

**Comments on the Draft Integrated Impact Statement (IIS)
re Gunns Ltd proposed pulp mill at Bells Bay**

to the Tasmanian Resource Planning and Development Commission

P.G. Laird, September 2006

The submission draws on research conducted at the University of Wollongong and shall be restricted to transport considerations. It does not necessarily reflect the views of the University. It also takes into account observations made of a detailed inspection of the Tasmanian rail system in February 2005, and, a visit to Tasmania in April 2006 looking at parts of at the Tasmanian road system.

1. The site of the proposed new pulp mill is noted as Bell Bay south of George Town in northern Tasmania. The cost is noted in the Executive Summary of the IIS at about \$1.4 billion and if approved could be operational by 2009. This summary notes eight major infrastructure items, but these do not include upgraded rail or road facilities. The summary notes a Bell Bay chip mill upgrade to include realignment of an existing rail spur, but it is not clear if this would assist rail receipt at the new pulp mill.
2. Although the Executive Summary of the IIS expresses a general preference to use rail - "wherever possible" is mentioned on page 46 - there is no firm commitment to use rail. In addition, the IIS notes impacts including the following:
 - a. Increased heavy traffic movements on local and regional roads.
 - b. Disruption to local and tourist traffic.
 - c. Increased exhaust fumes from heavy traffic increases.
 - d. Road safety.

However, the impacts of road transport appear to be understated in the IIS, and there does not appear to be any detailed consideration of external costs. This is despite the attention given to external costs as part of AusLink project assessment in the *National Guidelines for Transport System Management In Australia* released in November 2004 by the Australian Transport Council (Vol 2, Project Appraisal, page 87).

3. The negative impact of extended haulage of bulk commodities on public roads to both local amenity and tourism is well known. The impacts were well summarised by a NSW Coal Development Strategies Industry Task Force (1990, page 59): "*Road haulage has significant community costs including noise and dust pollution, increased energy usage, increased road maintenance, safety hazards, negative effects on tourism and complaints from local residents*".
4. An extreme example was provided in Wollongong NSW in the road haulage of coal. To quote in part (page 48)

"In 1983, Illawarra coal trucks were reportedly involved in fatal crashes at rates, per 100 million vehicle kilometres, of up to three times higher than NSW averages for all articulated trucks. During the eight years from 1978 to 1985, trucks hauling coal to

Port Kembla were reportedly involved in some 27 road fatalities. Further efforts by the NSW Government and the coal and trucking industry in the late 1980s, along with much road upgrading, lead to an appreciable improvement in safety in coal trucking. However, the upgrading of main roads used by coal trucks and other vehicles came at a large cost, estimated to exceed \$250 million.

"Other external costs of coal trucking to Port Kembla include road congestion in urban areas, air pollution, vibration, and noise. The noise from coal trucks was found to exceed NSW Government road side noise guidelines and was appreciably more than the noise from coal trains. Subsequently, extensive noise walls extending for several kilometres along Mt Ousley, and other roads used by coal trucks near residential areas in Wollongong City, were installed. "

5. More recent examples of concerns of road haulage are provided by both Victoria (Appendix A) and WA (Appendix B). In the WA case as noted on 15 August 2006 by Planning and Infrastructure Minister the Hon Alannah MacTiernan MP a new \$30m facility would cater for plantation timber and woodchips, resulting in a big reduction in road freight.

Of particular interest is that the WA Chip and Pulp Co. Pty Ltd (WACAP) will contribute \$8m being construction of, log loading infrastructure and associated works at Bunbury Port at a cost of \$6.71million; and construction of a rail siding at the Port of Bunbury at a cost of \$1.3 million.

6. The most extreme impact of road haulage of bulk commodities is a fatal crash involving a heavy truck. It is noted from the Australian Bureau of Statistics (ABS) Survey of Motor Vehicle Usage (SMVU) data that in Tasmania, that in 2004, articulated trucks drove 142m km which was 3.1 per cent of the distance driven by all vehicles (4561m km).

For 2004, data from the Australian Transport Safety Bureau shows that there were four fatalities in road crashes involving articulated trucks in Tasmania. This is 7 per cent of the 58 road fatalities that year. In the 17 calendar years to 2005, the corresponding percentage was 7.3 per cent (70 involving articulated trucks, 964 all vehicles).

It is clear that articulated trucks are over-represented in fatal road crashes.

7. The average unit cost on a national basis of road crashes involving articulated trucks is estimated by the writer¹ as 0.6 cents per net tonne km (net tkm) whereas the average unit cost of rail freight accidents is estimated at 0.03 cents per net tkm. The ratio is about 20 to one.

