud Tank Vermiculite Mine) not far from Gem Tree. It is about 10 km in from the end of the sealed section of the Plenty Hwy. It has an operational life to 2020. Workforce is about 5. It is stockpiled and then road transported by three road trains per week to Alice Springs and then rail to Adelaide.

Transport costs to ports and markets represent a major part of overall costs and upgrading of the Outback Way could have substantial additional benefits, especially if a regular heavy transport route developed between Perth and Brisbane reducing costs of transport to both of those markets and to the relatively high volume export ports associated with them.

### **Queensland**

#### **Phosphate Hill, Osborne & Cannington**

Although there are very substantial mining operations about 100 km north of the Outback Way at Phosphate Hill (WMC - phosphates), Osborne (copper gold), Cannington (BHP – silver, lead, zinc), they all tend to have their servicing links northwards to Cloncurry and Mt Isa<sup>32</sup> and are to the east of Boulia.

Apart from the upgrading of the Outback Way facilitating interstate movements of equipment, parts and personnel between major mining regions (see section below), the upgrading of the currently unsealed section between the Queensland border and Boulia is not likely to have a major impact on operations.

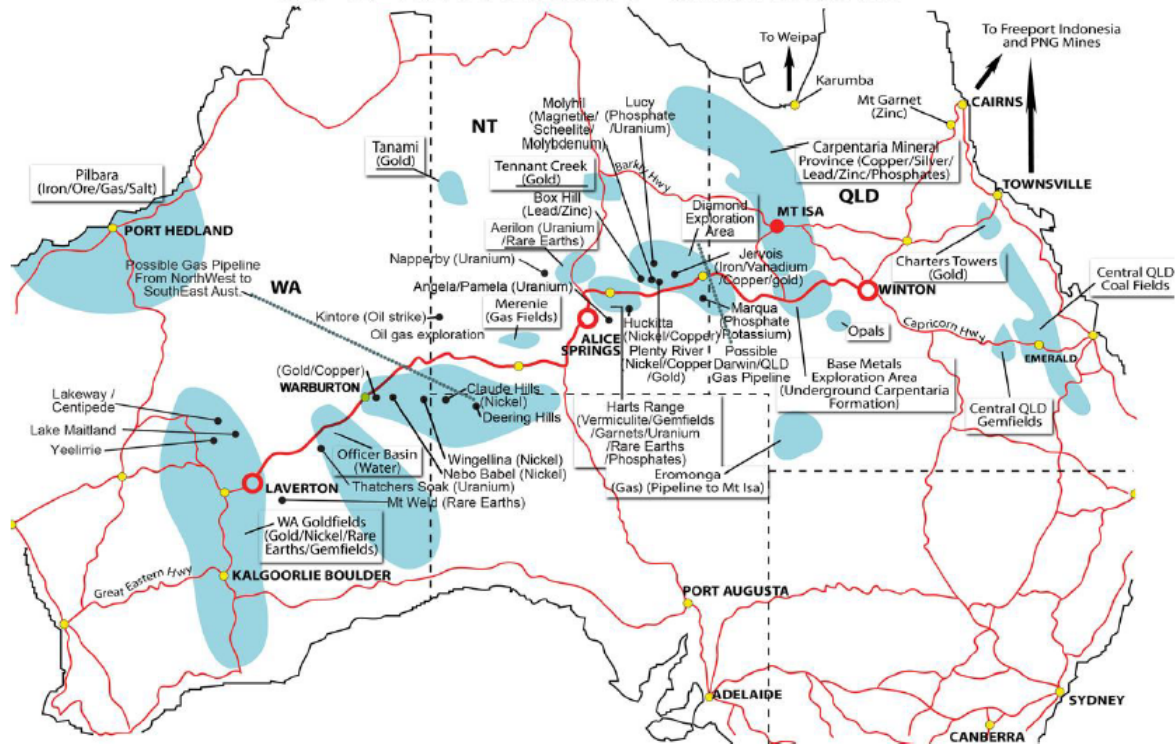
#### **Gas Pipeline**

The gas pipeline from the Eromanga oil and gas fields in south west Queensland to Phosphate Hill and Mt Isa crosses the Outback Way to the east of Boulia.

#### **Opal Fields**

Opal mining operations at Opalton and Mayneside, about 100 km south of the Outback Way, are serviced out of Winton and are not likely to be significantly affected by the Outback Way upgrading.

THE OUTBACK WAY  
Social, Cultural & Economic Impact  
MAP 12 - THE OUTBACK WAY - MINING INDUSTRY



Ref: J2494  
January 2012  
(Rev 30 March 2012)

## ENERGY

The Outback Way provides a current and future infrastructure corridor from east to west to distribute gas and water throughout the West Musgraves- though to NT and Qld.

