ALTA

Australian Livestock Transporters Association

Carrying a competitive economy into tomorrow

Getting road freight pricing, investment in roads and regulations right for Australia's future

A submission to the Productivity Commission Inquiry into Road and Rail Freight Infrastructure Pricing

May 2006


Livestock Transporters & Country Bulk Carriers
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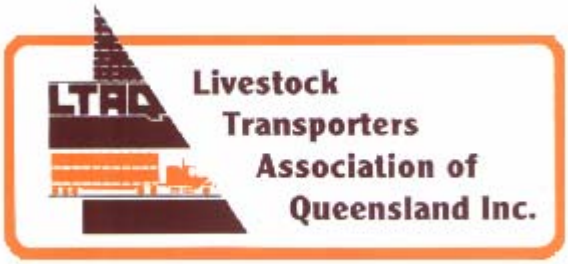
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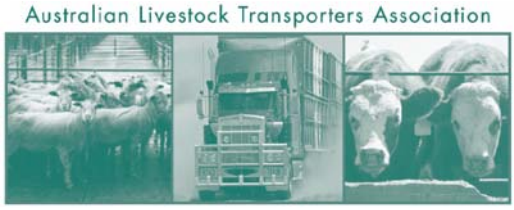

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EXECUTIVE SUMMARY

1 The Australian Livestock Transporters Association (ALTA) is the peak rural road transport industry group, representing the interests of almost 800 member companies from all States of Australia. The ALTA welcomes the opportunity to provide input to the Productivity Commission Inquiry into Road and Rail Freight Infrastructure Pricing.

POLICY POSITION

2 The ALTA fully supports the development of efficient charges for the use of Australia's road infrastructure, provided these charges are based on a sound methodology that is transparent and provided such charges are not used as a source of tax revenue for governments.

3 However, the ALTA believes that decisions regarding fees and charges for the road transport industry, and the timing of any changes in these fees and charges, needs to have consideration of the effects of non-price barriers on the efficient provision of road transport services.

4 The ALTA believes these non-price barriers impose a significant "tax" on the road transport sector and, hence, users of road transport services. The non-price barriers arise from the failure of some state governments to adopt best-practice regulation of road users. They also result from the presence of "infrastructure bottlenecks" that have stopped certain roads being uprated for use by modern multi combination vehicles.

5 Until these non-price barriers to the efficient provision of transport services in Australia are removed, the ALTA believes it would not be appropriate on economic efficiency grounds to increase road user charges even if such charges were designed to efficiently recover costs associated with the use of roads in Australia. To do otherwise would further penalise efficient export orientated industries such as the meat industry and so such fee increases would not be beneficial for the Australian community.

6 The ALTA has reached this policy position after undertaking case studies to identify the magnitude of the non-price barriers to the efficient provision of road transport services. We undertook a case study of the livestock transport requirements at Fletcher International Pty Ltd at Dubbo in New South Wales. The case studies show that the non-price barriers are equivalent to a "tax" of between 15 to 20 per cent on the transport of livestock to Dubbo (paragraph 151).

7 In contrast, preliminary calculations undertaken for this inquiry indicate that the introduction of road-user charges as recommended by the National Transport Commission (NTC) in its third determination would result in an increase in the cost of transporting livestock of under 0.5 per cent (paragraph 59).

8 The ALTA believes that even a small increase in charges of less than 0.5 per cent would not be beneficial for the Australian economy as it would exacerbate the negative economic effects of the very high tax non-price barriers impose on the livestock transport industry.

THE CASE STUDIES

9 Fletcher International Pty Ltd at Dubbo is disadvantaged because New South Wales is the only Australian state that does not allow "livestock loading", which involves ensuring livestock are comfortably and securely constrained in the trailers. In New South Wales the weight of livestock loaded on the truck must not result in the gross weight of the truck exceeding proscribed limits.

10 For a traditional 6 axle articulated semi trailer the ALTA calculates that livestock loading would allow an additional 3 tonnes of livestock to be carried per trip. Given typical trailer weights the additional 3 tonnes of livestock would represent a 14 per cent increase in load (paragraph 143). Provided the truck was fitted with "road friendly" suspensions the additional weight per trip would not cause additional road wear and may even result in less road wear (paragraph 148).

11 Fletcher International Pty Ltd at Dubbo is also disadvantaged by infrastructure bottlenecks that effectively prohibit the use of modern combination vehicles to transport livestock to Dubbo.

12 We estimated the cost of this prohibition in our case study. Our case study involved first identifying the vehicle combinations that are undertaking the existing livestock transport task at Fletcher International at Dubbo (paragraph 111). The second stage of the case study involved the identification of the infrastructure bottlenecks that were impeding the uprating of roads to enable modern multi combination vehicles to transport livestock to Dubbo.

13 The main constraints to uprating of the roads identified in the case study include inadequate length of turning lanes, short merging lanes, low bridge heights and insufficient line-of-sight for multi combination vehicles to undertake turns without disrupting through traffic (paragraph 119).

14 If the identified impediments to uprating of roads were removed it was estimated that the existing cost to transport livestock to Fletcher International at Dubbo could be lowered by just over 5 per cent per year or just under [redacted] per year or [redacted] million in net present value terms at a discount rate of [redacted] per cent (paragraph 125).

15 Thus the Australian community could spend at least $4.8 million in road works this year to allow uprating and the Australian community would still be better off than living with the existing situation.

16 The ALTA believes the infrastructure bottlenecks identified in the case study are not an isolated occurrence and meat processing facilities throughout Australia also face higher livestock transport costs as a result of these sorts of bottlenecks.

17 The cost of such bottlenecks could be substantial. For example, if the road transport cost savings to Fletcher International from removal of the infrastructure bottlenecks were available to other meat processors in Australia we calculate that Australia could spend almost $400 million on removing rural infrastructure bottlenecks and the Australian community would still be better off (paragraph 128).

18 In total, the non-price barriers to the efficient provision of road transport services to Fletcher International Pty Ltd are estimated to have raised its livestock transport costs by between 15 to 19 per cent. As livestock transport costs account for about 5 per cent of the ex works cost of the meat and meat products industry, the non-price barriers may have increased the ex works cost of Fletcher International's operations at Dubbo by up to 1 per cent.

19 Because export markets for meat products are highly price sensitive it is likely that a 1 per cent increase in the ex works cost of meat products would lead to a substantial loss in export sales. This loss could be as high as 12 per cent of Fletcher International Pty Ltd existing exports (paragraphs 153 and 154).

THE SOLUTION

20 What can be done? The ALTA believes that its analysis reveals significant design flaws in the institutional architecture of road transport policy, planning and management in Australia at all levels and across all jurisdictions (paragraphs 130 to 137).

21 For example, one arm of government can propose and fund a road upgrade but lack of regulatory "access" can mean the new infrastructure may just sit as an expensive museum piece, playing less than its potential role in driving our economy to its economic limits. Overall, the failure to ensure that each government area dealing with road transport matters has at least some basic appreciation of the whole leads to lost opportunities. Some major lost opportunities can be seen in the ALTA's case study.

22 The ALTA believes the situation can be significantly improved by strengthening the role the NTC plays in pricing and regulation of the road sector. In particular the ALTA believes the NTC Act 2003 should be amended:

- to require that the Board of the NTC include at least one representative from the Road Transport Industry and one representative for local councils; and
- to oblige the NTC when providing advice to the Australian Transport Council on matters related to the pricing and regulation of the road transport sector that it be specifically required to:

- comment on any infrastructure or other impediments that would impede the implementation or adoption of the proposed change;

- document the expected cost to a typical operator associated with the implementation of any proposed pricing or regulatory changes; and

- document the effects on the national economy of proposed pricing and regulatory changes. This should include the impact on the quantity of exports, national output, numbers employed and a measure of economic efficiency.

23 The ALTA also believes that Australia will continue to under invest in uprating roads because there is a “free rider“ problem associated with undertaking road improvements and undertaking road “uprating assessments” (see section 5.2.1). Accordingly the ALTA recommends that:

- Monetary assistance be available through AusLink to undertake the preparation of proposals for funding under AusLink’s rural roads program. Funding should be available to individuals, corporations or local councils. To preclude exploitation of this mechanism funding could be retrospective and paid on successful proposals based on a sliding scale of the value of the funded road investment.

1. THE ALTA'S STRATEGIC OBJECTIVES AND ITS MEMBERSHIP

24 The Australian Livestock Transporters Association (ALTA) is the peak rural road transport industry group, representing the interests of almost 800 member companies—from single truck operators to operators that run large fleets of up to 100 trucks—in all States of Australia. It has, over the course of more than 20 years, provided strong and considered policy advice to all governments on rural road transport matters and has led the industry to propose and implement many key reforms in new and efficient vehicle access, road infrastructure reforms, tax reform in road transport, load regulation, driver health and welfare and animal welfare reforms.

25 The ALTA's strategic objectives are:

- to ensure the productivity, welfare and future viability of the industry and to assist its members to adapt to a changing rural transport environment;
- to influence good road transport policy outcomes by emphasising to governments, regulators and wider industry the vital link that road transport plays in the success of Australia's meat, livestock and grain industries; and
- to promote a sustainable and safe rural road transport sector into the future by advocating efficient pricing mechanisms, effective rural road infrastructure spending and productive regulatory reform.

26 Australia's meat and livestock industry is the largest rural export industry, worth almost $15 billion dollars per annum to Australia. With the exception of a small (and diminishing) amount of livestock transport undertaken on rail in southern Queensland, ALTA members and their industry carry the daily output of the entire Australian livestock industry, every day of the year.

27 The key role livestock transport plays in the meat and livestock industry is indicated by input output data released by the Australian Bureau of Statistics[1]. This data indicates that road transport services provided directly to the wider meat and meat products industry in Australia were equivalent to about 5 per cent of the basic value of output provided by the meat products industry in 1988–99. While this may seem to be a small component of costs in the meat and meat products industry, even small changes in the productivity of the livestock transport sector could impact significantly on the output of the meat and meat processing sector because the meat and meat products sector is "trade exposed". In the Australian Bureau of Statistics input output table referred to above, just over 30 per cent of the output of the meat and meat products industry was exported in 1998–99.

1 Australian Bureau of Statistics 2004, Australian National Accounts: Input-Output Tables—Electronic Publication, 1998–99, publication number 5209.0.55.001, Canberra June. (Tables 27 and 2).

28 The ALTA recognises the key role it plays in maintaining the competitiveness of Australia's meat processing sector. This is why in 2006 the ALTA is building a stronger profile within the meat industry to drive holistic policy outcomes that will improve the productivity of this $15 billion per annum industry of which it is the principal logistical element.

1.1. ALTA Members and Bulk Transport

29 Many ALTA members also carry bulk grains and fertilisers for the farming community. The Australian grains industry is worth around gross value of broadacre agriculture was 14.3 billion in 2003–04 per annum[2]. While significant amounts of wheat in particular are still transported by rail, a major portion is carried efficiently by bulk trucks at some point in the supply chain. Thus all rail haulage of grain entails intermodal movements.

30 Like livestock carriers, ALTA bulk carrier members are as much affected by grain industry issues as they are by trucking issues. The ALTA is therefore also striving to achieve a greater profile in the wider bulk grains industry, to drive better outcomes for the entire grain-growing and transporting community.

1.2. ALTA and this Inquiry

31 The ALTA welcomes the opportunity to make a submission to this inquiry. It views this inquiry as a major opportunity for governments at all levels to take a more strategic view of the freight task facing rural Australia and how that task might best be met in a way that promotes continued cost-effective productivity improvements, ongoing improvements in road performance, and ultimately improved welfare for the Australian community.

32 The ALTA outlines in the following section its support for the current terms of reference and briefly summarises the findings of case study work it has undertaken to shed light on issues raised by the Commission in its Discussion Paper. Section 3 outlines the role road transport plays in the Australian economy and in the agricultural sector. Section 4 documents innovations in livestock transport over the last 60 years and calculates the productivity improvements this innovation has generated. Section 5 presents the results of a case study that supports the ALTA's proposition that inadequate infrastructure is the major non-price barrier to the efficient transport of livestock in Australia. Section 6 concludes the submission.

2 Australian Bureau of Statistics, 7503.0 - Value of Agricultural Commodities Produced, Australia, 2003–04

2. THE TERMS OF REFERENCE FOR THE INQUIRY

33 The ALTA fully supports the focus of this inquiry which was recently summarised as requiring the Commission to identify:

- options and timeframes for introducing economically efficient road and rail freight infrastructure pricing;
- non-price barriers to competition and efficient operation of road and rail transport; and
- distributional impacts of any recommended charges, especially for regional and remote communities.[3]

34 The ALTA believes that the inquiry is timely as it provides a forum to highlight and evaluate the economic consequences of the significant "non-price barriers" that the road transport sector—and, in particular, livestock and bulk carriers—encounter on a daily basis. These include:

- the failure of some state governments to adopt best-practice regulation of road users. Examples include the failure of New South Wales to adopt flexible loading arrangements—particularly at harvest time—that other states adopt as a matter of course, as well as more productive and efficient livestock loading regulations that are similarly embraced elsewhere with positive results; and
- the failure to provide appropriate infrastructure, mainly roads, that would allow the efficient transport of livestock to abattoirs and other locations and the efficient transport of grain and other bulk materials to and from ports and railways. Basically, cost-effective improvements to Australia's rural road network are just not being undertaken.