The Australasian Railway Association (2005 ²page 86) gives tables noting unit accident costs for freight varying from 0.32 to 0.7 cents per net tkm for road, and 0.024 to 0.03 cents per net tkm for rail, with mid range estimates 0.51 cents per net tkm for road, and 0.027 cents per net tkm for rail (with a ratio of about 19 to one).

¹ Laird (2005) *Revised Land Freight External Costs In Australia*, Australasian Transport Research Forum (ATRF) at patrec.org

² Australasian Railway Association Inc (2005) *The future for freight (with Port Jackson Partners)*

8. Other external costs identified in an Australian Rail Track Corporation (ARTC) Track Audit³ are air pollution, noise, road congestion, and greenhouse gas emission costs along with un-recovered road system costs. Further information is given in Appendix C which shows recently revised unit estimates as year 2000 costs of 2.75 cents per ntkm for road haulage in urban areas, 1.98 for road haulage in non - urban areas, 0.43 for rail haulage in urban areas, and 0.17 for rail haulage in non - urban areas.

These costs, adjusted to June 2006 values (using ABS CPI showing a 22.27 per cent increase since June 2000) are approximately 3.36 cents per ntkm for road haulage in urban areas, 2.42 for road haulage in non - urban areas, 0.53 for rail haulage in urban areas, and 0.21 for rail haulage in non - urban areas.

9. In the case of B-Doubles with 9 or more axles the National Transport Commission acknowledged in 2005 during the third determination of road user charges for heavy vehicles an average subsidy of \$8400 per year. Assuming an average load of say 40 tonnes 50,000 km per year with no backloading, the average unit subsidy is 0.42 cents per net tonne km (net tkm). Thus, for a haul of 100 km the subsidy is \$0.42 per tonne. This estimate is conservative.

10. The Gunn's Chip Mill Sidings, on a spur off the Bell Bay Line near Longreach, are at 41.7km from Launceston. Much of the Launceston - Bells Bay railway line was relatively recently constructed by Tasmanian standards and at the expense of the State Government. The section was opened in two stages by 1974.

11. The Tasmanian rail track is due to be upgraded following a special \$78m grant by the Australian Government and, an ongoing contribution by the Tasmanian Government.

12. The IIS notes the proponent currently has a Woodchip Mill at Hampshire near Burnie producing about 1.2 million tonnes per annum (mtpa). It appears that the IIS does not specifically indicate whether road or rail haulage will be used between this chip mill and the new pulp mill.

The Hampshire Woodchip Mill is 35.2km south from Burnie (on the Melba Line) which is 179.4km from Launceston. The total rail distance from Hampshire to Bell Bay is some 256 km. Assume road haulage via Launceston is a similar distance and the both modes would require say urban hauls of 10 km.

Using the 2006 external costs cited above, the external cost for each tonne of road hauled woodchips is about \$6.29 per tonne as against \$0.57 per tonne for rail haul woodchips (a factor of more than ten to one). This suggests that, for chips moving between the Hampshire chip mill and the new pulp mill, any decision by government not requiring the use of line haul rail and the company choosing to use road for the entire haul, there is a net increase of external costs of about \$5.70 per tonne in 2006 terms.

For 1.2 mtpa of woodchips moving between Hampshire and, the difference in external costs between road haulage and rail haulage is then \$6.84 million per annum in 2006 terms.

³ ARTC (2001) Booz.Allen and Hamilton Appendices *Interstate Rail Network Audit*

In 2015 terms, compounded at 3 % pa from 2006 giving an increase of 30.5 per cent, the difference is about \$7-40 per tonne. At 1.2 mtpa, this would result in external costs of \$8.88m pa.

13. It is noted that other road routes may be possible, including Devonport - Moriarity - Harford - Exeter (West Tamar H'way) - Batman Bridge - Longreach, which may be shorter than via Launceston. However, the conclusion that road haulage over this route will incur appreciably higher external costs than rail haulage via Launceston still holds.

14. It is understood that Hampshire is not "the major source" for supply to the Pulp Mill which will use 3.2 to 4 mtpa of woodchips. Other primary contributing sources may include the Triabunna chip mill. The use of rail should be given more attention from such sources. In addition, wood from coupes to the east of Scottsdale and especially the south, such as the Targa coupe, which if going be road would be forced onto the Tasman Highway and through Launceston could instead be hauled to existing North East rail heads such as Blumont (52.6kms.), Scottsdale (63.3kms.) and Lings (69.4kms.).

Consideration of consent conditions that would require a balanced use of rail, where viable from a 'triple bottom line' approach including external costs and not mere financial costs, would ease the trucking pressure of a major tourist thoroughfares and other roads. One such are the Scottsdale - Bridport - Pipers River - Bell Bay roads. These are known as "The Wine Route", due to the vicinity of a large number of popular vineyards in the area.