## AGRICULTURE

### CATTLE

#### *Northern Territory (Normal Movements)*

On the advice of stock and station agents in Alice Springs and inquiries in the industry, cattle properties in the Red Centre region can be broken into two groups :-

☐ Those north of Alice Springs and mainly east of the Stuart Hwy (some are along the Plenty Hwy and others further north).

☐ Those south of Alice Springs.

Total average turnoff in 2011 was about 110,000 head per annum, with 80,000 from the northern section (up on 2003 and 2009), and 30,000 from the southern section (up on the 2009 estimate in a drought year and back to 2003 levels).

Estimated current normal destination of annual turnoff is as follows :-

		%	Numbers	(cf 2009 Numbers)	(cf 2003 Numbers)
<b>Northern Section</b>	To Qld (saleyards)	24%	19,000 head		
	To Qld (meatworks)	36%	29,000 head		
	To SA/Vic	10%	8,000 head		
	To Darwin (live cattle export)	30%	24,000 head		
<b>Total</b>			<b>80,000 head</b>	<b>(60,000 head)</b>	<b>(50,000 head)</b>
<b>Southern Section</b>	To Qld	Nil	-		
	To WA	Nil	-		
	To Darwin (live cattle export)	20%	6,000 head		
	To SA/Vic/NSW (feedlots & abattoirs)	80%	24,000 head		
<b>Total</b>			<b>30,000 head</b>	<b>(20,000 head)</b>	<b>(30,000 head)</b>
<b>Total</b>	To Qld		48,000 head		
	To Darwin (live cattle export)		30,000 head		
	To SA/Vic/NSW		32,000 head		
	To WA		Nil		
<b>TOTAL</b>			<b>110,000 head</b>	<b>(80,000 head)</b>	<b>(80,000 head)</b>

Movements into Queensland in 2011 stood at 48,000 head.

Currently, major stock carriers indicated they will not use the Plenty/Donohue Hwy route if they can avoid it because of wear and tear on vehicles, slow speeds and risk of accidents. By and large, it is used only for movement of cattle from stations along this section of the road. The transports will use it for a while after grading but when it deteriorates, they will only use it if paid a surcharge depending on road conditions. Consequently, of the estimated 48,000 head of cattle pa. moving into Queensland in 2011, only about one-half were transported over the Plenty Hwy and about a third were carried over the Barkly Hwy despite the longer distance, ie. about 25,000 head travel over the Plenty Hwy and 23,000 over the Barkly Hwy.

#### **Queensland (Normal Movements)**

Based on estimates of Queensland stations, normal annual turnoff from those stations along the Donohue Hwy affected by the proposed upgrading of the highway is estimated at about 20,000 head.

In general, turnoff from this area moves eastward further into Queensland.

#### **Total Movements**

The above figures give estimated average total 2011 movements generated over the Eastern Arm as follows :-

		Numbers	(cf 2003 Numbers)
Eastern Movement	Barkly Hwy	23,000	(23,700)
	Plenty Hwy	25,000	(12,000)
	Donohue Hwy	45,000	(32,000)

This translates into estimated average annual road trains with 180 head per road train<sup>1</sup> of :-

		Annual	Daily
Eastern Movement	Barkly Hwy	128	0.35
	Plenty Hwy	140	0.38
	Donohue Hwy	250	0.68

*1 Note: The 2003 report worked on 'double' road trains. The above works in terms of 'triples' which more closely reflect the actual movements.*

## Upgrading Impacts

Transport operators indicated that given the current standard of the road, deck/km charges need to be higher to travel over the Plenty/Donohue route compared with travelling over a high grade all-weather road. Deck/km charges can be up to \$2.00 compared with normal of about \$1.25, ie. up to 50% higher. Operators report that on the Plenty/Donohue Hwys route, current road surfaces are poor 75% of the time, reducing travelling times down to 40 km/hr. The foregoing would be consistent with the fact that travel distance from the Plenty Hwy turnoff to Winton via the Barkly Hwy is 43% longer than via the Plenty/Donohue Hwys route. Estimated travel times Huckitta to Boulia were:

Good ..... 9 – 10 hours

Average ..... 14 – 18 hours

Poor ..... 24 – 26 hours

Thus, if the unsealed sections of the Outback Way are upgraded and maintained to sealed standard, stock and station agents and transport operators advised most current movements between the Alice Springs area and Queensland via the Barkly Hwy were likely to divert across the Plenty/Donohue Hwys route.

Although some from the more northern stations destined to Townsville may still travel over the Barkly Hwy. It is estimated the switch to the Plenty/Donohue Hwys would involve about 100 full cattle road train movements a year, increasing greatly movements over this section of the road.