35 The costs that these inadequacies impose on the livestock and bulk transport sector and the Australian economy are very substantial. Indeed, preliminary work undertaken for this inquiry suggests that the cost imposed by non-price barriers on the livestock transport sector is equivalent to a tax of 5 per cent. That is, the efficiency "bottlenecks" encountered by our members and others in the industry, if removed, could lower livestock transport costs by around 5 per cent in the case studies we have undertaken. In NSW due to the matters raised at paragraph 34 (first dot point) there is currently a further foregone efficiency of 12 to 14 per cent.

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3 Banks, Gary 2006, 'Freight Infrastructure: What are the Challenges in Achieving Efficient Pricing?', Presentation to the CRA International Seminar, National Library, Canberra, April.

36 In contrast, preliminary calculations undertaken for this inquiry indicate that the introduction of road-user charges as recommended by the NTC (NTC) in its third determination would, however unwarranted when cost recovery realities are considered, result in an increase in the cost of transporting livestock of under 0.5 per cent.

37 What these preliminary calculations indicate is that the non-price barriers to competition and efficient operation of road and rail transport referred to by the Chair of the Productivity Commission, Gary Banks, far outweigh the NTC's estimates of cost under recovery from large heavy vehicles.

38 Thus, despite the substantial policy reforms experienced by the road transport sector in the 1990s, the efficiency of road transport operations continues to be impaired by a variety of non-price barriers or what our members call "efficiency bottlenecks".

39 The costs of the efficiency bottlenecks identified by our members are likely to rise through time unless they are fixed. This is because the history of the road transport sector is one of productivity improvement based on industry-led innovation. There are new truck and trailer technologies available right now and extending in the future that offer substantial improvements in productivity for the livestock transport sector and the road transport sector in general.

40 These same innovations involve more road friendly vehicles and they also offer significant road performance, environmental and skilled labour dividends to the industry.

41 There is a real risk that these emerging technologies will not be fully available to the livestock transport sector if Australia continues to focus on improving road infrastructure in "strategic corridors" to the neglect of key transport routes used by the livestock transport sector. The ALTA believes that systematic analysis of alternate road investments, including investment in rural roads, would indicate that many rural road infrastructure bottlenecks require the most urgent attention (i.e. have the largest project net present values).

42 We expand on these themes in this submission. Where relevant, we draw on the case studies, to shed light on the issues we believe the Commission should consider.

3. THE ROLE OF ROAD TRANSPORT IN THE AUSTRALIAN ECONOMY

43 As recently noted by the Productivity Commission's Chairman, "efficient freight transport is vital for Australia's relatively small, trade-dependent economy, especially given our geography and widely-dispersed population and industry".[4]

44 This vital freight task has been predominately provided by the road transport sector. For example, in the latest Australia Bureau of Statistics input output table which relates to the 1998–99 year, road transport provided $20.6 billion in transport services to the Australian economy. In the same year, rail transport provided to the Australian economy was valued at $7.5 billion (Table 1).

Table 1: Selected transport services provided to the Australian economy ($m 1998–99)

		Final Consumption Expenditure		Gross Fixed Capital Formation			Changes in			
	Total Industry Uses	H'holds	Govt	Private	Public Ent	General Govt	Inventories	Exports	Total Final Uses	Total Supply
Road transport	11,734	4,631	729	925	39	153	11	2,363	8,851	20,585
Rail	3,426	1,528	177	82	6	18	14	2,261	4,085	7,511

Source: Australian Bureau of Statistics 2004, Australian National Accounts: Input-Output Tables—Electronic Publication, 1998–99, publication number 5209.0.55.001, Canberra June (Table 2).

45 Of the road transport services provided to the Australian economy about 60 per cent were provided directly to industry and the remaining 40 per cent were provided in the road transport of finished products to their various final uses. In contrast, 55 per cent of the rail transport services provided to the Australian economy in 1998–99 were involved in the transport of finished products to their final end use (Table 1).

46 Overall, rail transport accounts for just under 20 per cent of the total rail and road transport task in 1998–99. These data support the oft quoted statistic that only "15 per cent of freight is 'contestable' between rail and road".[5]

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4 Banks, Gary 2006, 'Freight Infrastructure: What are the Challenges in Achieving Efficient Pricing?', Presentation to the CRA International Seminar, National Library, Canberra, April, p.1.

5 NTC 2005, "High Productivity B-triples Will Reduce Truck Numbers On Australia's Highways".

47 The road transport sector is even more vital to the agricultural and meat processing sector than the aforementioned overall statistics might suggest. In 1998–99 rural industries consumed $899 million in transport services, of which 81 per cent were provided by road transport. Similarly, the meat and meat products industry consumed $757 million in transport services of which 95 per cent were provided by road transport (Table 2).

Table 2: Transport services provided to agricultural industries and the meat processing industry $m 1998–99

	Sheep	Grains	Beef cattle	Dairy cattle	Pigs	Poultry	Other agriculture	Meat products
Road transport	72	227	118	81	15	8	209	722
Rail, pipeline and other transport	8	71	6	6	1	2	11	29
Water transport	1	1	0	0	0	0	1	1
Air transport	8	8	11	9	2	1	22	5

Source: Australian Bureau of Statistics 2004, Australian National Accounts: Input-Output Tables—Electronic Publication, 1998–99, publication number 5209.0.55.001, Canberra June. (Table 2)

48 These data relate to the transport of inputs used to produce “final goods”. To obtain a total picture of how important each transport service is to agricultural industries and the meat and meat processing sector we also need to consider the role each transport service provides in the delivery of agricultural outputs to final uses such as exports. Again road transport is the dominant transport service used by the agricultural sector to deliver outputs to final users. However, particularly for grains, rail transport is also important (Table 3). Most of this service was involved in the supply of grains for export.

49 By contrast in 1998–99 the meat and meat products industry used only road transport services when delivery its output to final users (Table 3).

50 It is also possible to calculate the total amount of transport that industries use when producing outputs. This total requirement is calculated by adding together the direct use of transport by an industry and the transport services that are embedded in the inputs themselves (so called indirect requirements).

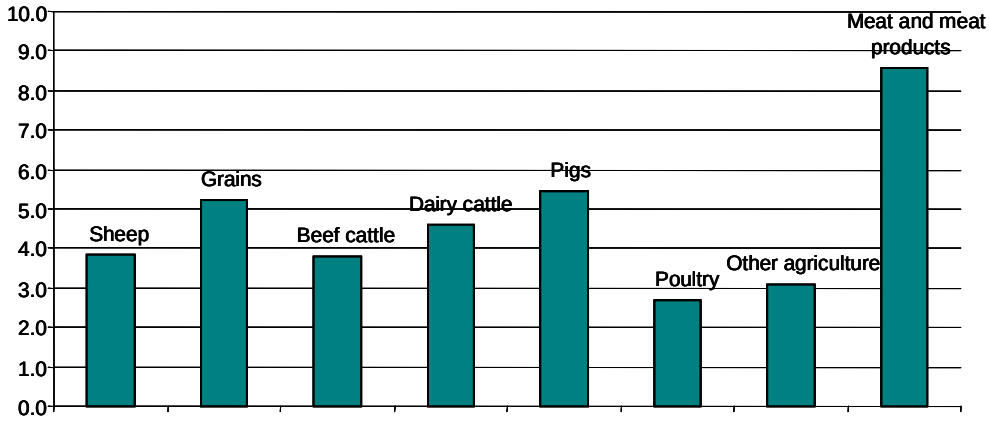
Table 3: Transport services incurred in the supply of final use of agricultural industries and the meat and meat processing industry $m 1998–99

Industry	Road transport	Rail, pipeline and other transport
Sheep	97	27
Grains	352	291
Beef cattle	48	5
Dairy cattle	-	0
Pigs	0	0
Poultry	0	1
Other agriculture	78	31
Meat and meat products	133	0

Source: Australian Bureau of Statistics 2004, Australian National Accounts: Input-Output Tables—Electronic Publication, 1998–99, publication number 5209.0.55.001, Canberra June (Table 2).

51 These calculations indicate that for every $100 of ex works meat and meat products produced, direct and indirect road transport services account for just under $9 of cost (Figure 1).

Figure 1: Road transport required to produce $100 of output of agricultural commodities and meat and meat products ($/$100)



Australian Bureau of Statistics 2004, Australian National Accounts: Input-Output Tables—Electronic Publication, 1998–99, publication number 5209.0.55.001, Canberra June (Table 10).

3.1. REGISTRATION AND ROAD USER FEES

52 The road transport sector is charged for the use of Australian roads on a "cost-recovery" basis. The road use fee was set at 20 cents per litre of diesel consumed by the commercial truck operator in the NTC's second determination of road user charges. This fee is effectively implemented via the diesel rebate scheme whereby eligible operators can claim a rebate of 18.5 cents per litre of the 38.143 excise that is currently payable on ultra-low sulphur diesel.

53 In addition to the road use charge, vehicles also pay a federal registration fee for prime movers and trailers used in interstate operations. State registration fees also apply for State-registered vehicles.

54 Registration charges for heavy vehicles are automatically adjusted annually. The registration charges for heavy vehicles that apply from 1 July 2006 were recently calculated by the NTC. These fees, along with the fees that would have applied if the fees and charges were based on the NTC's third determination, are given in Table 4.

55 The third determination fees and charges were designed to ensure that each class of heavy vehicle accurately recovers their 'fair share' of road construction and maintenance costs.[6] The NTC's third determination fees imply an increase in fees and charges for heavy articulated vehicles and lower fees for rigid vehicles and the lighter articulated vehicles (Table 4). This suggests that the NTC believes that the heavy vehicles are not paying their "fair share" of road construction and maintenance costs.

56 In addition to the registration fees, the NTC proposed an increase in the road user fee from $0.2 per litre to $0.221 per litre[7]. When this increase added to the change in registration fees we calculate that all vehicle classes would face a significant increase in fees and charges if the NTC's third determination charges were implemented.

57 As it made clear to all governments and the NTC during the ultimately successful campaign to have Australian Transport Council reject this proposal, the ALTA does not accept that the heavier vehicles are not paying their "fair share" of road construction and maintenance costs.

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6 NTC 2006, Road Transport Charges Expenditure Data—July 2006 Adjustment.

7 The actual road use fee is currently 18.643 cents per litre (38.143 -18.5).

Table 4: Registration fees applicable I July 2006 based on NTC second determination and third determination ($/vehicle 2005-06 prices)

Truck type	Registration charges based on second determination	registration charges based on third determination	Implied per cent change in registration charges
Rigid trucks: 2 axle: no trailer: GVM 4.5 to 7.0 tonne	343	350	2.04
Rigid trucks: 2 axle: no trailer: GVM 7.0 to 12.0 tonne	343	350	2.04
Rigid trucks: 2 axle: no trailer: GVM over 12.0 tonne	572	560	-2.10
Rigid trucks: 2 axle: with trailer	1,144	1,145	0.13
Rigid trucks: 3 axle: no trailer GVM 4.5-18	686	690	0.58
Rigid trucks: 3 axle: no trailer GVM >18	914	890	-2.63
Rigid trucks: 3 axle: with trailer >18	3,314	3,280	-1.03
Rigid trucks: 4 axle: no trailer GVM 4.5-25	1,029	1,030	0.10
Rigid trucks: 4 axle: no trailer GVM >25	2,285	2,230	-2.41
Rigid trucks: 4 axle: with trailer >25	6,056	5,970	-1.42
Articulated trucks: single trailer: 3 axle rig	1,828	1,800	-1.53
Articulated trucks: single trailer: 4 axle rig	2,171	2,150	-0.97
Articulated trucks: single 3 axle trailer: 5 axle rig	2,514	2,500	-0.56
Articulated trucks: single 2 axle trailer: 5 axle rig	4,569	4,480	-1.95
Articulated trucks: single trailer: 6 axle rig	4,912	4,830	-1.67
Articulated trucks: B-double: <9 axle rig	7,426	10,060	35.47
Articulated trucks: B-double/triple: 9 axle rig & above	7,769	10,410	33.99
Articulated trucks: Road train: 2 trailers	8,455	11,110	31.40
Articulated trucks: Road train: 3 trailers	10,170	12,860	26.45

Source: Appendix 1.

58 But even if it were to be accepted that the NTC's data base and cost allocation procedures provide a reliable indication of which vehicles are responsible for what costs, the ALTA notes that the implied level of cost under-recovery would be very modest, ranging from about 0.2 per cent of the total vehicle capital and operating cost for a 1-axle articulated truck (i.e., a "semi-trailer") up to 1 per cent of the capital and operating costs of road trains (Table 5).

59 Weighting these changes in freight rates by vehicle type by the share in total tonnes of livestock transported we calculate that implementation of the NTC's third determination charges would raise the overall cost of transporting livestock by under 0.5 per cent.

Table 5: Change in total vehicle operating costs and capital costs implied by the NTC's third determination charges (per cent)

Truck type	Change in operating and capital cost
2 Axle rigid trucks	0.3
3 Axle rigid trucks	0.5
4 Axle rigid trucks	0.5
1 Axle trailer	0.2
2 Axle trailer	0.3
3 Axle trailer	0.4
Articulated trucks	0.3
B doubles	1.0
Road trains	1.0

Source: ALTA calculations.

60 The ALTA believes that decisions regarding fees and charges for the road transport industry, and the timing of any changes in these fees and charges, need to give consideration to the effects non-price barriers have on the efficient operation of road transport. We therefore will return to a discussion of the policy implications of any under recovery of costs incurred by heavy vehicles after we have documented the non-price barriers the ALTA believes constrain industry efficiency.

