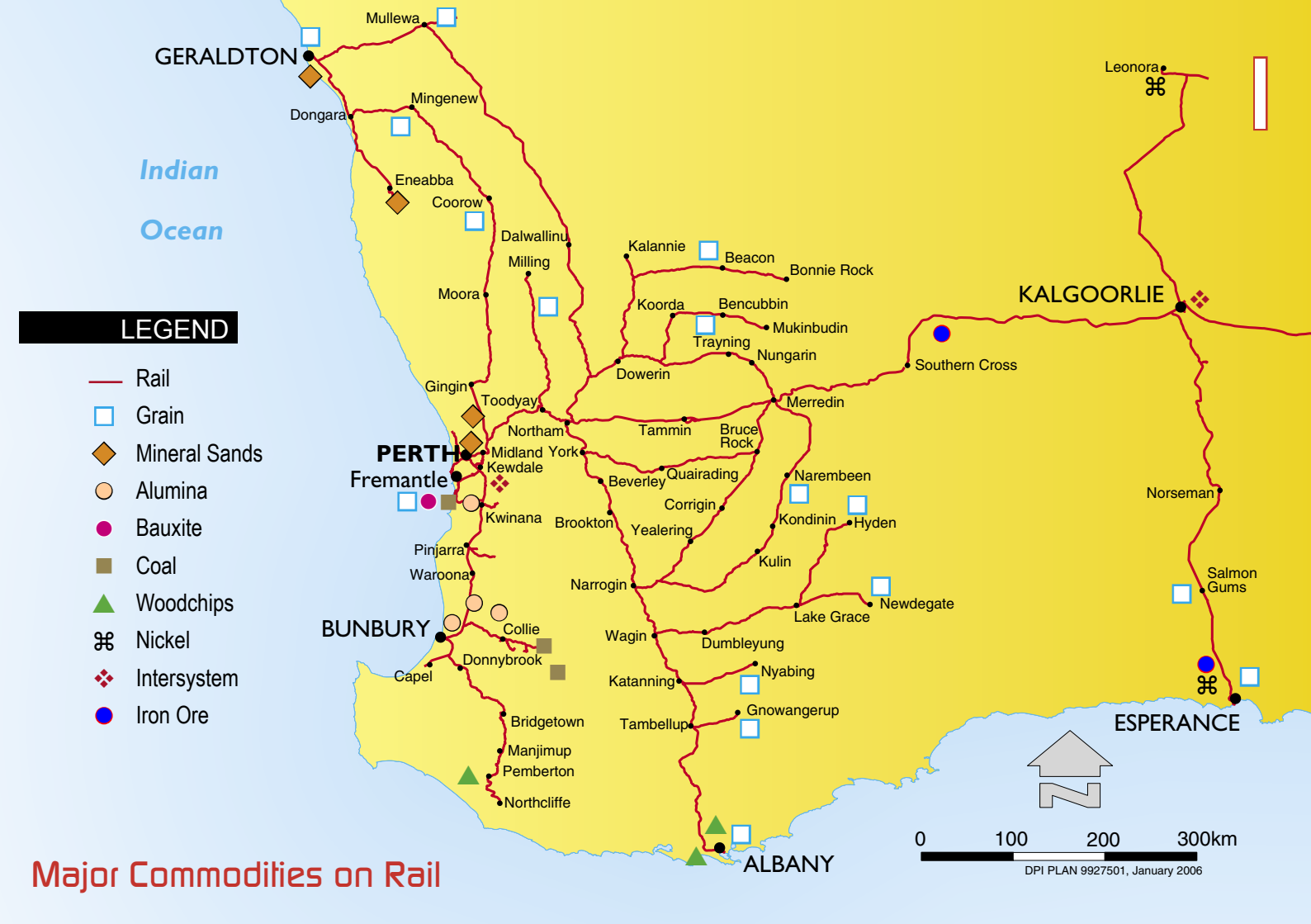
Looking for Balance

The Freight Task in Southern Western Australia

A study prepared for the Western Australian Rail Advisory Council


Indian
Ocean
LEGEND
Rail
Grain
Mineral Sands
Alumina
Bauxite
Coal
Woodchips
Nickel
Intersystem
Iron Ore
Mullewa
GERALDTON
Mingenew
Dongara
Eneabba
Coorow
Dalwallinu
Milling
Moora
Gingin
Toodyay
Northam
PERTH
Midland
Kewdale
Fremantle
York
Kwinana
Brookton
Pinjarra
Waroona
BUNBURY
Collie
Donnybrook
Capel
Bridgetown
Manjimup
Pemberton
Northcliffe
Kalannie
Beacon
Bonnie Rock
Koorda
Bencubbin
Mukinbudin
Trayning
Nungarin
Dowerin
Merredin
Tammin
Bruce Rock
Beverley
Quairading
Corrigin
Yealering
Narembeen
Kondinin
Hyden
Kulin
Narrogin
Wagin
Dumbleyung
Lake Grace
Newdegate
Katanning
Nyabing
Tambellup
Gnowangerup
ALBANY
Leonora
KALGOORLIE
Southern Cross
Norseman
Salmon Gums
ESPERANCE
0
100
200
300km
DPI PLAN 9927501, January 2006
Major Commodities on Rail

Introduction

The Government is keen to see freight that can be efficiently, competitively and sustainably carried by rail taken off our roads and put on trains.

By way of contribution to the discussion, the Western Australian Rail Advisory Council, in association with the Department for Planning and Infrastructure, engaged consultants Meyrick and Associates to identify opportunities for increasing the use of rail for moving freight in the southern half of Western Australia.

In seeking effective ways of achieving policy and investment outcomes for road and rail transport, Government has to acknowledge the context of privately owned/leased rail operations. Within this environment, the conventional tools of capital works, pricing and scheduling are no longer available to the public sector. New and innovative means are required to optimise the use of the different land transport modes.

The study was designed to assist with that process.