Introduction and growing enforcement of new regulations limiting travel times for cattle transports to 12 hours increase the case for upgrading the road. Current travel times between Huckitta Station NT and Boulia is reported to be 14 to 18 hours with a further 5 - 6 hours to railhead at Winton and 2.5 hours to Longreach. The state of the road means that drivers and cattle would need to be spelled enroute at substantial additional cost. The upgrading of the road has the potential to bring the trip to Winton within the travel time constraints. The trip via the Barkly Hwy would remain outside travel time constraints.

On the unsealed Western Arm of the Outback Way, problems for stock cartage over the road are increased by the fact that it is a long trip and there are no spelling facilities from Rowe Ck yards through to Kalgoorlie. In the past, stock and station agents have reported however, that there has been interest in Western Australia in Alice Springs area cattle and that if the Outback Way was upgraded to all-weather gravel, numbers moving over it could be expected to increase substantially, especially in times of drought. Presumably, most of these would represent a diversion from the South Australian market. However, as set out in Appendix 8, a survey of pastoralists living in the vicinity of the Plenty and Donohue Highways indicated that the benefits of upgrading the Outback Highway would be wider than the direct economic benefits identified above.

The upgrading would significantly assist pastoral station economics and operations by offering more reliable access to a wider range of market opportunities and supply options.

Very substantial social and quality of life benefits were also identified that would accrue to the pastoralists themselves but also help attract and retain workers. The most important aspect identified was safety. However, upgrading the road was also seen to bring substantial benefits in social and recreational opportunities, improved access to education, health and medical services, improved policing and security and general access to community and government services.

### Growth

It is not expected that cattle production in the area will increase greatly, although it has been reported that investment in watering points was increasing carrying capacity. Output can however be expected to fluctuate due to weather.

## CAMEL PRODUCTION

Desert Australia provides ideal conditions for feral camels. Australia is the only country in the world with a large feral camel population. Estimates vary significantly from 500,000 to one million plus camels. A population of one million feral camels would have a natural increase of 80,000 camels per year and numbers would consequently double every 8 to 9 years. Feral camels are found in Western Australia, Northern Territory, South

Australia and Queensland and cover an area of approximately 3.3 million square kilometres. Around 50% of feral camels live on Aboriginal land.

Major hotspots are where the WA/SA/NT borders come together (Central Ranges & Musgrave Ranges) and in the Simpson Desert (see Map 10). Some sources believe that half the feral camel population is located in Western Australia particularly in the Warburton area but also the Rudall River area near Telfer. Generally, camel densities are 0.25 camels per square km but around Warburton a 2007 aerial survey estimated 0.84 camels per square km. The national target is to reduce the density to 0.1 camel per square km within 3 years. Camels are very mobile animals that can move large distances in relatively short periods of time (eg. 100 km per day). Feral camels are considered both a pest and a resource. The control of feral camels is by shooting, capture of live animals or farming.

Attention paid to the issue depends on yearly weather conditions. In bad drought conditions (eg. 2008/09), the camels will tend to move in around settlements and stations looking for water and fodder. In these circumstances, they become very visible and create a nuisance and there are strong calls for culling. Wetter years will see them disperse and be less visible.

### **Pet Meat**

Shooting can result in a whole carcass left in the field to decompose or the removal of 4 legs, the neck and hide for sale to the pet food industry.

Camel meat competes with kangaroo, beef and mutton. The camel meat pet food market was undeveloped due to the inconsistent and seasonal supply of camel meat. However, moves to develop the market have been severely disrupted by a study in March 2011 that found that pet dogs had died after eating human grade camel meat because of types of plants the camels had been eating resulting in an accumulation of toxins in the camels. Prior to this, pet meat supply was attractive as it involved minimal capital infrastructure and consequently appeared to be the best strategy to manage the feral camel population in the short term. For the pet meat trade, camels were killed in the field in Western Australia and transported in 45ft freezer trucks to a pet food abattoir on the west coast. It had been suggested that there was a pet food market for 1,000 to 1,500 camels per month. In addition, wetter years have seen camels disperse making it less economic to harvest them. It is our expectation that a return to drier years and a solution to the toxin problem will see a return of harvesting at some time in the future.

Other than the environmental benefits, camel pet meat supply benefits include a royalty paid to Aboriginal communities, local Aboriginal employment and reduced damage to infrastructure in remote communities such as air-conditioners and bores/windmills. Road fatalities have also been attributed to camels.

### **Human Consumption**

The Aboriginal communities of Western Australia located in feral camel hotspots do not have a history of cattle pastoral enterprises and may remain with the pet meat supply operation to control feral camels.

