



## **INTERACTION OF REGIONAL ROADS AND RAIL NETWORK**

**PREPARED BY CITY OF KALGOORLIE-BOULDER  
IN EASTERN GOLDFIELDS WESTERN AUSTRALIA**

**May 2005**

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## **Attachment**

*Map showing locations relevant to Kalgoorlie – Boulder and regional transport corridors.*

## 1. Regional Context

The City of Kalgoorlie-Boulder is the regional service centre for the Eastern and North Eastern Goldfields in Western Australia. Its current population is approximately 32,000, and is located on a rich mineral belt extending in a north westerly direction from Norseman to the Pilbara. This has the potential of becoming a significant future land transport corridor in Western Australia. Refer to attached location.

From a transport perspective, the City forms a natural land transport hub. The National Transport Secretariat map of Australia's strategic freight corridors of national significance shows the City located at the intersection of major multi-modal corridors between the eastern states and Perth and Esperance Port and Leonora<sup>1</sup> ( and further North to the Pilbara).

It is serviced by the Transcontinental Railway, the north-south railway between Leonora and Esperance, and the Great Eastern Highway from Perth and the Goldfields Highway. Both highways connect with the Eyre Highway at Norseman. Also, due to the size of the City's economic hinterland, transport infrastructure to the north of Leonora is integral to the functioning of the transport hub<sup>2</sup>.

The regional economy has been underpinned by mineral development since the 1890s, which has been supported by significant infrastructure development including the provision of road and rail infrastructure, water and gas pipelines and communication infrastructure. The region remains a world-scale minerals producer, because it has developed a wide range of minerals in addition to gold, principally nickel (including nickel smelting) and iron ore.

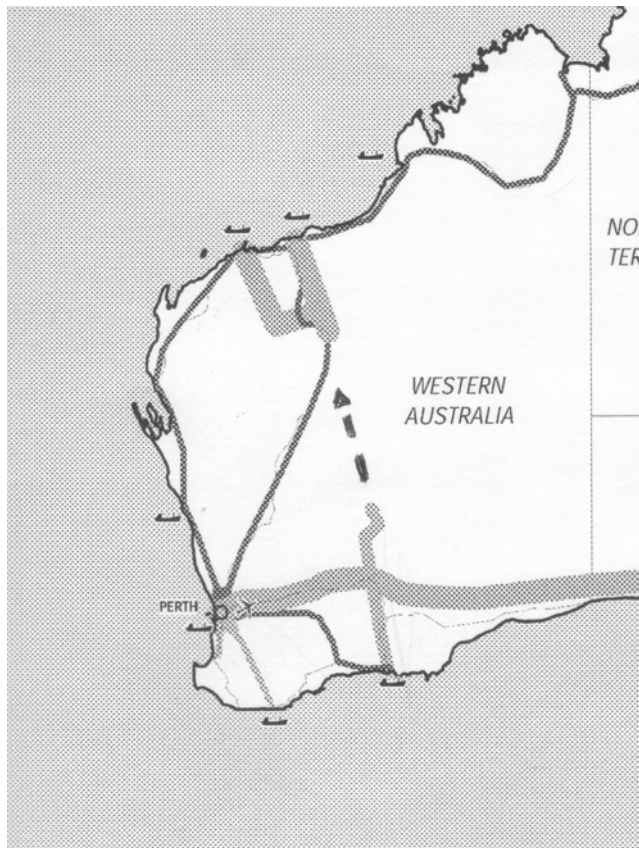
The potential of the mining industry is highlighted by projections of rail freight prepared by the Department for Planning and Infrastructure in 2002. Future rail freight generated by mining projects in the Goldfields Region was estimated to range from 4.8 million to 11.2 million tonnes in 2010, as compared with 3.6 million tonnes in 2000<sup>3</sup>.

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<sup>1</sup> National Transport Secretariat website *circa* 2002.

<sup>2</sup> The map also indicates a major national freight corridor at the northern end of the minerals belt between Port Hedland and Newman.

<sup>3</sup> Department for Planning and Infrastructure (2002) *Kalgoorlie Rail Realignment Demand and Impact Analysis Summary Report*, prepared by Land Transport Policy Directorate.



*The arrow is superimposed on the NTS Freight Corridor Map to show the future transport corridor linking Kalgoorlie with the Pilbara*

These developments will increase demand for transport infrastructure to support road and rail haulage as well as intra and inter modal transfers of bulk minerals and consumables, and general freight. East-west rail freight movements through the City will also increase as a result of growing interstate demand.

Kalgoorlie-Boulder is strategically located with respect to the rich north-west mineral belt that extends from Norseman, south of Kalgoorlie to the Pilbara. The map shows the potential for Kalgoorlie-Boulder to service the entire mineral belt.

The future prosperity of the region is strongly dependent on a continued improvement in land transport efficiencies. The main economic driver for the region is the mining industry, which is experiencing transport costs of up to 25 percent of operating costs<sup>4</sup>. The linking of road and rail networks through multi-modal and transport logistics development as well as transport corridor development would lead to superior transport outcomes for this region and is strongly supported by Council

<sup>4</sup> SMEC Australia (2001) *Investigation into Priorities for Improvements to Transport Infrastructure in the Goldfields Region*. Prepared for Chamber of Minerals and Energy-Eastern Regional Council; Kalgoorlie-Boulder Chamber of Commerce and Industry; and City of Kalgoorlie-Boulder.