61 To facilitate our discussion of the major non-price barriers faced by the road transport industry we outline in the next section the technological advances made by the livestock transport industry from the middle of last century to the present day. We then explain how impediments to the adoption of these technologies has effectively imposed a tax on rural road transport and the industries and communities that it serves that is far greater than the NTC's estimated cost under-recovery levels for heavy vehicles.

4. AUSTRALIAN LIVESTOCK TRANSPORT—AN EXAMPLE OF INNOVATION DRIVEN EFFICIENCY IMPROVEMENTS

4.1. WHY TRANSPORT IS IMPORTANT TO THE AUSTRALIAN MEAT INDUSTRY

62 The ALTA believes that given the obvious cost disadvantages Australia faces relative to competing countries in so many other areas (such as higher costs of business inputs in labour, fuel, taxation, market access restrictions, etc.) a significant amount of the competitiveness of Australia's meat and meat products industry must be attributable to Australia's superior transport infrastructure at all points of the journey, from 'paddock to port' or from 'paddock to supermarket'. Most significant factors include:

- superior all-weather road access to Australian herds and flocks;
- the superior vehicle combinations available in Australia, which can shift a larger number of livestock more economically, reliably and quickly than in other countries; and
- more efficient logistical links from abattoirs to supermarkets and export ports.

63 The ALTA believes that of these three points, two key factors—the types of road infrastructure available and what truck combinations have access to these roads—are areas where Australia can make significant further gains and build further competitive advantages for our entire $15 billion meat and livestock industry in the international marketplace.

64 One of Australia's key objectives for its meat industry should be to stay as far forward on this "transport infrastructure efficiency curve" as is cost effective. This means maximising the cost effectiveness of road infrastructure. This in turn means maximising the access granted to the most modern, efficient and productive vehicle combinations where it is cost effective to do so.

65 We document below the major innovations in Australia's livestock transport fleet and then quantify the productivity gains these innovations have delivered for Australian farmers and meat processors.

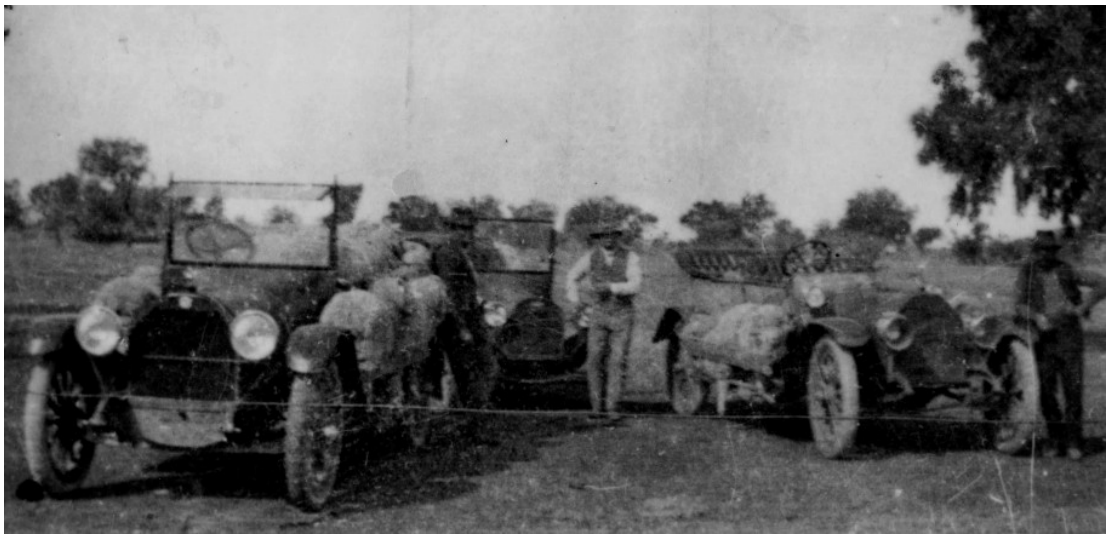
4.2. PRODUCTIVITY IMPROVEMENT IN LIVESTOCK TRANSPORT

66 The development of the Australian livestock transport industry is a remarkable story of productivity growth built on innovative truck and trailer design that is unsurpassed in the world.

67 Australia's productivity levels in meat and livestock today are a testimony to the efforts of industry pioneers over the past 60 years, starting from very modest beginnings (Figure 2).

68 Within 60 years, the gains in road performance, productivity and efficiency would prove to be enormous, through the same spirit of creativity and application that those in the photograph reproduced in Figure 2 displayed.

Figure 2: Sheep strapped to the running boards of inter-war years vintage cars—a very early example of rural industry experimenting with new technology in livestock transport!



4.2.1. 1940s

69 In the 1940s, a typical livestock truck would consist of a British-built rigid truck with a short flatbed trailer modified to carry livestock (Figure 3). Maximum capacity was around 8 head of cattle. Suspension was very primitive, consisting of hard leaf springs which were often not modified to suit specific road conditions. Fuel consumption was poor, braking systems were primitive and range was very limited.

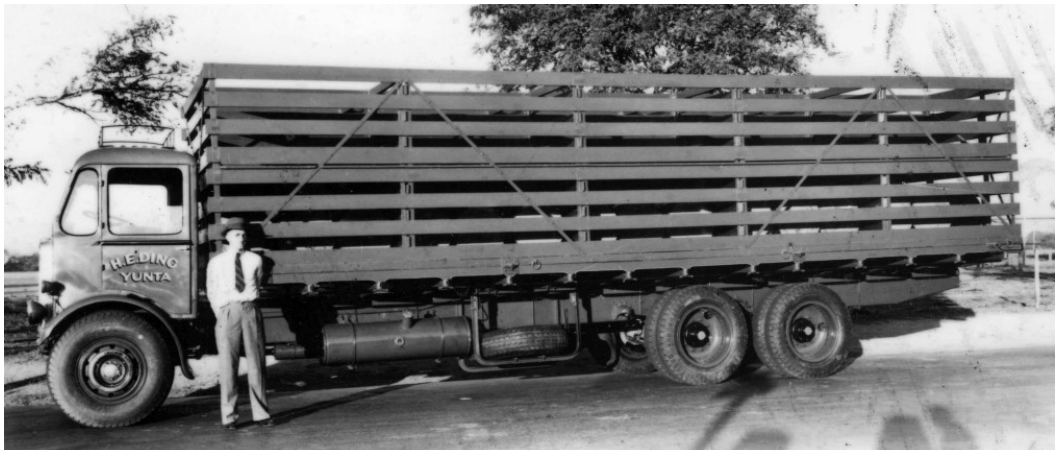
Figure 3: 60 years of innovation in livestock transport vehicles

4.2.2. 1950s

70 In the 1950s, livestock vehicles were “body trucks” that consisted of a single deck of livestock on the back of a rigid truck chassis; by modern standards, they boasted only quite limited range and very primitive suspension systems (Figure 4).

71 The late 1950s also saw the introduction of trucks towing separate trailers. These trailers were generally 20 feet in length and could carry around 18 head of cattle. The prime mover remained quite primitive, with little development in suspension and only one drive axle providing the motive power. Range increased.

Figure 4: A late 1950s ‘body truck”



4.2.3. 1960s

72 By the 1960s, a typical livestock truck would consist of an American built prime mover with larger horsepower engine, 3 axles instead of 2 which served to displace the prime mover's weight more effectively and reduce road wear (Figure 5). The trailers pulled grew as well, to 40-foot trailers capable of carrying around 30 head of cattle. Suspension systems improved with shock absorbers and the advent of side-by-side tyre arrangements that further dispersed weight. Operating range again increased.

Figure 5: A 1960s body truck with trailers.

4.2.4. 1970s

73 The 1970s saw a large leap forward in the carrying capacity of livestock trucks. Prime movers remained similar in design to the 1960s, although there were efficiency gains in horsepower, fuel consumption, load displacement and operating range. Major advances included the advent of large fixed stock crates attached to the prime mover plus one or two towed 40-foot trailers. Overall load capacity increased to around 50–60 head of cattle for a two trailer combination.

4.2.5. 1980s

74 Further major efficiencies were gained in vehicle design through the 1980s. Prime movers were provided with two drive axles to provide added motive power and harness available horsepower, improved engine technology leading to greater fuel efficiency and, in particular, suspension technology and dampening applications advanced significantly. In more remote areas, “double road trains” consisting of two 40-foot double-decked trailers became the norm. In less remote areas, single 40-foot trailers were the most common feature, but the development of a second deck for cattle on each trailer increased carrying capacity to around 44 cattle for a single trailer and around 88 cattle for a double road train. Similarly, sheep crates gained extra levels—up to four—improving carrying capacity markedly.

Figure 6: A standard 6-axle articulated semi-trailer configuration for livestock transport, common from the 1980s through to today

75 Coupling arrangements for trailers throughout these eras remained relatively simple. It was very similar to what can still be found on small domestic trailers towed by cars today.

76 This coupling was about to undergo a major advance, which would bring very significant benefits for tracking fidelity and overall road performance.

4.2.6. 1990s

77 The 1990s saw a major breakthrough for efficiency and performance in the B-double truck, which consisted of the prime mover attached to a 20-foot trailer and followed by a further 40-foot trailer (Figure 7). The stability, braking performance and overall "driveability" of this combination was augmented by the new coupling design between the first and second trailer. This design, known as a "B coupling", allowed for the second trailer to sit on a turntable and grouping of two or three axles that were fixed to the lead trailer. This system increased the stability, breaking and overall road performance of longer vehicles. It had a "smoothing" effect similar to the bogey axles connecting two railway passenger carriages.

78 This vehicle gained increasing access to regional and even urban areas through the 1990s due to its superior road-handling qualities and its ability to carry bigger loads. It could carry approximately 70 cattle. In addition, these new vehicles were required to have all wheels individually shrouded by mudguards to suppress dust, water and any small stones thrown up by the wheels.

Figure 7: A B-double livestock vehicle, showing the innovative B coupling: 3 axles sitting under the beginning of the second trailer, providing much greater directional stability and responsiveness.

79 Meanwhile in more remote areas of the country, “triple road trains”, consisting of a prime mover and 3 linked, 40-foot, multiple-decked trailers, carried the livestock freight task for much of the more remote parts of the country (Figure 8). These large vehicles can uplift over 120 cattle or around 1200 sheep at a time. The advent of airbag suspension technology and the increased numbers of axles displacing the overall weight further marked improvements in trailer construction using lighter materials lessened the tare (i.e., “empty”) weight of the trucks, allowing for greater efficiencies in load capacity without any marginal increases in road wear.

Figure 8: A standard triple road train operating in the north of Western Australia

4.2.7. Current Decade

80 The current decade has seen much development in suspension technology to reduce the road wear caused by heavier vehicles. Further innovations in more axle groups further defray weight effects. The B-double’s engineering principles, including the important B coupling, have been built upon to create new combinations that are larger again but which offer the similar braking, tracking and in-traffic performance as the B-double.

81 The “B-triple” vehicle is in essence a B-double with an additional 20-foot trailer added in the middle (Figure 9). It displays similar safer driving characteristics to the B-double as the third trailer is coupled to the second trailer using a B coupling. These vehicles carry twice the load of a traditional semi trailer. In that sense, where these vehicles operate, every second semi trailer is taken off the road, for only a marginal decrease in the fuel efficiency of a single prime mover unit.

Figure 9: A B-triple 2-deck per trailer cattle transport vehicle, showing advanced engineering systems on the trailer couplings

82 As noted by the NTC, B-triples are highly productive vehicles that "handle exceptionally well, in part because the trailers and prime-mover are "roll-coupled" by the use of fifth wheels (turntables) on the B-coupling. In effect, each part of a roll-coupled vehicle helps stabilise the other parts. Fifth wheel couplings also improve "tracking fidelity", which means the rear trailer does not swing as much as road-trains do".[8] This is an important consideration for any discussion of introducing these contemporary vehicles into more built up regional centres.

83 The NTC also noted that further innovation is expected in the B-triple fleet through the introduction of "steerable axels". The NTC indicated that "preliminary calculations show that a B-double with TrackAxle trailers will get around tighter corners than a normal six-axle single trailer articulated vehicle. And the improvement in swept path with B-triples is likely to be even more dramatic because of the cumulative effect with more trailers".

84 The results from trialling TrackAxle were promising and the installed cost of TrackAxle was reported to be $30,000 per axle in February 2004.[9] However, even if TrackAxle technologies could reduce the swept path of a B-triple there may still be significant barriers to the introduction of B-triple vehicles and other combination vehicles on Australia's roads.

8 NTC 2005, "High Productivity B-triples will Reduce Truck Numbers on Australia's Highways".

9 NTC 2004, "PBS Test Vehicle Shows Productivity Increase".

85 Put another way, even a significant cash investment in a technology advance that the NTC believes is a “dramatic” advance may be rendered worthless by a simple, relatively minor road infrastructure problem that denies this new vehicle access, such as a turning lane on a local council road that is not quite long enough to accommodate a B triple unit without disrupting through traffic. In such a case, NTC-led innovation principles are undone by a simple but unrelated road infrastructure issue. This example emphasises the holistic approach that must be taken when considering innovation in combination access and development.

86 The ALTA also notes that even without technologies like “TrackAxle” there is still substantial productivity gain to be realized from the existing truck fleet. For example, per tonne of freight, a B-Triple offers a 17 per cent freight rate advantage over a traditional 6 axle articulated truck. Also per tonne of freight a B-Triple generates about 25 per cent less road wear than does a traditional 6 axle articulated truck (paragraph 96). The ALTA believes that regulation of the road transport industry should facilitate the timely exploitation of available cost effective technologies rather than force a competitive industry to accelerate the adoption of what regulators believe are appropriate technologies.