The clear issues for road and rail freight transport are going to be capacity and congestion, particularly at Terminal and Port locations. From a broader community standpoint, safety and environmental issues will be predominent.

The Freight Task

In 2004, around 150 million tonnes of freight was moved through the southern half of Western Australia. This volume is forecast to increase significantly.

Major growth in mineral activity is being forecast over the next 20 years. There will also be continued growth in agriculture, imports and general freight, with the expectation that demands will double within ten years.

Moving this freight efficiently is essential to Western Australia's economy. However, the impact on the environment and on our communities must also be considered. Rail freight is of enormous importance in that context. The above figure illustrates the breadth of the system.

Study Methodology

The first task was to obtain a broad picture of current logistics arrangements for major freight tasks in the southern half of the State. Tasks over 10,000 tonnes per annum were considered.

Four industry groups that have large freight requirements were examined. Commodities with the potential to make greater use of rail were identified within each of those industry groups as shown below:

Industry Group	*Commodity Group*
Agriculture*	Export Hay & Export Containers
	Fertilisers
	Other Agriculture
Other Major Products	Cement & Lime
	Import & Export Containers
	Interstate Task
	Mining Inputs
	Fuel

Industry Group	*Commodity Group*
Mineral Resources	Alumina & Bauxite
	Coal
	Iron
	Mineral Sands
	Nickel
Timber & Forest Products	Timber & Forest Products

* grain freight is being assessed through a separate study.

Commodities were assessed to see if they met a number of pre-determined requirements for modal change, including:

- being physically achievable;
- being consistent with policy framework; and
- of interest to shipper/private rail sector.

