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P o r t A u t h o r i t y

Progress in Rail Reform
Productivity Commission
LB2 Collins St East
MELBOURNE VIC 8003

Dear Sir

SUBMISSION - PRODUCTIVITY COMMISSION- INQUIRY INTO PROGRESS IN RAIL REFORM

Please find attached a submission to the Productivity Commission inquiry.

Yours faithfully

Colin Steward
General Manager

ESPERANCE PORT AUTHORITY

Submission to the Productivity Commission - Inquiry into progress in Rail Reform

INTRODUCTION

The Esperance Port Authority is located on the South Coast of W.A. 400 km South of the goldmining centre of Kalgoorlie.

The Port is linked by a standard Gauge Rail Line to Kalgoorlie and then further North to Leonora. (see attached map)

The Rail Line is used to move bulk commodities to and from the Port.

Commodities currently handled through the Port that are transported by rail are as follows;

Commodity	Tonnes P.A.	Source or Destination
Diesel	225,000	Kalgoorlie and Leonora
Nickel Concentrate	80,000	WMC Mt Keith Nickel
Nickel Concentrate	70,000	Black Swan Nickel
Iron Ore	1,500,000	Koolyanobbing

The Iron Ore is Transported at a rate of nine trains per week while the nickel concentrate and fuel are a thrice weekly operation.

There is little doubt that the railway line linking the resource rich Goldfields to the Port at Esperance is vital to the Regional Development and Economic well being of the Goldfields Esperance Region of Western Australia. (see attached resource map)

2. CURRENT ISSUES CONFRONTING THE RAILWAY LINE

Portman Mining the company exporting the Iron Ore through the Esperance Port are currently evaluating the option of using Kwinana on the West Coast in preference to Esperance.

There are a number of factors influencing their thinking not the least of which is the fact that the railway line through to Kwinana is of a higher standard. Therefore rerouting their exports through Kwinana would enable them to move more tonnes more efficiently with the existing railway rolling stock.

The major advantages of the Kwinana line over the Esperance line are;

A heavier railway line (50kg/m versus 40kg/m) enabling heavier loads and greater track speeds,

Better gradients ensuring greater speeds and better fuel economy,

Better quality sleepers and ballasting further assisting overall performance.

The end result of the above advantages is that Westrail is able to offer better capacity and quicker turn around times on the Kwinana line. This means better utilisation of the rail rolling stock and hence the potential of enhanced economic viability for the mining operation. Obviously the rail operations are only one component impacting on the performance of the mine. It may ultimately prove critical in the company deciding whether or not to relocate to Kwinana. (A report carried out for the Port Authority by an independent consultant is attached)

ISSUES RAISED BY THE DIFFERENCE IN TRACK STANDARDS

Of major concern to the Esperance Port is the possibility that it could loose a significant amount of business because it is served by a lower standard rail line.

Of equal concern is what seems to be the situation where significant funds are being allocated through the Australian Rail Track Corporation to improve the nations major inter city rail lines, Brisbane through to Perth, while the regional or spur lines are ignored.

Should such a situation continue to unfold there is little doubt that the spur lines will ultimately loose out to the National system. This is turn will lead to a decline in regional development and a drop off in economic activity in the regional areas.

THE POTENTIAL IMPACT ON THE GOLDFIELDS ESPERANCE REGION

Should the iron ore exports be lost to the region the immediate impact would be the loss of approximately 35 direct jobs in the town of Esperance. It is also anticipated that other positions would be lost to the region as track maintenance and administration people were relocated to other areas to meet the revised needs of the system.

In the longer term the overall viability of the Esperance to Kalgoorlie rail line would be called into question due to the relatively small tonnage's remaining on the line.

The consequences of the closure of the line would have both long term and short term impacts.

Short Term

Fuel Imports

Approximately 220,000 tpa of diesel fuel is transported by rail from Esperance to the Goldfields principally for use in the mining industry. Should this fuel be carted by road transport it would involve about 3670 truck movements per annum based upon 60 tonne road trains.

Nickel Concentrates

Approximately 150,000 tpa of nickel concentrate is currently railed to the Port at Esperance. Should this fuel be carted by road it would result in about 1670 truck movements per annum based upon 90 tonne road trains.

Long-term

In the long-term it would be almost inevitable that the companies involved would seek out more cost effective transport options.

For example the fuel company may find it more economic to rail the fuel from Kwinana. Likewise the Mining Companies may look to rail to Kwinana or road freight to Geraldton as better options.

There is little doubt that the Goldfields region is resource rich with significant potential for growth. The benefits of such growth could in large part be lost to the region if the rail system is uncompetitive or has been closed down.

RAIL REFORM AND REGIONAL DEVELOPMENT

Rail reform in Australia has the potential to deliver considerable economic and social benefits to the Community. Unfortunately to date the reform has tended to be focussed on the National, City to City, system to the detriment of those rail systems serving the regional areas.