87 To illustrate its claims of the much greater importance of non-price barriers than charging methodologies to the cost-effective productivity of the industry, the case study ALTA has undertaken with Fletchers International at Dubbo was designed to highlight all of the major factors limiting the uprating of roads to Dubbo (see section 5 for the results from the case study).

88 In addition to B-triples other larger combinations on the same principle are being trialled across many parts of Australia. For the past two years, a vehicle known as the “BAB Quad”, which consists of 2 B-doubles pulled by just one prime mover unit, is showing excellent road performance characteristics. It carries the load of 2 B-doubles with only 1 prime mover. It currently operates between Mitchell (QLD) and Darwin and Alice Springs (NT).

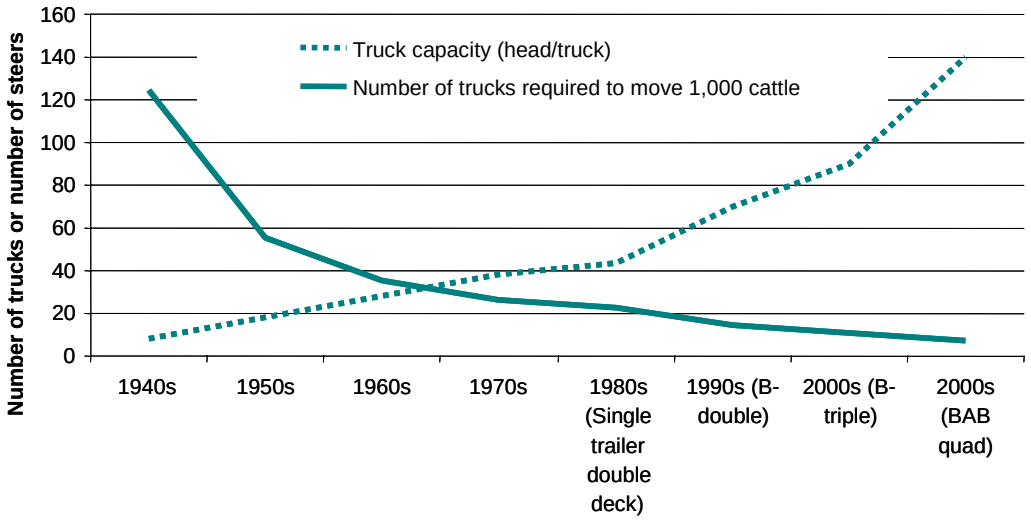
89 In Western Australia, double B-doubles have been in operation for some time. The Western Australian configuration couples the B-double trailers together using an “A-axle” (Figure 10).

Figure 10: A double B-double operating in Western Australia. This type of vehicle is a workhorse of the northern Australian cattle industry.

4.3. MEASURING THE BENEFITS OF IMPROVED TRANSPORT

90 Some idea of the benefits from the livestock transport industry's focus on sustained and creative productivity improvements can be seen if we calculate the number of trucks required to move 1000 steers, each weighing 475 kilograms. The following chart reveals quite starkly how more efficient, larger capacity vehicles have created industry-shaping "economies of scale" in livestock transport. Major efficiency points over time have included the advent of "two-deck" trailers and the larger road train combinations. Thus we calculate that over 120 truck movements would have been required to move the 1000 steers in the 1940s. Using the emerging truck technologies (BAB Quad) and assuming livestock loading principles apply (a regulatory advance that will be explained in more detail later in the submission), today the same movement of stock could take place using under 10 vehicles. The reduction in overall numbers of trucks on the road, on overall road wear, on the numbers of skilled drivers required and the fuel and emissions involved is significant. Quite simply, Australia's trade-exposed and heavily transport-dependant meat and livestock industry would not be able to function without such efficiencies in place.

Figure 11: Efficiency gains in livestock transport design—1940s to present



Source: ALTA calculations.

91 Access permit advances for newer vehicles have traditionally occurred slowly. Consequently, there still remain many locations where even B-double access is severely restricted and where road infrastructure spending ignores the productivity dividends that uprating of roads to handle longer vehicles would generate. In many cases, larger and more efficient combinations must stop and "break up" into smaller units for final approaches to their destinations—this process is time consuming and costly.

92 ALTA members have indicated that the uprating of roads to allow access to the roads by longer vehicles is undertaken on a road-by-road basis and is usually undertaken by staff from local councils. ALTA members have indicated that the principal factors they believe are taken into account when assessing a road for uprating include:

- the width of the pavement;
- the geometry of the road;
- the pavement foundation;
- approach visibility;
- width available for the vehicle to "sweep" when it needs to undertake a turn;
- road performance considerations such as the proximity of rail crossings relative to road intersections on the road under consideration;
- environmental factors including vibration levels, dust and spray levels, noise levels; and

- infrastructure constraints such as the height of a bridge above the pavement or the carrying capacity of a bridge.

93 As indicated at paragraph 92, the uprating of a road to allow access by certain multi-combination vehicles involves the consideration of numerous factors. It is therefore not surprising that many rural roads constructed many decades ago would be judged unsuitable for uprating to use by multi-combination vehicles and remain unopened to access—costing the meat industry significant efficiencies.

94 The ALTA also notes that other major benefits from uprating of roads to allow greater use of multi-combination vehicles are reduced wear on roads and improved vehicle performance.

95 As noted by the then NRTC "the triaxle is by far the most efficient axle group. For many years triaxles have been recognised as the axle group with most scope to have loading increased for productivity optimisation".[10] The increased efficiency of the triaxle results from the fact that it has a standard mass load for one ESA of road wear of 18.5 tonnes compared to a standard mass load for one ESA of road wear of 13.6 tonnes for a tandem axel.

96 The B-Triple has 3 triaxles and it thus exploits these higher mass loads so that per tonne of livestock transported it is calculated to produce 24 per cent less road wear (Table 6).

10 National Road Transport Commission (NRTC) 1996, 'Mass limits review', Technical Supplement No. 2, Road and Bridge Impacts, p. 178.

Table 6: Calculated road wear for different livestock vehicles (ESAs)

Truck gross vehicle mass (Tonnes)	Steer axle	Drive axle	First trailer triple axle	Second trailer triple axle	Third trailer triple axle	Gross vehicle mass	Tare weight	Livestock carried
B-Triple	6.00	16.50	20.00	20.00	20.00	82.50	39.00	43.50
B-Double	6.00	16.50	20.00	20.00		62.50	30.00	32.50
6 Axle	6.00	16.50	20.00			42.50	21.00	21.50
Standard mass load for 1 ESA (tonnes)	5.40	13.60	18.50	18.50	18.50			
Calculated road wear (ESAs)	**Steer axle**	**Drive axle**	**First trailer triple axle**	**Second trailer triple axle**	**Third trailer triple axle**	**Total**	**ESAs per tonne of livestock carried**	**ESAs per tonne relative to 6 Axle (%)**
B-Triple	1.52	2.17	1.37	1.37	1.37	7.79	0.18	-23.87
B-Double	1.52	2.17	1.37	1.37	0.00	6.42	0.20	-15.98
6 Axle	1.52	2.17	1.37	0.00	0.00	5.06	0.24	0.00

Source ALTA calculations

97 Larger vehicles with greater carrying capacities also reduce the overall number of truck movements required, if access is available, as discussed earlier. This has implications for truck performance, fuel efficiency, skilled labour requirements, emissions and overall cost effectiveness for the operator and customer alike.

98 The advent of the safer engineering characteristics of the B-double has meant that larger loads can be carried more effectively into rural and regional towns as well as metropolitan areas. The ALTA recognises that for future productivity dividends to occur, safe and road-friendly engineering designs must be advanced. The advent of larger successors to the B-double design point the way to these future efficiencies. Greater B-double access and improved access for vehicles such as the B-triple and the BAB Quad are the strategies that will help Australia's meat industry continue to remain highly internationally competitive.

99 The fact that road infrastructure has not kept pace with the rapid increase in truck carrying capacity experienced since the 1980s is, in the ALTA's opinion, the major non-price barrier to the "efficient operation of road " transport in Australia.

100 It is difficult to provide an overall assessment of the community-wide benefits that would flow from cost effective uprating of certain roads to allow multi-combination vehicles access. This is because such calculations would involve a road-by-road assessment.

101 Rather, what the ALTA has undertaken is a case study of the transport savings that would flow from the uprating of roads to allow greater use of multi combination vehicles to transport sheep and lambs to the Fletcher International Pty Ltd abattoir and processing facility at Dubbo, New South Wales.

102 The case study approach allows us to provide the Commission with an estimate of the "price equivalent" of the major non-price barrier to efficient operation facing the livestock transport sector in Australia.

103 The ALTA has chosen the Fletcher International Pty Ltd facility at Dubbo as it is representative of and instructive for considerations of non-price barriers and cost-effective productivity improvements we believe are available across the wider, $15 billion per annum Australian meat and livestock industry. Fletcher International is rated by Meat and Livestock Australia as the 8th largest single meat industry processor in Australia, estimated to have around 2.8 percent of the total market share for the industry.

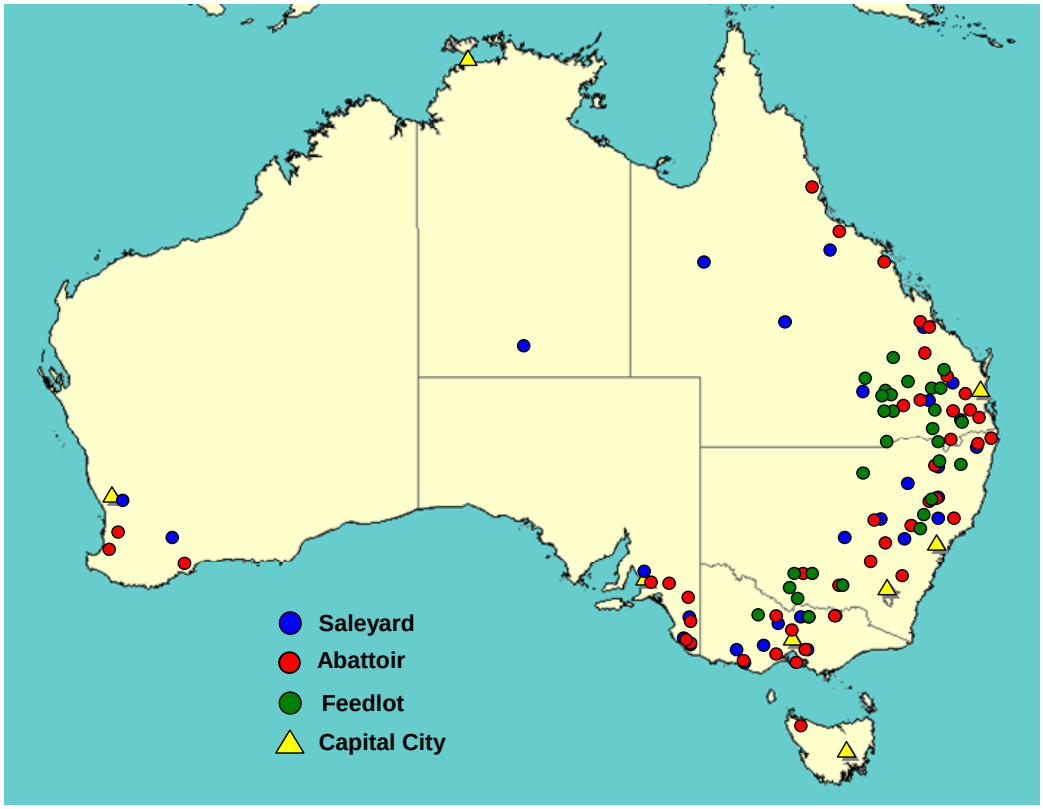
104 The case study and results from the case study are detailed in the following section.

5. CASE STUDY OF POTENTIAL TRANSPORT SAVINGS AVAILABLE TO FLETCHER INTERNATIONAL PTY LTD AT DUBBO

5.1. CASE STUDY DESIGN

105 The following chart shows the location of the most significant pieces of infrastructure in the Australian meat and livestock industry—the leading saleyards, abattoirs and feedlots, based on Meat and Livestock Australia statistics of the top 25 locations for each.

Figure 12: Major livestock related infrastructure in Australia



Source: ALTA

106 What this graphical representation reveals is that much of the road infrastructure linking the major infrastructure of Australia's $15 billion per annum meat and livestock industry is generally not in line with the major urban freight hubs that are considered strategic intermodal corridors and afforded priority funding under AusLink. The bulk of the meat and livestock infrastructure lies west of the Dividing Range on the East Coast of Australia.

107 The road infrastructure that links the major infrastructure of the livestock industry has not evolved at a rate that would facilitate the widespread introduction of the more productive B-double, B-triple and Double B-double multi combination vehicles. As a consequence, livestock transport costs are higher than they need to be which reduces the competitiveness of Australian livestock industries both at the farm level and at the processing level.

108 To obtain an estimate of the potential cost savings available to the livestock processing sector that would flow from cost effective uprating of major livestock transport corridors in Australia, the ALTA worked with Fletcher International Pty Ltd at Dubbo to determine:

- the current level of vehicle movements incurred by Fletcher International Pty Ltd to transport the sheep and lambs processed in a typical yearly kill; and
- the vehicle movements that would be required to transport the sheep and lambs processed in a typical yearly kill assuming multi combination vehicles were available for use where it would be technically feasible to use such vehicles.