15. If road transport of bulk or hazardous chemicals is to be used, a more detailed case should be made out by the applicant before permission to use it is granted. This should address issues including measure to improve road safety, reduce environmental impact, and an ongoing contribution to road maintenance.

16. In respect of road safety, appropriate measures used in other jurisdiction include truck operator accreditation, financial contribution to improved road facilities, and mandatory the use of tachographs and "smart cards".

These "smart cards" on arrival at a chip mill are presented to a check inspector. In some jurisdictions such as Canada, the forestry company and trucking company have a contract that provides for immediate cessation of service if there is any record of speeding, or driving excessive hours. Measures to reduce environmental impact include specification that go beyond existing regulations for exhaust emissions and preclude the use of Jacob brakes are also possible.

17. It is recommended that consent conditions should specify in detail where rail is to be used in supplying feedstock to the pulp mill. There are ample precedents in both Queensland and New South Wales of consent conditions requiring the use of rail for moving bulk commodities such as rail.

If for any part of moving feedstock to the mill, or an assembly point, road transport is to be used, both an upfront charge to improve road safety along the haulage route and ongoing road use contribution charges should be levied. These should be a fee in so much per tonne that reflects the distance hauled, the road traversed (with a higher fee for use of roads of light construction where the road damage is higher) and amount of under-recovery from present National Transport Commission (NTC) charges.

APPENDIX A Support for freight on rail in Victoria

10 August 2006, local paper

HORSHAM councillors will maintain their push for the retention of rail-freight services in country Victoria after attracting 'overwhelming' statewide support on the issue.

Councillors, responding at a meeting on Monday night to a stream of municipal and political responses, spoke at length on a need for State Government commitment.

Horsham Rural City Council wrote to regional municipalities and politicians last month in a bid to spread awareness of what it considered a deteriorating rail-freight system.

Council chief executive Kerry Shade advised the council of the depth of response. We've had a tremendous amount of phone calls on this one, all confirming support. And it's certainly been taken up by the major political parties," Mr Shade said. "There is concern what the impact will be on roads if major freight lines are closed."

...

Cr Gary Bird said rail-line maintenance had fallen away considerably since privatisation. "If rail was handed back to the government they would be looking at a massive upgrade bill and be forced to close it," Cr Bird said.

"Of course that then puts pressure on the freight system and we get more trucks on the road. If the railways go, the roads deteriorate. They either have to fix the rail up or keep fixing the roads up, there is no way out. We have to push the ball on this one."

Mayor Cr Roslyn MacInnes: "I too think that this is what happens when you take your eyes off the ball. The Liberal Government saw it as a way to cut costs, to plug a monetary hole. But it's been to the detriment of our state. The restoration of our train-passenger services has been outstanding. But we're increasingly suffering from freight on our highways. It's really time we have freight back on the railways and not on the road."

APPENDIX B WA Planning and Infrastructure Minister Media Release 15/8/06

The [Western Australian] State Government has today signed an agreement paving the way for \$14.45 million to be spent constructing the Greenbushes Intermodal Facility and other associated rail infrastructure.

Planning and Infrastructure Minister Alannah MacTiernan said the facility would cater for plantation timber and woodchips, resulting in a big reduction in road freight.

"Over a 10-year period, more than seven million tonnes of timber freight will be transferred from road to rail in the South-West," Ms MacTiernan said.

"The equivalent of 144 heavy haulage trucks will ultimately be taken off the region's roads every day."

The Minister said this was an innovative partnership between the State Government and WA Plantation Resources, Australian Railroad Group and WestNet Rail.

Ms MacTiernan said the project would see the upgrading of railway infrastructure and the construction of a new woodchip train loading facility at North Greenbushes.

"Under the initiative, woodchips processed at Manjimup will be trucked to the new train loading facility at North Greenbushes and railed to Bunbury Port for export," she said.

A new log transport rail service will be introduced to move blue gum plantation logs sourced from the Boyup Brook district.

"The logs will be transported by rail to Bunbury Port where they will be processed by the new WA Plantation Resources woodchip mill," Ms MacTiernan said.

South-West MLC Adele Farina and Collie-Wellington MLA Mick Murray welcomed the agreement.

Ms Farina said residents of Balingup, Kirup, Boyanup, Donnybrook, Dardanup and Bunbury's outer suburbs would see fewer trucks passing through their townships.

The Minister said the project involved outstanding co-operation between the Government and the plantation timber and rail transport industries.

"We now expect to be able to develop a vital intermodal hub in the South-West region that will be able to cope with the growing freight demands of the plantation timber industry," she said.

"This project is the first of its kind in Western Australia to involve a public/private partnership in a venture with privatised rail."