August 1998

Kalgoorlie - Esperance Railway

report to the

Esperance Port Authority

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Railway to the Port of Esperance

1. Introduction

This report is a preliminary assessment of the ability of Westrail's eastern railway system to service the Port of Esperance (the Port). The focus is on:

Operational capacity, particularly as effected by track condition; and
Track upgrade needs and costs.

2. Synopsis

The major user of the railway is also a prime customer of the Port. But the railway services this customer inefficiently in that track condition imposes costs on the customer; particularly heavy fuel consumption and poor utilisation of rolling stock.

Most of the answer is to upgrade the track at a cost of about $35 million. This will, however, need to be accompanied by other low cost capital and operational initiatives. Accomplishment of the latter might, however, require some review of the way customers acquire railway services.

3. Situation

The Esperance branch line is fed from the interstate main -line and the Leonora branch. The predominant traffic on the Esperance branch is iron ore sourced from Koolyanobbing (1.2 MVy). Other rail traffic on the branch is a 3 day/week freighter carrying imported fuel and mineral exports and spasmodic grain trains. This traffic is not significant in relation to the iron ore. Prima facie the business viability of the Kalgoorlie - Esperance railway depends on retaining the Koolyanobbing Iron Ore (KlO) business.

It is possible that KlO output will be increased to about 3.5 MVy. This might, however, be exported via Kwinana instead of Esperance. If this happens, the economics of the Esperance branch will be badly compromised and threaten the remaining traffic on that branch.

4. Koolyanobbing Iron Ore

KlO's strategy will, of course, be determined by the overall economics of its total supply chain to its customers. Railway line-haul costs are only part of this. It is, however, likely that the railway costs are a material part of the economic equation.

In this context, the prime Esperance railway requirement seems to be to match the Kwinana alternative in terms of rolling stock utilisation. The minimum engineering and operational needs are:

23 t axle load (for competitive tare:payload); and
Cycle time of 24 h/train (for competitive rolling stock utilisation)'.

' Currently, the loaded train is restricted to 50 km/in on the Esperance branch primarily because of track standard. The empty train is limited to 70 km/in because of instability of the wagons.

5. Operational Requirements

It is provisionally calculated[2] that the cycle time for KIO can be 24 hours. This conclusion is based on the following key assumptions:
The Esperance branch line is upgraded to allow maximum speeds loaded of 80 km/h;
Trip servicing of locomotives and wagons is carried out at Esperance[3] during unloading time;
Wagons are modified[4] to allow empty speeds of 100 km/h;
Current generation 4000 hp general freight locomotives are used; and
Crew availability is determined by Esperance line train operations[5].

6. Track Upgrade

Original construction standards applying on most of the Esperance branch do not permit contemporary operating practices or KlO's operating needs6. The 336 km Widgiemooltha - Esperance section is the original narrow gauge line converted to standard gauge. Rail, formation and ballast structure remain unchanged.

The primary weakness is the 40 kg/m section "Commonwealth" rail. This is weak in beam strength, resulting in large deflections and high stresses on the ballast and formation; the degradation of which is exacerbated by inability of the rail section to resist load deflection.

The economic basis of an upgrade to KIO standards is, therefore, replacement of the existing 40 kgim rail[7] with 50 kg/m rail[8.] The cost of this will depend on whether used rail[9] can be acquired. Used rail might be availabie10, although this will be in demand for other works. It is provisionally assumed that 65% of the requirement will be met with new rail.

Some other work is needed. It is necessary to increase ballast depth in selected areas mainly south of Salmon Gums in sand country. This selective ballasting will apply to about 20% of track south of Widgiemooltha. Ballasting will damage about 10% of the old timber sleepers which will need to be replaced.

2 Using a computer based train performance simulator applied to the existing track profile (gradients and curves).
3 ie The train runs non-stop from the Perth - Kalgoorlie mainline onto the Esperance branch.
4 By installation of constant contact" side bearers; which is a relatively inexpensive modification.
s ie Is not subject to wider system and roster considerations related to the east-west mainline.
6 The Kalgoorlie - Widgiemooltha section (55 km) is 50 kg/m rail to the standard of the Kalgoorlie - Koolyanobbing mainline; and meets KIO needs.
7 40 kg/m rail generally restricts trains to 50 km/in at 22 t axle load.
B Minimum requirement is 47 kg/m. It is noted that the Kooiyanobbing - Kalgoorlie line is to be re-railed with 60 kg/m rail.
9 Used rail would be 94 Ib/yd = 47 kg/m.
10 Westrail plans to re-rail the Kalgoorlie - Koolyanobbing line. This replaced rail would suffice for about 50% of the Esperance branch upgrade. Queensland and NSW re-rail 47 kg rail every year.

Indicative cost estimates to upgrade the Esperance branch to the KIO requirements are:

Component	km	SM
Rail	336	30.0
Ballast	67	1.1
Sleepers	7	0.8
Road Xings		0.3
Contingency		2.8
Total		35.0

Cost will vary according to availability of used rail, and is estimated at:

$M 40.7 if all replacement rail is new; and
$M 24.1 if all replacement rail is used rail.