109 The case study results are detailed in the following section.

5.2. CASE STUDY RESULTS

110 Fletcher International Pty Ltd process approximately [redacted] million sheep and lambs at Dubbo NSW. ALTA visited the abattoir at Dubbo and interviewed senior management at the abattoir. Interviews were also held with trucking operators that undertake the vast majority of the livestock transport task for Fletcher International Pty Ltd.

111 These interviews revealed that Fletcher International Pty Ltd divides the source areas for sheep and lambs into 8 major geographical regions. Over [redacted] per cent of the [redacted] million sheep and lambs processed in a year are sourced from the 5 source regions in New South Wales. [redacted] per cent of the [redacted] million sheep and lambs are sourced from Queensland and the remainder come from Victoria and South Australia (Table 7).

Table 7: Place of origin for sheep and lambs processed by Fletcher International Pty Ltd at Dubbo and transport combinations used in the transport task from region to Dubbo

Source region	Average transport distance to Dubbo by region	Regional % of total sheep slaughter	Annual sheep slaughter numbers by source region	Transport combination(s) currently used by region
New England				
Dubbo region				
Central Tablelands				
Central West				
Riverina				
Central North				
QLD				
VIC/SA				
Total				

Source: Interviews with Fletcher International Pty Ltd

112 The existing livestock transport task to Fletcher International Pty Ltd at Dubbo was costed assuming carrying capacities and freight rates for the different vehicle combinations currently in use (Table 8).

Table 8: Assumed vehicle capacities and freight rates used in the case study

Vehicle combination	Vehicle capacity (sheep)	Transport cost ($/ Km)	Unit cost ($/100 sheep/km)	Sheep per axle
Single Semi (6-axle)	400			66.7
B-double (9 axle)	600			66.7
Double Road Train	800			66.7
B-triple (12 axle)	800			66.7
Triple Road Train	1200			75.0

Source: Interviews with Fletcher International Pty Ltd

113 The potential advantage of the multi combination vehicles over the traditional 6-axle articulated semi trailer is clear from the data given in Table 8. A B-triple carries 100 per cent more sheep than does a traditional 6 axle articulated truck. Consequently,

- the fixed costs associated with the freight journey (e.g., the driver) are spread over a greater number of sheep.

- the prime mover of the B-triple hauls 100 per cent more sheep for about a 15 per cent reduction in fuel efficiency.[11] This data implies a 85 per cent improvement in the number of sheep transported per litre of fuel used; and

- the B-triple transports the same number of sheep per trailer axle as does the traditional 6 axle articulated truck (Table 8).

114 Provided the B-triple is used as intensively as is the 6-axle articulated truck, these figures imply that the B-triple is a far more "productive" truck than is the 6-axle articulated semi trailer. This is confirmed by the fact that the freight rate per kilometre per 100 sheep transported is about [redacted] per cent lower for the B-triple compared to the freight rate per kilometre per 100 sheep transported by a 6 axle articulated truck (Table 8).

115 Thus, in situations where it is possible to use a B-triple this will provide significant cost savings to Fletcher International Pty Ltd because it can be calculated from the data given in Table 8 that on average each sheep or lamb processed at Fletcher International Pty Ltd was transported on average approximately [redacted] kilometres prior to processing.

116 The data given in Table 8 along with the vehicle combination data in Table 7 can also be used to calculate the weighted average freight rate that applied to the vehicles used to transport the sheep and lambs to Dubbo and the number of vehicle movements required to transport the [redacted] million sheep and lambs. These figures were [redacted] for the average freight rate per loaded kilometre and [redacted] truck movements.

117 Thus the existing cost to transport the [redacted] million sheep and lambs to Dubbo was estimated to be [redacted] million [redacted]

118 The next step in the case study was to identify impediments to the use of the more productive multi-combination vehicles.

119 To do this, interviews with the principal livestock carriers used by Fletcher International Pty Ltd indicated that the routes used by the carriers to transport livestock to Dubbo were not rated for certain multi-combination vehicles. The main reasons the routes in question were not suitable for certain multi combination vehicles can be broken into several distinct groupings:

11 Data used by the NTC in its third determination implies that the average 6 axle articulated truck achieved 1.98 kilometres per litre of fuel. A B-double achieved 1.78 kilometres per litre and the B-triples 1.72 kilometres per litre. See NTC 2005, "Cost Allocation & Pricing Model Third Determination", sheet Forecast_Vehicle_Data, October 21.

- Federal Road problems. On the major feeder highways to Dubbo, pavement depth and condition does not, in general, limit uprating. However, lack of suitable right and left turning lanes for longer trucks can result in part of the trailer remaining on the through road, where there is a short turning lane available and/or a short merging lane available. In several cases multi-combination vehicles can not exit the through road as the swept area of the vehicles exceeds the turn area available at the exit.

- Local, State Road problems. Particularly to the east of Dubbo, several routes are crossed by bridges that are to low for modern stock crates. Local and State access intersections on feeder roads to major arterials to Dubbo like the Mitchell, Barrier and Newell do not uniformly possess the swept path dimensions to allow for some longer vehicles to access and egress more effectively. Some entrances/exits to the major highway are built shortly after rises and crests in the road—modern, longer vehicles with slower turning times cannot always "nip across" effectively.

- Private sector farm infrastructure challenges. Farm gates are a major problem as many can not accommodate swept paths for multi-combination vehicles such as a B-triple. Many farm stockyards were also built prior to the 1980s and have insufficient turning circle space for a B-triple. The loading ramps in some farm stock yards have insufficient height to allow efficient loading of stock on to the top decks of a multi combination vehicle with trailers designed to carry sheep and lambs (4 decks per trailer).

120 The livestock carriers were asked to estimate the vehicle combinations that would be used to undertake the existing stock movements for Fletcher International Pty Ltd assuming that the non private sector impediments to uprating roads to Dubbo outlined in paragraph 119 were removed. The results of this analysis are given in Table 9.

Table 9: Optimal truck combinations assuming public sector impediments to road uprating removed

Source Region	Transport Combination(s) Currently Used by Region	Optimal Vehicle Combo by Region
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Source: Interviews with Fletcher International Pty Ltd

121 The optimal vehicle combinations given in Table 9 were used along with data on the assumed carrying capacities of the different vehicles to calculate the number of vehicle movements required to transport a typical year's stock turnover to Fletcher International Pty Ltd. A total of [redacted] truck movements are indicated which represents a reduction in truck movements from the current situation of 844.

122 While the number of truck movements is estimated to fall dramatically, promising very obvious road performance benefits, the weighted average freight rate per kilometre rises from an estimated [redacted] per loaded kilometre in the current case to [redacted] per loaded kilometre in the hypothetical case.

123 This data implies that the cost to transport the [redacted] million sheep and lambs to Dubbo would be [redacted] million [redacted] if all public sector impedients to uprating roads to Dubbo were removed.

124 An annual saving of [redacted] million is indicated, which represents just over 5 per cent of the estimated current cost of transporting the [redacted] million sheep and lambs to Fletcher International Pty Ltd at Dubbo (Table 10).

Table 10: Calculated livestock transport saving available to Fletcher International Pty Ltd through the use of the optimal combination of vehicles ($)

Region	Current annual cost	Annual cost assuming optimal combination of vehicles used	Total Annual Savings
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

Source: ALTA calculations.

125 At a discount rate of [redacted] per cent, this annual saving represents [redacted] million in net present value terms. This is the saving to Fletcher International Pty Ltd but other businesses would also most likely benefit from the uprating of the identified roads.

126 Thus the Australian community could spend at least $4.8 million in road works to allow uprating and the Australian community would still be better off than living with the existing situation. The net positive dividends appear clear, particularly when the dramatic road performance dividends from substantially less truck movements in and around Dubbo are taken into account.

127 The ALTA believes that the infrastructure bottlenecks identified in the case study are typical of the impediments to efficiency faced by the meat industry throughout Australia. We include in an Appendix letters supporting proposals for funding from AusLink to remove two notable rural infrastructure bottlenecks.

128 The cost of such bottlenecks could be substantial. For example, if the savings in road transport cost savings to Fletcher International from removal of the infrastructure bottlenecks were available to other meat processors in Australia we calculate that Australia could spend almost $400 million on removing rural infrastructure bottlenecks and the Australian community would still be better off than living with the existing situation (Table 11).

Table 11: Calculated livestock transport saving available to the Australian meat and meat processing sector through the removal of rural "infrastructure bottlenecks" ($m)

Industry	Livestock transport cost 1998–99	Transport saving assuming 5% productivity improvement from removal of infrastructure bottlenecks
Sheep	40.00	2.00
Grains	0.00	0.00
Beef cattle	415.00	20.75
Dairy cattle	0.00	0.00
Pigs	50.00	2.50
Poultry	1.00	0.05
Total	506.00	25.30
Present value of saving (8% discount rate)		316.25
Present value of saving in 2004-05 prices		372.887

Australian Bureau of Statistics 2004, Australian National Accounts: Input-Output Tables—Electronic Publication, 1998–99, publication number 5209.0.55.001, Canberra June. (Table 26).

5.2.1. Why is there insufficient uprating of rural roads?

129 If it is profitable for the "infrastructure bottlenecks" to be removed it is reasonable to ask why they are still there. The ALTA believes there are 5 fundamental reasons for this anomaly. These are:

- the authorities that might undertake worthwhile road improvements (and especially local councils) are not always in a position to capture a significant proportion of the benefits from road improvements and so authorities have insufficient incentive to invest, even in projects that would generate social benefits. For example, a council may not act if it fears road users originating from areas controlled by other councils would "free-ride" on its investment initiatives;

- even programs like the AusLink's local roads program which enables the funding of projects that are put forward jointly by local councils and others in regard to roads and structures in areas beyond their immediate responsibility, cannot fully solve the problem. The proposals which are brought to AusLink's attention are still limited to those in which the proponents can obtain an advantage and where the costs of identifying and organising the support of those who would benefit are not prohibitive. Thus the proposals reaching AusLink remain a sub-set of those that would pass a wider cost benefit test:

- notwithstanding all this, some of the fault lies with the perceptions of the authorities themselves. Whether on their own initiative or through the support of proposals put to AusLink or other agencies, local councils (and some state bodies) seem unduly reticent about their capacity to form coalitions (say of several councils or industry bodies) to overcome the free rider problem. They appear to be unfamiliar with taking such a broad perspective and have provided themselves with limited resources for generating and evaluating big-picture proposals which might benefit their constituents. In ALTA's experience, local governments in particular take an unnecessarily reactive approach to uprating and appear locked into a tradition of not proactively identifying worthwhile uprating programs that would yield net benefits;

- historically the environmental and road performance benefits from road uprating have been misunderstood by local communities leading to local opposition to the uprating of roads; and

- lack of industry involvement in the process. Livestock and grain transporters are in fact the best source of core data on where inadequate road infrastructure is causing bottlenecks and where the greatest efficiencies could be harnessed through improved vehicle access.

130 The ALTA believes the current situation could be significantly improved through greater emphasis on a "bottom up" approach to infrastructure planning.

131 The ALTA is an example of an organisation that could fill a role as a high-level policy conduit to turn raw industry feedback on infrastructure bottlenecks into analysis that government bodies at all levels could use to make sensible improvements. The detailed project net present value outcomes that are part of our case study of Fletchers International at Dubbo in this submission are a good example of these abilities. The method of operation of government transport departments and regulators does not currently allow sufficient scope for such input.

132 The results of the current top down approach to road infrastructure planning can be seen in the bureaucratic passion for GPS tracking of heavy vehicles know as the Intelligent Access Program (IAP).

133 IAP is considered the “Rosetta stone” for regulatory bodies to receive data on road usage. However, as our case study shows, much of the analysis required for improved road management must come from other sources. In particular, industry knowledge of what particular infrastructure bottlenecks exist and which of them are the greatest impediments to the freight task needs also to be harnessed—analysis that GPS data cannot itself provide.

134 In pursuing IAP, regulatory bodies seem to be forgetting the costs of installation and maintenance of advanced GPS technology. They also appear unconcerned about the potential for subsequent abuse of this very comprehensive data through secondary analysis. It is notable that at a time when anxiety is being expressed by the general public about plans to introduce smart ID cards for all Australian citizens; a similar process is being put in place for the heavy vehicle industry with little recognition of the risks.

135 Supporting quantitative evidence is often critical to the success of reforms. Equally, in the absence of supporting quantitative evidence, perfectly sound proposals for improvement will sometimes fall on deaf ears. To quote an example, we recall that in its 1996 report into bridges and road wear, the former NTRC made it clear that there were almost certainly benefits available from bridge improvements. But further analysis was not carried out and the magnitudes of the net benefits remained unknown. We believe the failure of the NTRC to follow through with quantitative evidence in 1996 is why much of the required remedial work on bridges has never materialised.

136 To further reinforce the bottom up approach to the removal of road infrastructure bottlenecks, the ALTA believes it would be appropriate to require that the NTC Board include at least one member who had detailed grass-roots industry knowledge.

137 In addition, when preparing regulatory impact statements or when providing advice to the Australian Transport Council on matters related to the pricing and regulation of the road transport sector, the ALTA believes more informed public debate about proposed pricing and regulatory changes would be achieved if the NTC were specifically required to:

- comment on any infrastructure or other impediments that would impede the implementation or adoption of the proposed change;
- document the expected cost to a typical operator associated with the implementation of any proposed pricing or regulatory changes; and
- document the effects on the national economy of proposed pricing and regulatory changes. This should include the impact on the quantity of exports, national output, numbers employed and a measure of economic efficiency.