## 2. Issues for the City of Kalgoorlie-Boulder

Of relevance to the functioning of the national land transport network will be the efficiency of the Kalgoorlie-Boulder transport hub and the efficiency of the transport 'spokes' radiating from the City. The development of north-west rail and road bypasses are planned. Also, in the long-term research is being conducted regarding road/rail inter-modal terminal options for Kalgoorlie-Boulder.

Ultimately the bypass projects will be needed when freight movements and the adverse impacts on urban amenity reach certain thresholds. Also, there will be a future need for enhancing existing inter-modal facilities and services at West Kalgoorlie or possibly at Parkeston. Currently, the City does not have a common user road/rail inter-modal facility and there are physical, operational and competitive constraints on the use of the existing facility.

More immediate requirements in relation to the national land transport network were recommended by SMEC<sup>8</sup> (2001) in regard to the potential re-allocation of transport infrastructure funding for the region. Their primary development recommendation was the immediate weather proofing of the Lake Raeside road section on the Goldfields Highway to the south of Leonora. This section was closed because of Cyclone Bobbie in 1995 for approximately three weeks. The aim is to reconstruct 10 km of road and to construct a high level bridge in order to significantly improve flood immunity.

The risk of closure causes mining companies to the north of the section to hold higher than optimum inventories of consumables during the cyclone season, which increases operation costs. When the section is impassable, if transport is required from the eastern states, it involves a detour of approximately 1,200 km as compared to the significantly shorter distance of 234 km from Kalgoorlie. The community has requested this project be brought forward in State programming of works.

An important missing link in a future corridor linking the Goldfields-Esperance Region with the Pilbara is the unsealed section of the Goldfields Highway between Wiluna and Newman.<sup>9</sup> Sealing of the section from Wiluna to Meekatharra was recommended by SMEC<sup>10</sup>, however the longer-term benefit to the Pilbara and Kimberley regions is best served by sealing the route direct to Newman via the shortest possible route. Truck haulage costs on this section are more than 50

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<sup>5</sup> SMEC, *ibid*, p.9.

<sup>9</sup> *op cit*

<sup>10</sup> *op cit*

percent higher than on the adjacent sealed sections, because of additional travel time and maintenance costs.

In terms of regional planning, there is a strong consensus among stakeholders to accelerate these works. Options for the development of north westerly links from Wiluna to the Great Northern Highway, utilising the shortest possible route from Wiluna to Newman, are highly preferable.

In the Northern Goldfields, the road network would strengthen with future development of the Outback Highway, which incorporates the Great Central Road. Upgrading to an all-weather standard would create a direct link between Western Australia and the new Darwin to Alice Springs Railway and attract increasing freight and tourism flows between Western Australia and the Northern Territory. In cyclonic periods it would be the only accessible route to eastern and northeastern Australia.

To the south of Kalgoorlie-Boulder, preliminary planning is being undertaken to strengthen links between the Goldfields and the wheat belt. This involves options to upgrade existing local government roads. Also, there is a desire to strengthen tourism pathways linking the southwest with the region, as in the case of the Holland Track and Way between Broomehill and Coolgardie.

### **3. Recommendations**

#### **3.1 A New Common User Kalgoorlie Inter-Model Freight Hub**

The establishment of a common user Inter-Model Transport Hub is seen as imperative to ensure that freight transport can support the economic development and exploitation of the WA Goldfields. Kalgoorlie has significant advantages, due to its strategic location, to act as an inter-model transport hub. Located at the junction of the Trans-Australia east-west rail and road networks and the north-south Esperance-Leonora Railway line and with the Pilbara and soon to be upgraded “Outback Highway” to the north.

Consideration of the future development of Kalgoorlie-Boulder needs to be considered when planning the location of the facility ensuring that it has room to grow, without interfering with the residential development of the City. This includes all associated infrastructure necessary to support freight transfer facilities, storage and distribution systems.

An integral part of the success of the hub is to ensure that the inter-model freight facility is developed as a “Common User” facility. The ongoing management will need to allow equitable and non-discriminatory access to all road and rail users. Users will benefit for the facility through both financial and efficiencies gains, but these gains need to be viewed as long term and competitive charges will be required to build an initial customer base.

#### **3.2 Upgrading Regional Roads as links to the Inter-Model Hub**

To the north of Kalgoorlie, three issues need attention:-

a) **Outback Highway:-**

The development of the Outback Highway has been substantially funded and provides a vital freight link between both the Northern Territory, Queensland and Western Australia.

b) **Goldfields Highway – Lake Raeside Crossing:-**

Realignment of the highway and a new bridge crossing are required to ensure that this vital link between Kalgoorlie-Boulder and the Northern Goldfields is not closed due to periodic flooding.

c) Wiluna to Great Northern Highway link:-

The servicing of the link between Wiluna and Great Northern Highway is seen as an integral part of the successful operation of the Kalgoorlie Inter-Model freight facility. The most direct route between Wiluna and Newman should be developed as it has the greater overall financial benefit.

To the South the importance of the Kalgoorlie to Esperance Road and Rail links cannot be overstated.

The City of Kalgoorlie-Boulder supports the “Esperance Joint Submission Team” in the request “That the Kalgoorlie to Esperance Road and Rail corridor be placed on the Auslink National Network. We believe this is justified because of the significant freight volumes using this route the growing population and economic significants of the region and the current and potential export nature of the freight in the region.

The further development of the link between the WA Goldfields and the South West/Great Southern area’s of WA is also in need of upgrading the Holland way/track (Broomehill to Coolgardie) has a sound economic base to its case for development.



**Locations relevant to Kalgoorlie - Boulder and regional transport corridors.**