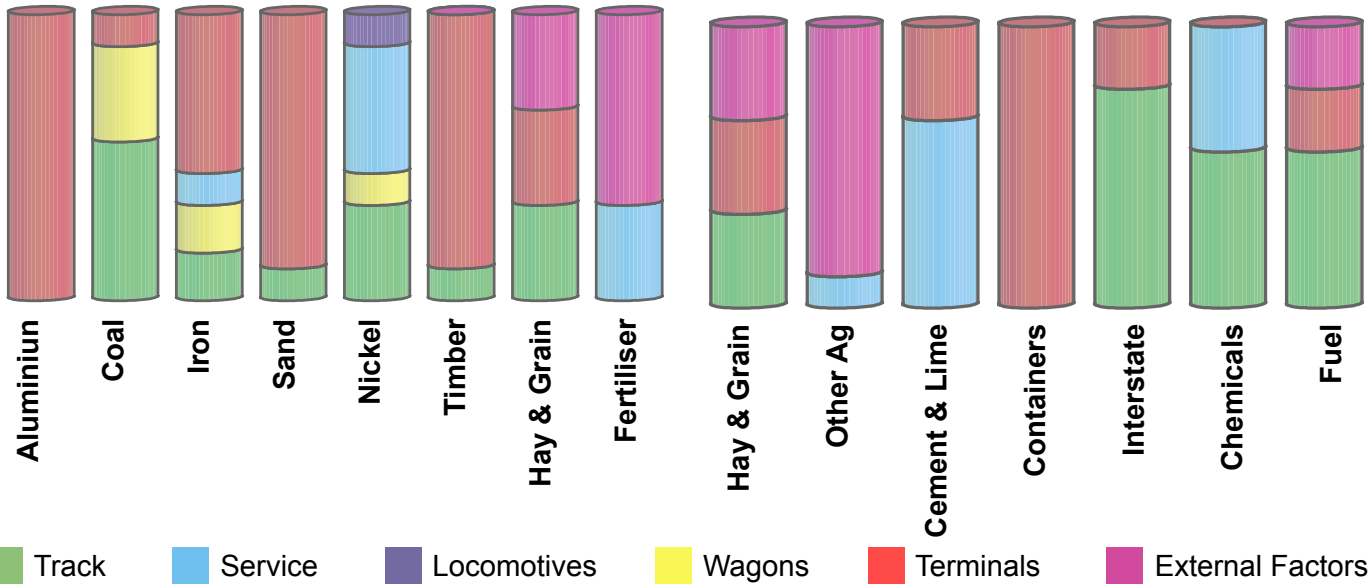
This phase yielded a shortlist of projects for inclusion in the final detailed evaluation.

The detailed evaluation involved an economic examination of each project, including assessing the project life, identifying funding gaps between the commercial outcomes and cost impacts, nominating the incidence of benefits and defining a suggested role for Government.

Rail Infrastructure Requirements by Commodity

In assessing the potential role for rail in the identified projects, it became clear that different commodities have different rail infrastructure requirements. This is illustrated below.

Rail Infrastructure Requirements



The figure illustrates the particular infrastructure constraints associated with the movement of each commodity by rail. For example, the constraint for aluminium relates to terminal facilities, whereas for chemicals, track and service aspects are more important.

This information was identified in discussion with operators, freight owners, industry and government agencies.

Study Results

a) Infrastructure Projects

The assessment conducted during the study reduced the large number of potential rail infrastructure projects to a shortlist of six. These are illustrated below.

Project	*Type of Project*	*Capital Cost*	*Net Benefits*	*Description of Benefits*
Kalgoorlie Dangerous Goods Handling Facility	Support for Dangerous Goods facility at Kalgoorlie	$2.0 M	$2.26 M	Reduction in the costs of externalities related to freight movement as a result of shift from road to rail
Passing Loops on the East West Standard Gauge Line	Support for the lengthening of passing loops	$10.0 M	$5.79 M	Improvements in efficiency of track.
Bunbury Terminal	Build rail loop at port, unloading facilities at port, ensure rail capacity and build loading facilities at Capel	$7.2 M	$7.22 M	Reduction in the costs of externalities related to freight movement as a result of shift from road to rail
Geraldton Port Rail Unloading	Part funding for a rail unloader and associated planning requirements	$12.2 M	$7.82 M	Reduction in unloading costs related to speedier unloading rates
Greenbushes Intermodal Terminal	Part funding for infrastructure to develop an intermodal facility at Nth Greenbushes for movement of logs and woodchips	$10.68 M	$4.96 M	Reduction in the costs of externalities related to freight movement as a result of shift from road to rail
Kewdale Intermodal Terminal minor upgrades	Early funding of on site ancillary services eg road and drainage upgrades	$3.5 M	na	Efficiency improvements in interstate rail transfer facility