138 A simple change to the funding of proposals for road upgrades could also improve matters. Monetary assistance could be made available through AusLink to undertake the preparation of proposals for funding under AusLink's rural roads program. Funding should be available to individuals, corporations or local councils. To preclude exploitation of this mechanism funding could be retrospective and paid on successful proposals based on a sliding scale of the value of the funded road investment

139 We now outline how inconsistent regulation across Australian states has increased livestock transport costs in some states.

5.3. INCONSISTENT REGULATION OF THE LIVESTOCK TRANSPORT INDUSTRY ACROSS STATES, A CASE STUDY IN LIVESTOCK LOADING LIMITS

140 For many years now all states in Australia except NSW have recognised in their loading weight regulations that the transport of livestock is a mass constrained exercise. That is, the greatest impediment to logistical efficiency from the processor's perspective is the mass of the product.

141 In other states over the past 20 years, regulations have "traded-off" dimensional constraints for mass concessions to reflect this reality of the business. That is, livestock deck lengths (dimensions) have remained "constrained" for a corollary gain in mass concessions. This follows a simple principle: if something is heavy and still needs to be moved efficiently, the size of the object can be reduced, but the ability to move its weight efficiently remains of primary importance.

142 By and large, maximum deck lengths in livestock transport have remained as follows:

- Semi trailer deck length constrained to 12.5 metres.
- B-double deck length constrained to 18.8 meters (6.3 metres for the "A" trailer, 12.5 meters for the "B" trailer).

143 In States other than NSW, the mass concessions for livestock transport follow the principles of the Higher Mass Limits currently being rolled out as part of AusLink upgrade arrangements. Higher Mass Limits seek operator commitment to employing road-friendly suspension packages in return for mass concessions: a standard semi-trailer moves from a gross weight of 42.5 tonnes to 45.5 tonnes. Assuming a tare weight for this vehicle of 21.5 tonnes, this concession offers an increase to existing load weights from 21 tonnes to 24 tonnes—a 14.2 per cent increase in load concession.

144 In reality then, the principles for livestock loading deliver much the same outcome, by allowing livestock trucks to load to full—this has significant implications for the welfare of the transported animals and their eventual eating condition, as less-than-full livestock crates mean that animals risk being "bounced about" during the journey. Animal welfare objectives have been a significant corollary benefit of livestock loading regulations in other States.

145 The livestock loading regulations available in all parts of the country other than NSW have the effect of increasing the capacity of leach livestock crate by approximately 10–12 per cent. For transport contracts that primarily involve shorn lambs and sheep for slaughter, this efficiency can approach 15 per cent, as the lack of wool on the animals increases the sheep and lamb capacity of each crate. This is the case for Fletcher International lamb and sheep movements.

146 In reality, the livestock loading concession can exceed the precise weights outlined in Higher Mass Limits regulations. However, if the vehicle is fitted with road friendly suspensions it may cause less road wear than an equivalent vehicle that cannot employ livestock loading but which also does not possess road friendly suspension.

147 The estimated reduction in road wear associated with livestock loading coupled with road friendly suspensions depends on the estimated road wear reduction factors. The NRTC has provided two sets of road wear reduction factors due to road friendly suspensions and the latter of these sets was said by the NRTC to be "conservative"[12] (Table 12).

Table 12: Estimates of road wear due to a 6 axle articulated semi trailer with and without livestock loading and with and without road friendly suspension

Axle weights (tonnes)	Steer axle	Drive-axle prime mover	Tri-axle trailer	Total
Without livestock loading	6.00	16.50	20.00	42.50
With livestock loading	6.00	17.00	22.50	45.50
Standard mass load for 1 ESA (tonnes)*	5.40	13.60	18.50	
Calculated ESAs				
Without livestock loading	1.52	2.17	1.37	5.06
With livestock loading	1.52	2.44	2.19	6.15
NRTC's road wear reduction factors due to road friendly suspensions				
Conservative	1.00	1.25	1.20	
Original	1.10	1.50	1.90	
Calculated ESAs with livestock loading				
Conservative	1.52	1.95	1.82	5.30
Original	1.39	1.63	1.15	4.16

*Source: National Road Transport Commission (NRTC) 1996, 'Mass limits review', Technical Supplement No. 2, Road and Bridge Impacts, p. 174.

12 National Road Transport Commission (NRTC) 1996, 'Mass limits review', Technical Supplement No. 2, Road and Bridge Impacts, p. 177.

148 Thus if the change in road wear associated with livestock loading is calculated using the less conservative road wear reduction factors proposed by the NRTC we calculate that livestock loading would allow an additional 3 tonnes of livestock to be carried on a 6 axle articulated truck. If this truck were fitted with road friendly suspensions then the truck is calculated to cause 4.16 ESAs of road wear. This is about 17 per cent less road wear than the 5.06 ESAs of road wear calculated for a 6 axle articulated truck without road friendly suspensions and carrying 3 tonnes less freight (Table 12).

149 In summary, livestock loading is a major regulatory efficiency that allows a specific industry to overcome its most significant constraint—mass. When allied to modern road-friendly suspension regimes it offers positive externalities in reduced road wear.

150 The lack of livestock loading regulations in NSW means that compared with its neighbours, NSW is disadvantaged in transport costs by around 10 to 12 per cent in its livestock transport industry. The mass constraint remains and this ultimately contributes to higher, less-competitive end-product prices for NSW meat products.

5.4. IMPACT ON FLETCHER INTERNATIONAL OF QUANTIFIED NON-PRICE BARRIERS

151 Taken together the two case studies suggest that Fletcher International Pty Ltd faces livestock transport costs that are 15 to 19 per cent higher than they need to be. This is broken down into:

- 10 to 14 per cent higher transport costs because NSW does not allow livestock loading; and
- 5 per cent due to the existence of “infrastructure bottlenecks”.

152 As livestock transport costs account for about 5 per cent of the ex works cost of the meat and meat products industry the non-price barriers may have increased the ex works cost of Fletcher International’s operations at Dubbo by up to 1 per cent.

153 Because export markets for meat products are highly price sensitive it is likely that a 1 per cent increase in the ex works cost of meat products would lead to a substantial loss in export sales. For example, in Econtech’s Industry Model of the Australian economy the price elasticity of demand for Australian sheep meat is -12.[13] That is for every 1 per cent increase in the fob price of meat products exports fall by 12 per cent.

13 Econtech 2002, A Guide To Econtech’s Industry Model —Murphy Model 600 Plus (Mm600+) 26 May, p.17.

154 This elasticity implies that the 1 per cent increase in the ex works cost of Fletcher Internationals operations would lead to slightly less than a 12 per cent reduction in exports from the Fletcher International Pty Ltd works at Dubbo.[14]

155 In the following section we outline what we believe are the policy implications of the case study results.

5.5. IMPLICATIONS OF THE CASE STUDIES FOR VEHICLE CHARGES

156 The non-price obstacles identified in the case study are frustrating the execution of the livestock transport task and, in particular, are preventing ALTA's members from taking full advantage of currently available and prospective advances in truck design. In terms of their impact on ALTA members' transport operations, the imposts considerably outweigh in importance the third determination pricing reforms proposed by the NTC.

157 Thus a key question that arises for this inquiry is what the identification of the cost imposts summarised in paragraph 151 means for the sequencing and prioritising of transport reforms.

158 This inquiry will no doubt identify many areas where policy reform is required. Such policy reform will not be achieved quickly nor at once, so for the meantime a policy question that presents itself is whether implementing a subset of reforms in isolation would make things better or worse for the economy in the short to medium term. In an inquiry in which a wide variety of factors are potentially on the reform agenda, this matter requires careful consideration.

159 As the ALTA sees it, in an inquiry in which the interests of the community as a whole are paramount, the strategy should be to recommend fixing first those distortions which would at least promote, and certainly not jeopardise, the call on resources of those industries which are undeniably efficient from a national point of view.

160 It is possible, on the basis of available estimates of effective and nominal rates of assistance, to nominate the pastoral and meat processing industries as two such industries. To reduce assistance to such industries until the more important imposts are addressed would be to make the economy worse off.

161 This type of issue is no doubt common in Productivity Commission inquiries. In relation to the agricultural sector, the Productivity Commission's predecessor, the Industries Assistance Commission confronted the issue in its Nitrogenous Fertilisers and Phosphatic Fertilisers inquiries in the 1970s.

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14 The drop in exports is less than 12 per cent as the percentage increase in the fob price of sheep meat is less than the percentage increase in the ex works sheep meat price as costs are incurred in transport the sheep meat from the works to ports. As these ex works costs do not change the weighted average fob price change will be less than the percentage change in the ex works price.

162 The issue before the Industries Assistance Commission was that parts of agriculture were benefiting from subsidies for use of these fertilisers. The subsidies had two potential effects:

- First they were offsetting some of the cost increasing effects on the agricultural sector of very high assistance being granted to manufacturing industries at that time; and
- They may have encouraged a substitution of fertiliser for other inputs in the agricultural sector.

163 The Industries Assistance Commission recommended the subsides be retained. In essence it argued that removal of the subsidies would have further penalised the very efficient rural industries which would not have been beneficial to the economy.

164 In addition, the Industries Assistance Commission did not believe the fertiliser subsidies were significantly influencing farmers input choice decisions since fertilisers were seen principally as a substitute for land and the Industries Assistance Commission believed that land was largely a fixed input for the farm sector.

165 In a subsequent inquiry in 1982 the Industries Assistance Commission[15] recommended that the subsidies be terminated over a relatively short period as it judged that rural industries would benefit from any likely general reductions in assistance program and through the achievement of Governments broader industry and policy objectives.

166 The ALTA believes that the possible undercharging of heavy vehicles identified in the NTC's third determination poses the Productivity Commission with similar policy choices that were faced by its predecessor when it considered the issue of whether or not to maintain the fertiliser subsidies that were enjoyed by agriculture in the 1970s. That is, any undercharging of heavy vehicles serves to compensate efficient export orientated industries for the cost increasing effects of non-price barriers to the efficient provision of road transport.

167 Given the magnitude of the effects of the non-price barriers on the cost of transport faced by the very efficient export orientated meat and meat products industry, the ALTA believes it would be appropriate to consider any increase in heavy vehicle charges only after the significant non-price barriers to the efficient provision of road transport services are removed.

168 Also, since the vehicles that the NTC believes are under charged are not permitted to operate on many of Australia's roads the possible under recovery of fees from some heavy vehicles is unlikely to lead to significant changes in industries choice of truck for the transport task.

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15 Industries Assistance Commission 1982, Phosphatic and Nitrogenous Fertilizers, 26 February.

6. CONCLUSIONS

169 ALTA has set out to examine the three areas that together comprise public policy and management in the road freight industry—these are:

- pricing—how governments cover the cost of road maintenance and upgrades;
- expenditure—how, where and on what basis governments choose to spend those recovered funds from the road transport industry; and
- regulation—what regulatory environment governs the industry.

170 What is clear from the ALTA's examination of the current pricing mechanisms as well as its case study results is that all three areas of road freight policy and management require urgent review. This is not a new observation; indeed, it was the very reason for COAG commissioning this inquiry. However, in empirical terms, the ALTA has shown that the major barriers to cost effective productivity in the rural road transport industry do not lie in pricing, but in historical expenditure and regulatory practices that serve to tax industry severely and stifle cost efficiency opportunities.

171 What is the ALTA's observation from this analysis? Road freight policy and management is undoubtedly a very complex business, stretched across three levels of government and nine major jurisdictions nationally, not including hundreds of local council areas. Critically, unless pricing, expenditure and regulatory regimes are understood holistically—unless their interrelations with one another are well understood across these various jurisdictions, old and punishing inefficiencies can remain unaddressed and new inefficiencies can arise without warning.

172 As the ALTA submission has shown, rural Australia and the meat and livestock sector in particular is overwhelmingly reliant on road freight. In a highly-competitive, trade-dependent economy, such public policy and management inefficiencies can be disastrous.

173 What can be done? The ALTA believes that its analysis reveals significant design flaws in the institutional architecture of transport policy, planning and management in Australia at all levels and across all jurisdictions. These architectural flaws mean that pricing planning considerations can be easily—even unwittingly—cut asunder from expenditure considerations—operators can upgrade to the "recommended" new equipment standards set by regulators, but unresolved infrastructure barriers on specific roads themselves—which are administered by an entirely separate arm of government bureaucracy to the regulators—mean that these potential gains are lost.

174 Roads can be upgraded by these administrators with the best intentions, but lack of regulatory "access" can mean they sit as expensive museum pieces, playing less than their potential role in driving our economy to its limits; pricing methodologies designed without sufficient understanding of vehicle innovations and cost efficiencies can send price signals to operators that actually discourage purchase of the most cost-efficient new vehicle combinations for managing Australia's growing freight task. Overall, the failure to ensure that each government area dealing with road transport matters has at least some basic appreciation of the whole leads to lost opportunities. Some major lost opportunities can be seen in the ALTA's case study.

175 Perhaps the most frustrating legacy of this bad design is that industry itself—which over many years, as might be expected, has driven creativity and innovation and cost efficiencies through its own self interest—has been excluded from any meaningful and ready dialogue on transport policy reform. Where they have occurred, the gains have been piecemeal and hard won; too often though, the losses have been greater still. In 2006, the job of untangling the knotted mess that is pricing, regulatory and infrastructure expenditure jurisdictions is daunting. If left to drift for even another 5 years, the task may simply be beyond the skill and effort of even the most concerted of industry and government efforts.