The Anangu Pitjantjatjara and Yankunytjatjara (APY) lands in South Australia have a high feral camel density and were attempting to develop a sustainable live harvest camel industry.

It was reported in earlier surveys that live camels were primarily targeted at the human consumption market through South Australia's Peterborough abattoir. The Peterborough abattoir has been sold and this trade has ceased. There are two proposals for abattoirs to process camel, one at Port Pirie to process 100,000 head per annum and one south of Alice Springs to process 50 to 100 a day.

The major factor affecting the commercial viability of harvesting feral camels is transport. Live camels can only be transported on single decks with a maximum of 22 camels/deck. Transport is by triples. Although camel density is important, it is less important than accessibility. Economic viability will be dramatically reduced even in locations where there is a high camel density but low road accessibility.

### **Live Export of Camels**

There is a global trade in live camels but is variable. Some 363 were exported in 2007. The majority of camels are shipped from Darwin but other ports including Townsville, Broome, Wyndham and Adelaide have been used. The current dispersion of camels with wetter conditions has led to cessation of the trade.

The camel industry evokes mixed reaction from grazier's, some believe it is competition to the cattle industry and others are skeptical about the sustainability of a camel industry.

### **Woody Weed Control**

Feral camels have been purchased by landholders in Queensland and New South Wales to control woody weeds. Numbers are estimated at 5,000 in Queensland and 1,000 in New South Wales.

### **Camel Tourism**

In Australia there are about 50 camel tourism operations attracting both domestic and international tourists. Camel tourism consists of camel trekking and riding (Uluru) as well as camel racing in the Northern Territory (Alice Springs) and Queensland. Camel tourism is another attraction for tourists along the Outback Way.

### **Camel Farming**

Unlike other countries, any camel industry in Australia would predominately be based on the harvesting of wild feral camels. However, the development of abattoirs would increase the prospects of farming to achieve regularity of supply. Camel farming could provide much needed continuity of supply by supplementing the wild harvest. This would significantly enhance the prospects of capital investment in abattoirs and the development of both the pet food and international human consumption markets.

### **Summary**

The situation in relation to camels is currently indefinite and difficult to assess. The current best prospect seems to be the processing south of Alice Springs of 50 to 100 head a day, 5 days a week, say 785 a day over 240 days, ie. 18,000 head.

Savings would be of transport over the unsealed section from Warburton to Kata Tjuta of 510km.

### **CROPS**

In 2009/10, the total estimated value of rural industries and fisheries in the Northern Territory was \$524.6 million, a decrease of 10.5% over the previous year. However, horticultural production defied the trend increasing in value by 18.5%. The Central Australia region accounted for \$4.74 million of the total value of horticulture compared to the Top End and Katherine regions of \$78.9 million and \$34.51 million respectively.



**Table – Crop Production Central Australia Region, Northern Territory, 2007**

Crop	Industry Value	Tonnes Produced	Estimated Area Planted
Fruit	\$3.68 m	1,048	244 ha
Vegetables	\$1.06 m	106	na
<b>Total</b>	<b>\$4.74 m</b>	<b>1,154</b>	<b>244 ha</b>

Source : NT Government.

The majority of

the value of the horticulture production in Central Australia is attributed to the table grape crop. Table grape production has varied from 1,300 tonnes in 1996 to 3,000 tonnes in 2000 worth an estimated \$18m, to a crop value of approximately \$4m in 2009. Table grape production has recovered due to better markets and more area is being planted to take advantage of the seasonal window of opportunity. The seasonal window of market opportunity exists for table grapes and most other horticultural crops in Central Australia. However, any delay in getting to market can severely affect both the quality and prices achieved and ultimately the value of the horticultural industry in Central Australia. The Central Australia region is generally a Queensland fruit fly free area (status regained late in 2011) which allows Central Australian horticultural produce to access most markets without treatment. Its advantages are offset by its need to supply quality produce in a narrow time frame. To avoid produce being downgraded due to quality issues (eg. rough roads causing delays and/or bruising), growers select crops that are more robust in nature or crops that can access Northern Territory or South Australian markets via sealed roads.