b) Non-Infrastructure Projects

In addition to assessing infrastructure projects, other ways by which Government could encourage greater use of rail for freight were investigated as detailed in the table below.

Issue	*Recommendation*
Working Arrangements between Public and Private Sectors	That Industry and the Department investigate skills and resources to develop alliance partnering opportunities with the private sector
Skills Development and Industry Attraction	That there be a rapid review of the opportunities for the provision of training needs for land transport operators
Planning	That in major new infrastructure developments, the role of rail should be inherent in the planning and decision making processes
Geraldton Port Rail Unloading	That areas of policy overlap in promoting high productivity road transport be assessed against actual marginal cost impacts of the vehicles on the community
Ownership and Partnering Issues	That Government procedures and policies that may constrain Government or private sector investment in rail infrastructure should be considered in any investment decisions
Service levels	That Government review the delivery of rail services to clients, with a particular focus on the provision of the quality and quantity of the fleet.
Long-term Strategic Planning of the Rail Network	That Government foster strategic planning of long-term track solutions, ensuring these plans are transparent to industry, using the revamped freight and logistics council to steward track development.
Investment in ports as intermodal terminals	(1) That consideration be given to the PATREC model being extended to provide funding solutions to ports in their role as intermodal terminals; (2) That a model be developed using the experiences of other port authorities to identify best practice developments at ports in Western Australia and elsewhere in Australia; (3) That Government develop funding models for ports, particularly regional ports, to enable access to specialised simulation support in order to more fundamentally understand the interaction with demand and supply for the port services.

Current Project Status

a) Infrastructure Projects

The current status of the six high priority infrastructure projects identified for further evaluation is as follows:

Kalgoorlie Dangerous Goods Handling Facility ($2.0M)

Currently, DPI is undertaking a study into the needs for improved or new intermodal facilities in Kalgoorlie-Boulder. The Kalgoorlie Intermodal Facilities Study will consider the needs for improved hazardous materials handling and storage facilities.

New or improved passing loops and track improvements on the Kewdale to Kalgoorlie standard gauge railway ($28.1M)

In November 2005, the Federal Government announced that it will provide $28.1 million through its Auslink infrastructure funding program for the Kewdale to Kalgoorlie standard gauge railway. This work will increase the capacity of the interstate railway by extending eight passing loops and re-sleepering 76km of track with concrete sleepers. Work on this infrastructure is expected to commence in 2006.

Bunbury Terminal ($7.2M)

The Bunbury Port Authority, DPI and Australian Railroad Group are undertaking a study into the potential export of coal from Collie through Bunbury Port. This study will consider rail terminal infrastructure needs for Bunbury Port. Part of this study will consider the opportunity for a common user train unloading facility that could handle a range of compatible commodities in the future.

Geraldton Port Rail Unloading ($12.2M)

The State Government sponsored Mid West Strategic Infrastructure Group is working with the Geraldton Port Authority and mining proponents to develop a rail infrastructure support package at Geraldton Port to compliment the new iron ore handling facilities announced by the Government in January this year.

Greenbushes Intermodal Terminal ($10.7M)

Planning and construction of this project is expected to commence early in 2006. It is anticipated that woodchip trains will commence operations between North Greenbushes and Bunbury Port in the second half of 2006 and the log trains on the same route to commence in early 2007 following the completion of a new woodchip mill at Bunbury Port.