176 The ALTA hopes that this analysis will act as a call to action for the serious architectural redesign of transport policy and management infrastructure across all jurisdictions. In commissioning this review, the Prime Minister, Premiers and the Head of the Local Government Association have opened the door to major new economic efficiencies and road performance dividends for Australia. The ALTA has provided sound, practical analysis to show that the efficiencies are there. It would be a gross failure to squander this major opportunity on a minor reworking of road pricing methodologies.

APPENDIX A: CALCULATION OF VEHICLE CHARGES

A.1.1 Introduction

177 In this appendix we document the calculation of vehicle charges that would apply from 1 July assuming charges were based on the NTCs second determination and assuming charges were based on the NTC's third determination.

178 The fees and charges consist of three components. These include:

- A road use fee based that is effectively implemented via the Diesel rebate scheme. The road use fee per litre of diesel determined by the NTC is deducted from diesel excise paid per litre by an eligible operator and the residual is the diesel rebate.
- A registration fee for the prime mover which is based on the number of axels on the prime mover; and
- A registration fee for trailers which is based on the number of axels on the trailer.

A.1.2 The road use fee

179 In its second determination the road use fee was set at $0.2 per litre. This was raised to $0.221 per litre in the NTC's third determination.

180 To calculate the value of the road use fee per vehicle we use the NTC's data on the number of vehicles and fuel consumed and apply the determined road use data. The calculated road user fees are given in Table 13.

Table 13: Road user charges and registration fees applicable I July 2006 based on NTC second determination and third determination ($/vehicle)

Truck type	Number of Vehicles	Distance Travelled ('000 KM)	Fuel Consumption (Litres)	Average fuel consumption per vehicle ('000 litres)	Second determination road use charge ($/vehicle)	Third determination road use charge ($/vehicle)
Light rigid trucks	73,565.5	1,424,399.7	230,727.5	3.1	627.3	693.1
Rigid trucks: 2 axle: no trailer: GVM 4.5 to 7.0 tonne	47,834.8	719,667.6	140,867.5	2.9	589.0	650.8
Rigid trucks: 2 axle: no trailer: GVM 7.0 to 12.0 tonne	79,682.9	1,900,864.6	432,299.4	5.4	1,085.0	1,199.0
Rigid trucks: 2 axle: no trailer: GVM over 12.0 tonne	48,593.0	1,089,118.4	321,665.4	6.6	1,323.9	1,462.9
Rigid trucks: 2 axle: with trailer	11,097.6	246,720.5	63,096.9	5.7	1,137.1	1,256.5
Rigid trucks: 3 axle: no trailer GVM 4.5-18	3,989.3	114,166.4	43,949.8	11.0	2,203.4	2,434.7
Rigid trucks: 3 axle: no trailer GVM >18	36,788.5	1,081,893.9	442,622.2	12.0	2,406.3	2,659.0
Rigid trucks: 3 axle: with trailer >18	7,158.0	488,946.1	233,732.1	32.7	6,530.6	7,216.3
Rigid trucks: 4 axle: no trailer GVM 4.5-25	1,540.1	14,465.0	5,032.0	3.3	653.5	722.1
Rigid trucks: 4 axle: no trailer GVM >25	4,165.7	149,622.3	73,871.0	17.7	3,546.6	3,919.0
Rigid trucks: 4 axle: with trailer >25	754.4	59,087.1	31,995.2	42.4	8,482.6	9,373.3
Articulated trucks: single trailer: 3 axle rig	1,314.6	23,248.0	10,947.9	8.3	1,665.6	1,840.4
Articulated trucks: single trailer: 4 axle rig	4,488.4	175,560.0	65,693.7	14.6	2,927.2	3,234.6
Articulated trucks: single 3 axle trailer: 5 axle rig	1,410.0	66,882.3	31,622.6	22.4	4,485.3	4,956.3
Articulated trucks: single 2 axle trailer: 5 axle rig	5,766.8	352,382.4	170,465.7	29.6	5,912.0	6,532.8
Articulated trucks: single trailer: 6 axle rig	32,950.8	3,086,365.1	1,558,713.0	47.3	9,460.8	10,454.2
Articulated trucks: B-double: <9 axle rig	1,368.9	239,225.0	134,159.4	98.0	19,601.7	21,659.8
Articulated trucks: B-double/triple: 9 axle rig & above	5,975.9	1,055,985.3	615,506.0	103.0	20,599.6	22,762.5
Articulated trucks: Road train: 2 trailers	3,109.6	380,439.0	257,031.8	82.7	16,531.7	18,267.5
Articulated trucks: Road train: 3 trailers	1,094.9	190,356.8	156,758.3	143.2	28,634.1	31,640.7

Source: Appendix 1.

A.1.3 Registration charges

181 The Road Transport Charges (Australian Capital Territory) Amendment Act 2002 automatically adjusts heavy vehicle registration charges according to an annual adjustment procedure. The procedure is automatically applied on 1 July each year.

182 Registration charges that would apply from 1 June 2006 under the NTC's second determination are reproduced in Table 14.

Table 14: Registration charges that would apply from 1 June 2006 under the NTC's second determination

DIVISION 1 - LOAD CARRYING VEHICLES ($) - 2006				
Vehicle Type	**2 axle**	**3 axle**	**4 axle**	**5 axle**
Trucks				
Truck (type 1)	343	686	1,029	1,029
Truck (type 2)	572	914	2,285	2,285
Short combination truck	629	2,285	2,285	2,285
Medium combination truck	4,342	4,342	4,684	4,684
Long combination truck	5,998	5,998	5,998	5,998
Prime Movers				
Short combination prime mover	1,485	3,883	5,025	5,025
B-double prime mover	4,569	5,711	6,283	6,283
Road train prime mover	5,711	5,711	6,283	6,283
DIVISION 2 - LOAD CARRYING TRAILERS				
Calculated using the formula:	$343 x Number of Axles			

Source: National Road Transport Commission 2006,' Road transport charges expenditure data – July 2006 adjustment'. Truck (type 1) means a rigid truck under 12.0t (2 axles), 16.5t (3 axles) or 20t (4 or more axles). Truck (type 2) means a rigid truck over 12.0t (2 axles), 16.5t (3 axles) or 20t (4 or more axles). Short combination truck means a truck nominated to haul one trailer where, according to the nomination: (a) the combination has 6 axles or fewer; and (b) the maximum total mass that is legally allowable for the combination is 42.5 tonnes or less

183 Charges proposed to apply from July 2007, but expressed in terms of 2005-06 prices are given in are given in Table 15.

Table 15: Registration charges that would apply from 1 July 2007 under the NTC's third determination but expressed in 2005-06 prices

DIVISION 1 - LOAD CARRYING VEHICLES ($)				
Vehicle Type	**2 axle**	**3 axle**	**4 axle**	**5 axle**
Trucks				
Truck (type 1)	350	690	1030	1030
Truck (type 2)	560	890	2230	2230
Short combination truck	620	2230	2230	2230
Medium combination truck	4230	4230	4570	4570
Long combination truck	5840	5840	5840	5840
Prime Movers				
Short combination prime mover	1450	3780	4900	4900
B-double prime mover	6640	8310	9140	9140
Road train prime mover	8310	8310	9140	9140
DIVISION 2 - LOAD CARRYING TRAILERS				
The amount calculated using the formula:	$350 x Number of axles			

Source: Third Heavy Vehicle Road Pricing Determination Draft Regulatory Impact Statement, October 2005.

184 These charges were mapped to operational vehicle classes using a concordance provided by the NTC[16]. These fees can be calculated given the number of axels on the trucks and trailers. This data is given in Table 16 This data was used to determine the different the registration fees that would apply to the different vehicles as at I July 2006 assuming the NTC's second determination applied. The calculated registration fees are given in Table 17.

16 NTC 2005, Third Heavy Vehicle Road Pricing Determination: Draft Technical Report – Appendices, pp. 114–115.

Table 16: Axels on trailers and prime movers

Truck type	Axels on trailers	Non trailer axels	Total axel
Rigid trucks: 2 axle: no trailer: GVM 4.5 to 7.0 tonne	0	2	2
Rigid trucks: 2 axle: no trailer: GVM 7.0 to 12.0 tonne	0	2	2
Rigid trucks: 2 axle: no trailer: GVM over 12.0 tonne	0	2	2
Rigid trucks: 2 axle: with trailer	1.5	2	3.5
Rigid trucks: 3 axle: no trailer GVM 4.5-18	0	3	3
Rigid trucks: 3 axle: no trailer GVM >18	0	3	3
Rigid trucks: 3 axle: with trailer >18	3	3	6
Rigid trucks: 4 axle: no trailer GVM 4.5-25	0	4	4
Rigid trucks: 4 axle: no trailer GVM >25	0	4	4
Rigid trucks: 4 axle: with trailer >25	4	4	8
Articulated trucks: single trailer: 3 axle rig	1	2	3
Articulated trucks: single trailer: 4 axle rig	2	3	5
Articulated trucks: single 3 axle trailer: 5 axle rig	3	2	5
Articulated trucks: single 2 axle trailer: 5 axle rig	2	3	5
Articulated trucks: single trailer: 6 axle rig	3	3	6
Articulated trucks: B-double: <9 axle rig	5	3	8
Articulated trucks: B-double/triple: 9 axle rig & above	6	3	9
Articulated trucks: Road train: 2 trailers	8	3	11
Articulated trucks: Road train: 3 trailers	13	3	16

Source: ALTA calculations.

Table 17: Trailer and non trailer registration fees as at 1 July 2006 based on NTC's second determination and the third determination ($/vehicle/year)

Truck type	Third determination	Second determination	Change ($/vehicle)
Rigid trucks: 2 axle: no trailer: GVM 4.5 to 7.0 tonne	350	343	7
Rigid trucks: 2 axle: no trailer: GVM 7.0 to 12.0 tonne	350	343	7
Rigid trucks: 2 axle: no trailer: GVM over 12.0 tonne	560	572	-12
Rigid trucks: 2 axle: with trailer	1,145	1,144	2
Rigid trucks: 3 axle: no trailer GVM 4.5-18	690	686	4
Rigid trucks: 3 axle: no trailer GVM >18	890	914	-24
Rigid trucks: 3 axle: with trailer >18	3,280	3,314	-34
Rigid trucks: 4 axle: no trailer GVM 4.5-25	1,030	1,029	1
Rigid trucks: 4 axle: no trailer GVM >25	2,230	2,285	-55
Rigid trucks: 4 axle: with trailer >25	5,970	6,056	-86
Articulated trucks: single trailer: 3 axle rig	1,800	1,828	-28
Articulated trucks: single trailer: 4 axle rig	2,150	2,171	-21
Articulated trucks: single 3 axle trailer: 5 axle rig	2,500	2,514	-14
Articulated trucks: single 2 axle trailer: 5 axle rig	4,480	4,569	-89
Articulated trucks: single trailer: 6 axle rig	4,830	4,912	-82
Articulated trucks: B-double: <9 axle rig	10,060	7,426	2,634
Articulated trucks: B-double/triple: 9 axle rig & above	10,410	7,769	2,641
Articulated trucks: Road train: 2 trailers	11,110	8,455	2,655
Articulated trucks: Road train: 3 trailers	12,860	10,170	2,690

Source: ALTA calculations.

A.1.4 Total fees and charges

185 The road use fees given in Table 4were added to the changes in registration fees given in Table 17 to calculate the total fees and charges per vehicle. These calculations indicate that all vehicle classes would incur significant increase in fees and charges under the NTC's third determination. (Table 18)

Table 18: Total road use fees and registration charges under the NTC's second and third determination ($/vehicle)

Truck type	Road use fee and registration third determination	Road use fee and registration second determination	Increase (per cent)
Rigid trucks: 2 axle: no trailer: GVM 4.5 to 7.0 tonne	1,001	932	7.39
Rigid trucks: 2 axle: no trailer: GVM 7.0 to 12.0 tonne	1,549	1,428	8.47
Rigid trucks: 2 axle: no trailer: GVM over 12.0 tonne	2,023	1,896	6.70
Rigid trucks: 2 axle: with trailer	2,402	2,281	5.30
Rigid trucks: 3 axle: no trailer GVM 4.5-18	3,125	2,889	8.15
Rigid trucks: 3 axle: no trailer GVM >18	3,549	3,320	6.89
Rigid trucks: 3 axle: with trailer >18	10,496	9,845	6.62
Rigid trucks: 4 axle: no trailer GVM 4.5-25	1,752	1,682	4.14
Rigid trucks: 4 axle: no trailer GVM >25	6,149	5,832	5.44
Rigid trucks: 4 axle: with trailer >25	15,343	14,539	5.53
Articulated trucks: single trailer: 3 axle rig	3,640	3,494	4.20
Articulated trucks: single trailer: 4 axle rig	5,385	5,098	5.62
Articulated trucks: single 3 axle trailer: 5 axle rig	7,456	6,999	6.53
Articulated trucks: single 2 axle trailer: 5 axle rig	11,013	10,481	5.07
Articulated trucks: single trailer: 6 axle rig	15,284	14,373	6.34
Articulated trucks: B-double: <9 axle rig	31,720	27,028	17.36
Articulated trucks: B-double/triple: 9 axle rig & above	33,173	28,369	16.93
Articulated trucks: Road train: 2 trailers	29,377	24,987	17.57
Articulated trucks: Road train: 3 trailers	44,501	38,804	14.68

Source: ALTA calculations and NTC 2005, Cost Allocation & Pricing Model Third Determination, sheet Result_Summary, October 21.