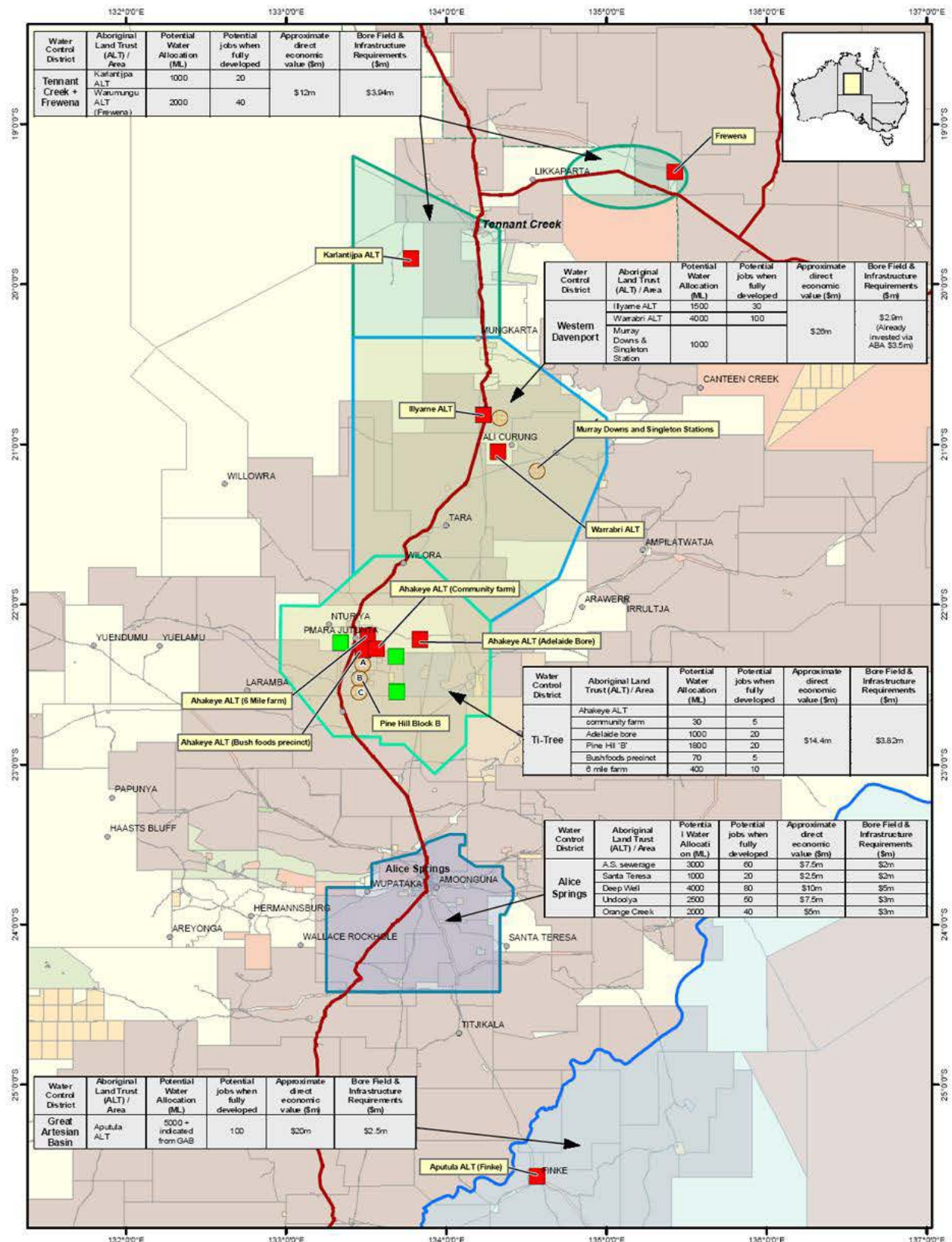
Although table grapes dominate Central Australia's production, other crops grown include lettuce, mangoes, onions, cabbages, watermelons, olives, dates and bush tomatoes. Other crops being considered by Centrefarm Aboriginal Horticulture Limited (Centrefarm) include citrus, avocados, capsicum, passionfruit, stonefruits, nuts, beetroot, asparagus and bananas.

Centrefarm was established in 2002 by Aboriginal landowners in Central Australia to drive the development of horticulture on Aboriginal land. Their Strategic Development and Business Plans identified Ti Tree, Utopia, Willowra, Finke, Alekarenge and two other areas near Tennant Creek as areas of Aboriginal land suitable for commercial horticulture. Map 11 gives Centrefarm's "Infrastructure requirements to develop agricultural industry in Central Australia".

Centrefarm estimates that with a water allocation of 28,500 ML, the identified horticultural areas will produce \$104.9 million in direct value and 600 jobs. The horticulture production is estimated at 114,000 tonnes from 2,850 ha. This development would result in the horticultural production in the Central Australian region almost equalling the combined total of the Top End and Katherine regions or conversely almost doubling the value of horticulture in the Northern Territory. The type of crop grown will be highly dependent on the ability to access markets on sealed roads due to the narrow time frame and the need to deliver good quality fruit and vegetables.