7. Other Major Competitive Factors

7.1 Fuel Consumption The Kwinana alternative to Esperance is about 27% more efficient in terms of fuel consumption. Of this, about ,/3 reflects the track profile with the balance attributable to 17% extra distance[12].

Parameter	Unit	ESP	KWI
Consumption	i/trip	19242	15154
Distance	km	579	497
Efficiency	l/kgtk	3.7	3.4

Track works can improve fuel efficiency[13].

7.2 Mainline Track Capacity

The interstate mainline Kalgoorlie - Kwinana is reaching saturation at critical times. This developing situation reflects an increasing number of interstate freight operators and increased country passenger services'4. Proposals to operate metropolitan services in the Kwinana area threaten to exacerbate this. Mainline user charges will tend to rise to reflect capacity demand and planned expenditure on re-railing, concrete sleeper installation, and replacement of life expired signal systems. In this environment, cycle times and track access reliability will be more fragile than experienced on an upgraded Esperance branch line.

" ie Steeper hills and tighter curves

12 Rail distance from Koolyanobbing - Kwinana 495 km, Esperance 586 km. '3 Train performance simulations have identified areas where minor curve straightening and grade peak lopping would alleviate train braking and acceleration; and allow 'momentum' running to minimise application of locomotive power (ref Attachment 3).

'4 The new "Prospector".

8. Westrail

The economic objectives are to minimise rolling stock turnaround and to optimise investment and operating costs. There are some possible operating improvements which would contribute to these ends. These might not, however, get ready endorsement from the current rail operator, Westrail.

- The economic place to service rolling stock is at the Port. This is the place where time best permits access to locomotives and wagons, and where this will cause least delay. The Port has adequate space and workshop support. Trip servicing of the railway equipment passing through Esperance could be handled by an establishment of 2 to 3 tradesmen given the port facility as a base.

For similar reasons, locomotives should be fuelled at the Port. Fuel prices can be expected to be no higher than at Kalgoorlie.

For both logistical and social reasons, the Port is to be preferred to Kalgoorlie as the base for locomotive drivers. It is also likely that more appropriate conditions of employment and productivity could be arranged with crews outside the Westrail industrial agreement.

. It is uneconomic[15] to use other than current generation locomotives.

These improvements, should be a condition for a railway operator doing business with the Port's customers. If the track is to be upgraded it will be necessary to ensure that railway services will be of a quality appropriate to support and justify the rail investment One way to ensure this would be for railway users to seek bids for the business from the wider railway market'5. The Port might assist by coordinating this process.

9. Economics

The relative competitiveness of the Esperance railway depends on the commercial considerations facing customers. These transcend railway issues and are beyond the scope of this report. It is, however, noted that, in the case of K10 as a customer of the Port of Esperance, the main comparative considerations are:

Disadvantage of costs of track upgrading and high fuel consumption; Whether track access charges for the Esperance branch must include capital charges on upgrading costs or are either current market rates or at track maintenance cost (both being about 0.4 c/gtk); and Advantage of established port terminal infrastructure and more certain access to track capacity.

It is, however, possible to postulate that the alternative routes will bear similar rail haul costs on the basis of the following assumptions:

The Esperance branch is upgraded for 23 t axle load and 24 hour turnaround;
Turnaround through Kwinana would be 28 hours; . K10 ships 3.5 Mt/y; and
Capital charges are not applied to the Esperance branch, and current rates still apply to the east - west mainline.

[15] Because of fuel and maintenance cost.

[16] The prime bidders would be National Rail Corporation, Australian Southern Railroad, WLine and Westrail.
The relative costs of KIO haulage are then estimated to be:

Cost	to ESP	to KWI
	Slt	$/t
Locos	1.36	1.75
Wagons	1.11	1.36
Crew	0.50	0.58
Fuel	1.94	1.48
Admin	0.45	0.40
Track	3.52	3.35
Total	8.88	8.92

10. Track Finance

Commercial revenue from the Esperance railway does not cover track capital costs in addition to "above rail" and track maintenance costs’7. Finance for the track upgrade will need to be by way of government grant.

It is possible, however, that government can justify an investment in the Esperance railway in terms of:

Alternative requirements for road infrastructure and modifications to the Esperance town environment and port; or Railway and environmental expenditure associated with increased rail traffic in the Kwinana area.

1 1. Recommendations

It is recommended that the Esperance Port Authority:

a) Petition the WA Government to upgrade the Esperance Railway primarily by rail replacement from Widgiemooltha to Esperance;

b) Support the upgrade proposal with a calculation of the public costs of the rail and . road alternatives; and

c) Seek to assist railway users obtain competitive bids from operators to supply railway services.

Attachments:

1. Train Paths
2. Engineers Report
3. Track Profiles and Train Speeds

’7The Esperance railway shares this characteristic with almost all general freight railways in Australia.