Kewdale Intermodal Terminal Upgrades ($3.5M)

The Public Transport Authority is currently undertaking planning studies for future expansion of freight terminal facilities in the Kewdale precinct. These should be completed by mid 2006.

b) Non Infrastructure Initiatives

The State Government, its agencies and industry stakeholders are progressing the initiatives identified in this study. Through a range of mechanisms, public and private sector decision-makers are working closer than ever before in strategic partnerships to achieve a balanced and sustainable freight system to serve the needs of all Western Australians.

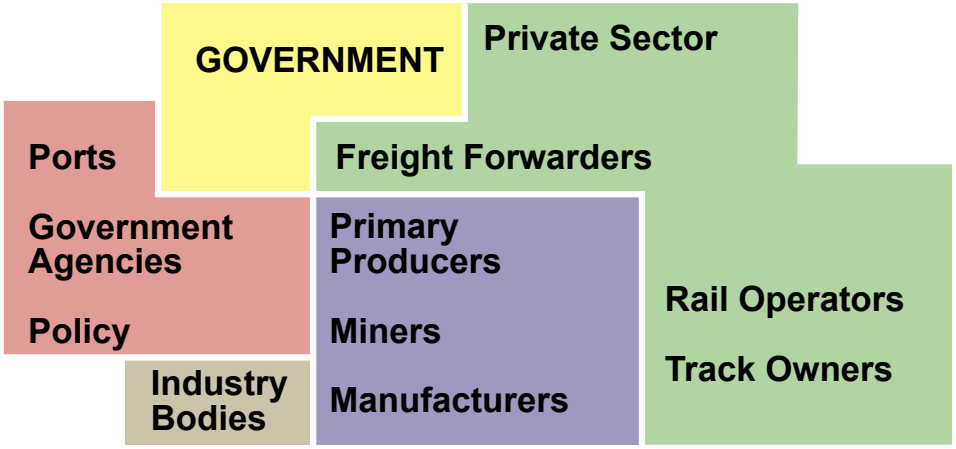
The Decision Making Framework

There are clear and sensible market signals in many of the freight transport markets.

Ideally prices reflect competitive supply and demand profiles.

There are, however, imperfections in these markets and cost externalities that mean that public policy is necessary to achieve economic use of resources that generate the greatest possible community benefit.
In other words, Government's long-term sustainability objectives do not always align with industry's short term commercial ones.

Government and industry stakeholders must continue to form collaborative partnerships to seek that alignment and bring projects to fruition that benefit Western Australians in a sustainable manner.



Delivering Better Freight Outcomes

This study has proven to be invaluable in establishing a firm policy basis for sustainable freight operations in the southern half of Western Australia.

Specifically infrastructure and non-infrastructure opportunities were identified and are now in the process of being developed.

In a more general sense, discussion associated with progressing the study findings has directly contributed to:

- Identifying the rail component in the State Transport Infrastructure Plan;
- Shaping the freight input to the broader State Infrastructure Plan;
- Assisting the case for infrastructure funding through the Auslink program;
- Developing public/private partnerships to progress sustainable freight outcomes;
- Establishing freight logistics policy expertise and responsibility within the Department for Planning and Infrastructure; and
- Addressing the common disconnect between industry's short term commercial expectations and Government's long term strategic ones.

It is vital that the needs and expectations of both industry and the community are understood by all parties in developing the economic growth of the State. This study and the initiatives identified by it are already providing sound opportunities for this to occur.

Looking for Balance

The Freight Task in Southern Western Australia

A study prepared for the Western Australian Rail Advisory Council

Further Information

The two studies: Analysis of the Western Australian Freight Task Strategic Commodities for Rail – Task 1 Report. (2004 Meyrick and Associates); and Analysis of the Western Australian Freight Task: Conclusions. ((2004 Meyrick and Associates), are available on the Department for Planning and Infrastructure's web site. Go to: www.dpi.wa.gov.au/