The sealing of the Eastern Arm will be critical to Centrefarm achieving the planned expansion. It will allow direct access to major east coast markets with a distance saving compared to the Barkly Hwy route of 471km. In bringing this factor to account, it is assumed that if the Eastern Arm is sealed, of the order of 30,000 tonnes per annum will move over the road, ie. about 1.25 per day outbound generating 2.5 movements. Trucks projected to use the Eastern Arm between Brisbane and Alice Springs will no doubt back load the horticultural produce.

# INFRASTRUCTURE REQUIREMENTS TO DEVELOP AGRICULTURAL INDUSTRY IN CENTRAL AUSTRALIA



TOTALS				
Potential Water Allocation (ML)	Potential jobs when fully developed	Approximate direct economic value (\$m)	Bore Field & Infrastructure Requirements (\$m)	
28,500 +	600	\$104.9m	\$28.1m	

**Horticulture**

- Aboriginal Land Trust Sites
- Existing Growers
- Native Title Sites

Geographic 1:2,500,000

**Water Control Districts**

- Alice Springs
- Tennant Creek + Frewena
- Ti-Tree
- Western Davenport
- Great Artesian Basin

**Land Tenure**

- Aboriginal Freehold
- Crown Lease Term
- Freehold
- Perpetual Pastoral Lease
- Reserve
- Vacant Crown



## TOURISM

Upgrading the Outback Way will have a substantial impact on tourism in Australia outside of the south east corner.

From east to west, the route starts at Winton in the heart of Australia's iconic Waltzing Matilda country, the vast open Mitchell grass plains of Western Queensland – the birthplace of Qantas, the home of Waltzing Matilda, Australia's national song, sheep country and the Stockman's Hall of Fame, opal mining and dinosaurs.

Boulia, also in Mitchell Grass Downs country, is famous for its mysterious Min Min light and being the home of cattle trains.

To the west, the road crosses the legendary Georgina River flowing towards Lake Eyre and passes north of the Simpson Desert through cattle country.

At Harts Range, the famous mountain range scape of the Red Centre makes its appearance. The route passes through the Gem Tree gemfields and then down the Stuart Highway to the iconic attractions of Alice Springs, Uluru (Ayers Rock) and Kata Tjuta (the Olgas).

Proceeding west, the road passes the Petermann Ranges to the south with lost Lasseters famous cave just off the road to the left. Across the Northern Territory/Western Australia border from the Docker River Aboriginal settlement, is the famous Giles Weather Station in the heart of the continent with iconic symbols of the history of the region (a wrecked Blue Streak Rocket and Len Beddels road grader of the Gun Barrel Highway fame), in pride of place in its front yard. The road then passes through mile upon mile of low bush and sand ridges with wild camels often along the road to Warburton with its indigenous art centre, Tjukayirla Road House, Cosmo Newbury settlement to Laverton – western outpost of Western Australia's famous goldfields.

In a wider sense, it is a transcontinental route that links the iconic Australian regions of the Great Barrier Reef and Outback Queensland's Waltzing Matilda country, the Red Centre, Western Desert, West Australia's Goldfields, Perth and the South West.

The major benefit of the Outback Way will be to facilitate movements of:

- a) Domestic visitors between the major visitor source regions along the east coast and the Red Centre and the Perth area at a time when a major growth is taking place in 'see Australia travel' by the 'baby boomer' demographic.
- b) International visitor movements, especially between the larger international visitor regions of Cairns, the Red Centre and Perth, but also between the Great Barrier Reef, Gold Coast and Sydney to Red Centre movements.

The Outback Way Eastern and Western Arms have a very important potential in setting up touring circuits that will facilitate movements around Australia.

At present, the major circuit around Australia's coastline is divided by the Darwin – Adelaide Stuart Highway into two 'butterfly wings', making an eastern and western circuit also possible. The Outback Way will divide these circuits again, first into two, enabling a southern circuit and a northern circuit, and into four enabling south east, north east, north west and south west circuits.

Upgrading of the Outback Way to 'all-weather' gravel was projected to result in a doubling of the relatively low visitor traffic on the two arms. Sealing the two arms seems likely to double the movements again resulting in a four-fold increase composed of existing movements to and from the Red Centre 'diverting' to the more efficient

access route to/from that area but also a substantial increase in overall visitor movements to the Red Centre area of great benefit to that area's economy.