The allocation of funding will be as follows:

- WestNet Rail Pty Ltd - an upgrade of the track between North Greenbushes and Bunbury at a cost of \$6.44million;
- WA Chip and Pulp Co. Pty Ltd (WACAP) - construction of train loading facilities at Greenbushes, log loading infrastructure and associated works at Bunbury Port at a cost of \$6.71million; and
- WACAP - construction of a rail siding at the Port of Bunbury at a cost of \$1.3million.

"A key feature is that Government funds will be spent only on improving State-owned assets," Ms MacTiernan said.

Ms Farina said the majority of Government spending on this project would be within the South-West region, benefiting local contractors.

Expected construction will begin in October with the facility due to start operating in mid-2007.

APPENDIX C Revised Land Freight External Costs in Australia

Executive Summary of a Australasian Transport Research Forum Paper Sydney September 2005 Philip Laird, University of Wollongong

This paper outlines some estimates of external costs of land freight transport published in Australia since 1990. The earlier reports include those of the former Inter-State Commission, the National Transport Planning Taskforce, the Victorian Environment Protection Authority and the Bureau of Transport and Regional Economics with its 1999 report *Competitive Neutrality between road and rail*.

With the increasing land freight task and projections for future growth, estimates of external land transport costs have been of increasing interest to government. Recent examples include Queensland Transport, the Victorian Department of Infrastructure, the NSW Department of Transport study of grain transport options, the Australian Transport Council's 2004 *National Guidelines for Transport System Management*, and, the 2003 Austroads report *Valuing Environmental and Other Externalities*. A New Zealand Ministry of Transport *Surface Transport Cost and Charges* study released in 2005 is also of note.

The paper gives particular attention to six external costs of road and rail freight operations in both metro and non-urban areas identified for the Australian Rail Track Corporation's 2001 Track Audit. These external costs are accidents, air pollution, noise pollution, greenhouse gas emissions, congestion, and incremental road damage. The results of two studies conducted for Queensland Transport in 2001 and 2004 that provided updated estimates for each of the Track Audit externalities are discussed. The revised estimates of unit costs include:

1. Australia wide accident costs of 0.6 cents per net tonne kilometre (ntkm) for road freight moved by articulated trucks and 0.03 cents per ntkm for rail freight.
2. An average cost of air pollution in capital cities of 0.65 cents per ntkm for freight moved by articulated trucks and 0.22 cents per ntkm for rail freight moved by diesel electric locomotives. These estimates are based on PM10 emissions as discussed in two BTRE reports *Health Impacts of transport emissions in Australia: Economic costs* (2005) and *Urban pollutant emissions from motor vehicles: Australian trends to 2020* (2003).
3. Noise in capital cities - 0.22 cents per ntkm for road, 0.12 cents per ntkm for rail.
4. A greenhouse gas cost (based on \$25 per tonne of carbon dioxide) of 0.18 cents per ntkm for road freight moved by articulated trucks and 0.06 cents per ntkm for rail freight.
5. Road congestion (metro only) 0.10 cents per ntkm for road. -
6. Pending the third determination of road user charges for heavy vehicles of the National Transport Commission, under-recovery of road system costs from articulated trucks at 1.0 cents per ntkm.

Table 1 Recommended revised Australian land freight externality costs

Externality Measure	Road (c/ntk)	Rail (c/ntk)
Accident Costs	0.60	0.03
Air pollution		
- Metro	0.65	0.22
- Rural	0.13	0.04
Noise pollution		
- Metro	0.22	0.12
- Rural	0.07	0.04
Greenhouse gases	0.18	0.06
Congestion (Metro only)	0.10	-
Increased road maintenance	1.00	
TOTALS		
Metro	2.75	0.43
Rural	1.98	0.17

Reference: As per text. Note that road maintenance costs for roads of light construction are higher, also that any rail track subsidies may need to be taken into account.

It may be noted that, excluding unrecovered road system costs, the metro articulated truck road external cost of about 1.75 cents per net tonne km is less than half the approximate value cited in the above Austroads report of some 4 cents per net tonne km.

Lower unit costs are given for air pollution and noise for road and rail haulage in non-urban areas.

Even if the users of land freight transport are not required to meet their full external costs, such costs should be fully accounted for when major infrastructure investment decisions are being made. Based on the information in this report, the values in Table 1 are recommended.

It is also of note that road vehicle operators using petrol pay an appropriate de facto externalities charge through fuel excise without rebates, and the assigned average health costs from car use (1.3 cents per km) in the state capital cities equates to about 12 cents per litre of petrol used.

However, following introduction of the New Tax System in 2000, the operators of heavy vehicles were granted conditional rebates for the use of diesel, which have since been further extended to effectively require no payment of external costs (cf about 20 cents per litre prior to 2000).