APPENDIX B: UPGRADING RURAL ROADS, LETTERS OF SUPPORT

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COONABARABRAN NSW 2357

13 March 2006

Copies: NSW Livestock and Bulk Carriers Asssociation; Coonamble Shire Council; Liverpool Plains Shire Council; Elders Ltd (Killara Feedlot); AMH Ltd (Caroona Feedlot); Saleyards Organisation of Australia – NSW Division (Coonamble Saleyards); NSW Farmers Association; Australian Meat Industry Council; Cargills Abattoirs Australia; Fletcher's Abattoirs; Wingham Beef; Throsby's Abattoirs; RSPCA NSW Division; NSW WorkCover; Hon John Anderson MP - Federal Member for Gwydir;

Dear Sir,

ALTA SUPPORT FOR AUSLINK FUNDING APPLICATION – UPGRADE TO THE LOW BRIDGE ON THE COONABARABRAN TO BARADINE ROAD

I write with the support of my colleague Mr Robert Cavanagh, New South Wales Association President, to offer our full support and assistance for your council to apply for funding for upgrade works to the low rail bridge on the Coonabarabran – Baradine Road under the recently-announced *AusLink Strategic Regional Program*.

You would be aware that some weeks ago the Federal Minister for Local Government, Territories and Roads wrote to all councils to advise them of $127 million in new AusLink funds available, on merit, for road or rail infrastructure projects that promise benefits to local industry productivity and safety. The ALTA asked its members nationally to identify local road issues that might meet these criteria.

Based on very strong member feedback in NSW, we believe that the low rail bridge on the Coonabarabran – Baradine Road is an excellent candidate for securing such funding. As you will see below, the analysis we have conducted suggests that *the upgrade would pay for itself in well under a year, based on the savings in livestock transport costs alone.*

Current Situation
The rail bridge across this road has a clearance of only 4.3 metres. Modern stock crates require a clearance of 4.6 metres. As such, the livestock transport industry is not able to use the Coonabarabran - Baradine corridor. This road is B-double rated, but cannot make

use of this very efficient, safe and modern truck configuration because of the low bridge. This has the following direct impacts on the whole region's livestock industry, which the ALTA would ask you to consider in assessing the merits of a funding application:

- Diverts Many Trucks from Most Efficient Route The main livestock transport affected by the road are the two major feedlots - Killara and Caroona; which we understand have a combined average annual turnoff of around 75,000 - and the Coonamble saleyards with an average annual throughput of 25,000. Based on the 67-cow capacity of a B-double, feedlot and saleyard movements alone require an estimated 1,493 B-double diversions annually of around 110kms (220kms return) *via* Gilgandra.

- Once our estimate of additional truck movements required to actually transport livestock *into* the feedlots from backgrounding and *into* the saleyards from regional farms is accounted for, the number of diverted movements would be well over 2,500 – or around 11 B-doubles per day every Monday to Friday, 52 weeks a year. This is therefore a major problem – a bridge upgrade promotes the most efficient transport route and keeps this amount of trucks away from further clogging the Newell Highway network.

- Higher Fuel Bills, Environmental Damage, Less-Competitive Local Industry The transport diversion of 220kms (return) places around $422.00 in extra fuel cost on each load of cattle (based on B-double fuel efficiency of around 1.4 kms per litre and current local diesel price of around $1.37 per litre). Based on annual diverted B-double movements of around 2,500 (see above) **the additional fuel bill for the local livestock industry to absorb is over $1,055,000 dollars per year** – all a direct result of the low bridge. Diesel fuel is an unrenewable resource being consumed at unnecessarily high levels because of the bridge. This extra cost makes the industry less profitable and export cattle prices less competitive.

- Driver Fatigue Risk The extra 2 hours of driving time caused by the diversion represents a significant fatigue management and road safety issue for our drivers. This issue is becoming critical in NSW where extremely rigid fatigue management requirements are now in place – any reduced trip times will help us;

- Animal Welfare Risk The additional 1-hour (one-way) diversion *via* Gilgandra represents more time that livestock are forced to stand on trucks *en route*, compounding animal welfare stressors *unnecessarily*;

- Loss of Saleyards Business From discussions with the Coonamble saleyards management, it appears that Coonamble loses significant business to other regional saleyards as a direct result of the low bridge: cattle from surrounding areas are redirected out through to alternatives like Moree in preference, due to the additional time and cost implications for Coonamble.

- Collision Risks Significant In addition to the economic damage, the width of the current bridge structure does not allow even lower clearance-rated trucks to pass each other in total safety. All local transporters are very concerned about the prospects of an accident occurring under this narrow pass. The winding approach to the bridge does not help this situation and the barriers constructed to 'calm' traffic movements under the bridge would – unwittingly - restrict the aprons of the road in an emergency situation.

- Upgrade Would Cause No/Very Low Rail Disruption We understand that upgrades to the bridge would not unduly disrupt rail movements on this line, as it appears there have been no trains pass over the bridge since before last harvest.

Summary
On the ALTA's conservative analysis, the current state of the bridge is costing the region's livestock industry **over a million dollars every year** in direct livestock-related transport costs. The costs to wider road transport industry such as general freight and foodstuffs can only be guessed at. Anecdotally, we are led to believe that the bridge repairs to rectify the problem would cost less than $500,000 dollars. If that is the case, *the livestock benefits alone would pay for the improvements in less than a year*. These costings are surely a clear-cut justification for pursuing the upgrade; the road safety, driver and animal welfare benefits that the upgrade promises are also significant. All of these risks and costs are avoidable and the Federal Government now has funding under the AusLink Regional Programme to address just such problems.

Way Ahead
We would be happy to work with your officers further with a view to your council putting an application for funding forward – I understand the applications for funding close on 1 May 2006. We believe the parties copied to this letter may also offer their in-principle support, given the benefits available.

Thank you for your consideration. My point of contact is the ALTA's Executive Director, Mr Luke Fraser, on 0437 146 274.

Yours sincerely,

MA Sullivan

Mark Sullivan
President

RL10520

23 March 2006

Chairman Tony Critch
CBH Pty Ltd
Gayfer House
30 Delhi Street
WEST PERTH WA 6005

cc: Mr Grant Robins, West Australian Livestock and Country Bulk Carriers Association
Mayor Vickie Peterson, City of Geraldton Council
The Chief Executive, WA WorkSafe Association
Chairman Tony Critch, CBH Pty Ltd
RSPCA WA Division
Mr Ian McIvor, Australian Live Exporters Council Limited
WA AQIS
President Trevor De Landgrafft, West Australian Farmers Federation
President Sandy McTaggart, Pastoralists and Graziers Association WA
WA Main Roads
The Hon Wilson Tuckey MP, Member for O'Connor

Dear Tony,

**ALTA SUPPORT FOR AUSLINK FUNDING APPLICATION –
UPGRADE TO COOLINA HOLDING YARDS, NARNGULU (ARTHUR ROAD)**

I write with the support of my colleague Mr Grant Robins, WA Association President, to offer our full support and assistance for your council to apply for funding for upgrade works to the final few kilometers of access roads to the Coolina livestock holding yards, Narngulu, under the recently-announced *AusLink Strategic Regional Program*.

You would be aware that some weeks ago the Federal Minister for Local Government, Territories and Roads wrote to all councils to advise them of $127 million in new AusLink funds available, on merit, for road or rail infrastructure projects that are of benefit to local industry productivity and can offer other safety benefits. The ALTA asked its members nationally to identify road issues that might meet these criteria.

Based on very strong member feedback in WA, we believe that the Coolina holding yards are an excellent candidate for securing such funding. As you will see below, the basic analysis we have conducted suggests that *the upgrade would pay for itself very quickly, based on the savings in livestock*

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transport costs alone. There are also very significant safety, animal welfare and driver fatigue issues that an upgrade would address. Supporting analysis of this claim follows.

Background

The Coolina holding yards (on Arthur Road) are the only public, AQIS-accredited livestock holding facility in northern WA. The Coolina yards serve three main roles:

1. They are the main holding yard for all received livestock for the live export trade that runs from the Port of Geraldton – as you would know, this industry is a major employer with on average 25 ships per year transporting around 65,000 head of cattle;

2. They are the main yards for all other domestic livestock movements in northern WA, particularly all cattle headed South from the Kimberleys. The holding yards are also a critical piece of animal welfare infrastructure, as they allow cattle to 'spell' before further transport to more southerly/northerly destinations;

3. The ALTA understands that Coolina holding yards is also being mooted as the site for a new saleyards – the first in the entire region – due to the proximity to current livestock transport routes and associated facilities.

In total, over 110,000 head of cattle per year transit through the Coolina facility.

Current Road Infrastructure Problem

At present, the final 2.2 km of the southbound approach to the yards and the final 1.5 km of the eastbound approach to the yards is not rated for Triple Road Train access. This means that 53.5 metre long cattle road trains that have driven loaded from destinations like Broome, or to and from the Port of Geraldton must undertake a major diversion through the suburbs and city streets of Geraldton which involves 'dropping' the 3rd crate of the road train on private land and unloading in 'stages' in order to unload the cattle at the Coolina yards legally.

Our analysis of the economic and safety implications of this sub-standard state of affairs is as follows:

Final Few Kms of Road Diverts Over 750 Trucks from Most Efficient Route

- The triple road train combination is the only efficient means of transporting cattle over long distances in WA. Unfortunately, the state of the last few kms of access roads means these efficient trucks need to 'unhook' the final road train trailer for the final 1-2 kms of the journey to the Coolina yards; this involves 'illegally' leaving the final trailer on the only suitable unhooking ground – the privately owned CBH Bullring – and then undertaking a total diversion of around 82 kms until all three road train trailers can be successfully unloaded at the yards.

- This adds between 2 and 3 hours to each triple road train movement. The diversion takes heavy trucks through the suburban and city streets of Geraldton, often at night.

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- There are up to 750 triple road train movements into the Coolina facility a year (estimate based on 110,000 cattle per year, up to 150 cattle to a triple road train).

No.of trucks on Geraldton's streets for live export work 1/3rd more than necessary

- The same final couple of kilometers of road also mean that triple road trains cannot be used to service ship loading for the live export trade from the Coolina yards. If this was to happen, the greater carrying capacity of the road train would mean that heavy trucks on Geraldton's streets would be reduced from the current number of **468 movements** in and out of the port **to only around 312 movements** per year (based on the greater carrying capacity of the triple road train and a 65,000 head a year export rate from the port). 1/3rd less cattle trucks on the street is surely an excellent outcome.

Avoidable extra transport costs passed to local primary industry

- Based on per km transport rates of around $6.90 per km for a triple road train and the estimated movements of up to 750 triple road trains per year, we estimate conservatively that the last couple of kilometers of road to the Coolina holding yards is **costing the livestock and farming industry around $412,000 dollars per year in totally avoidable costs.**

- If the inefficiencies caused by not being able to take cattle from the yards to the port by triple road train were added to this figure **it would exceed $750,000 dollars as an annual avoidable direct cost.**

Causes avoidable animal welfare stress

- Our association works hard to eliminate unnecessary animal stressors for the livestock we carry. The stopping and starting and delays caused by the last 2 kms of under-developed road to the Coolina yards causes unnecessary stress to animals that have already often traveled extreme distances. When the delay is applied to the total throughput of the yards annually, this additional time on trucks totals 275,000 hours of unnecessary and avoidable animal stress per year. We believe this upgrade is a practical way to help the cause of animal welfare.

Serious Driver Occupational Health and Safety Risks

- 'Hooking' and 'unhooking' road trains is a potentially hazardous operation. Unfortunately, the lack of a public hooking and unhooking area at Coolina forces private property to be used by the whole industry. This property – the CBH Bullring - is not lit at night and this compounds the risk of serious accidents occurring.

Driver Fatigue Compounded

- In addition, the extra 2-3 hours of driving time and physical labour involved in the current practice is a significant extra strain on all drivers, who in most cases have already traveled long distances. These drivers would dearly love to avoid further driving time through the suburban streets of Geraldton. For these reasons we believe there would be significant health and safety benefits to improving the final few kilometers of access road to the Coolina yards. As an industry we are

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doing our best to manage fatigue as a risk to driving; this infrastructure issue makes our efforts that much harder and exposes us to greater scrutiny from WorkSafe unnecessarily.

Community Safety Considerations

- For the reasons discussed above, we believe that the reduction in heavy vehicle presence on the city and suburban streets of Geraldton that would ensue from the upgrade would be a real safety dividend for the town. Our trucks do not want to be on Geraldton's suburban streets but these last few kilometers of access road are forcing them there.

Summary

Upgrade works to allow for the triple road train rating of this final few kilometers of road has very significant economic, safety and animal welfare benefits for the Geraldton community, for truck drivers and for the profitability and standards of the WA livestock industry in general. On the figures provided, a cost-benefit analysis by the Council engineers will show a positive outcome for the community.

Way Ahead

We believe this is exactly the sort of project that would warrant attention through the *Auslink Strategic Regional Programme* and we urge you to submit an application to the Federal Government. I understand that applications for this funding stream close on 1 May 2006. We believe the parties copied to this letter may also offer their in-principle support to any application you might lodge, given the benefits available.

Thank you for your consideration. My point of contact is the ALTA's Executive Director, Mr Luke Fraser, on 0437 146 274.

Yours sincerely

Mark Sullivan
President

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