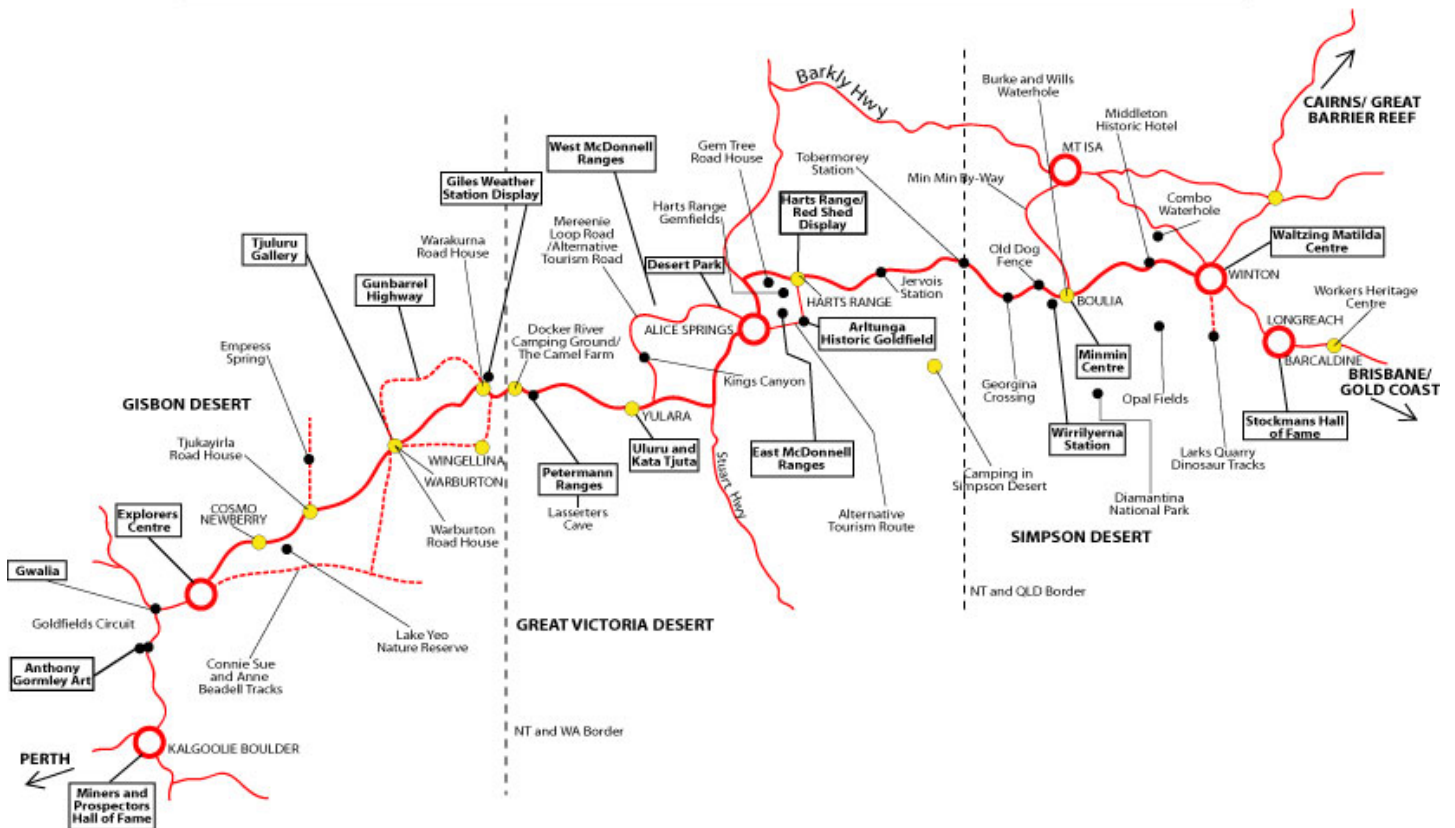
The Outback Way enables tourists to ZIG ZAG Australia- put their car on the Adelaide /Darwin railway and go east or west from Alice Springs, do a cross continent crossing, either self-drive, fly/ drive(hire) or via a tour company. The packages that can be created are diverse and as the route is developed the market will demand these.

The business development in the way of roadhouse, indigenous tourism tours and experiences will grow and provide economic opportunities to indigenous communities.

The Outback Way is part of the Inland Treasure Trail linking all the fossicking tourism businesses up for visitors to experience.

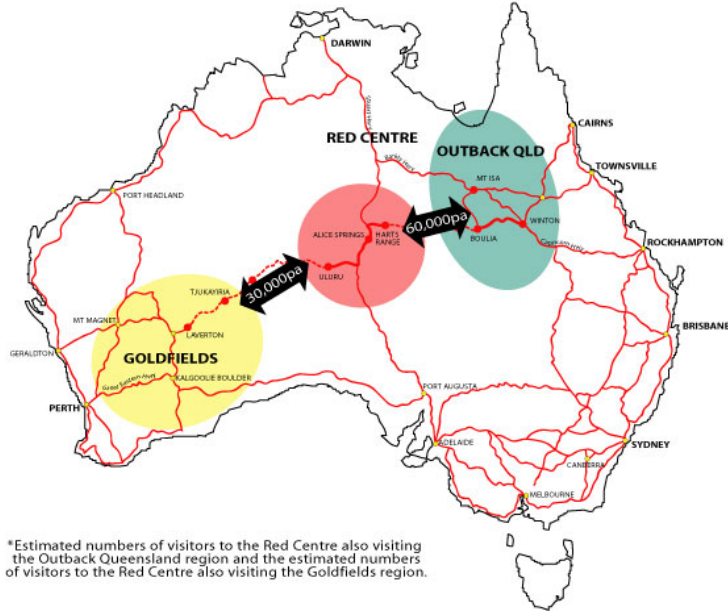
2 new tourism operations have opened in the last 2 years along the Outback Way with the ever increasing travellers experiencing this iconic journey.

### MAP 7 - THE OUTBACK HIGHWAY - SOME TOURISM POINTS OF INTEREST





MAP 9 - DOMESTIC AND INTERNATIONAL VISITORS - INTERREGIONAL VISITATION\*



**DEFENCE**

The Outback Way provides a link with all the over Horizon radar sites, Pine Gap in the NT and a critical new trans-national link with rail hubs in Kalgoorlie- Alice Springs and Winton for mobilisation and distribution of

**THE OUTBACK WAY**  
*Social, Cultural & Economic Impact*  
**MAP 16 - THE OUTBACK WAY AND DEFENCE**



- **Enhance trade and other investment links with the Asia-Pacific;**  
The Outback Way connects east and west- freight, agriculture, equipment to the Adelaide to Darwin railway enhancing and growing the viability of this infrastructure with these industries exporting to Asia through central Australia- alleviating pressure and congestion at Qld & WA Ports.
- **Address impediments to growth;**  
Ensuring policies are congruent with the federal, states and the Territory policies – synergies and consistency will be key seeing Northern Australia as a whole rather than divided by state boundaries. Policies will need to be reviewed to open up this mindset.
  - **Set conditions for private investment and innovation;**  
The investment needs to ensure Australia's best interest is front of mind and that Australia gains a longer term benefit environmentally, socially and economically from any private or foreign investment this enabling infrastructure provokes. Let us learn from past mistakes and ensure future development is for the long term sustainability of our nation and Australian's. Let's value our country and it's environment and put adequate requirements in place to ensure those investing and benefiting from our country operate with an environmental and social conscience. We need to ensure agreements are putting Australia's future first before short term gains (within election cycles.)

#### **SEGRA 2013 –**

One of the challenge areas identified at SEGRA focused on the development and governance of Australia. Key issues included the following:

- The imperative that any policy and governance actions act to unite south and north Australia.
- The true costings and funding sources for development need to be well understood and gain wide spread consensus from the commencement of engagement at the national level. In particular, development of the north will raise issues of levels of foreign investment that need to be carefully considered in a global context.
- There needs to be a recognition of the diversity of northern Australia from west to east as well as north to south including (for example): location and ease of accessibility to offshore seabed mineral resources such as manganese; the inherent potential to grow high income earning food and fibre crops; and the vulnerability of energy resources including imported diesel fuels for agricultural, mining and transport uses.
- There is considerable caution about plans for northern development given past experiences in relation to problems with (for example): decision-making between the Commonwealth and the other jurisdictions; the ecological implications of harvesting water; the sustainability of agriculture production systems; distance to markets and shipping costs; and commercial and risk financing.

This challenge area is one of the five ongoing topics delegates from SEGRA 2013 have agreed to work cooperatively on throughout the year and to report back at SEGRA 2014.

- **Critical economic and social infrastructure needed to support the long term growth of the region, and ways to support planning and investment in that infrastructure.**

Enabling infrastructure will open up areas of northern Australia provoking private enterprise to invest and establish businesses to support the growth in tourism, agricultural and new mining production.

Invest in further development for indigenous communities about business, development and management. So they can take up the opportunities that will present themselves.

There are significant projects that are being worked on that need to be incorporated into Northern Australia's development- such as the;

- Road development for West Musgrave Ranges mining interests.
- Development of a strategic roads network in Qld by the Townsville & North West RDA,
- Indigenous Training College at Yulara,
- mining development on the Plenty Highway at Jervois,
- mining exploration at Boulia,
- horticultural production in Central Australia- grapes, fruit, vegetables is growing as producers diversify.
- Innovations by Desert Knowledge CRC.
- Tanami Road, north of Alice into the Kimberley's,

**FOR FURTHER INFORMATION CONTACT:** Representatives from the OHDC Inc will be available to present at public hearings.

The Outback Highway Development Council Inc.

Contact: Patrick Hill Chairman OHDC Inc

Or Helen Lewis: General Manager-

[www.outbackway.org.au](http://www.outbackway.org.au)