



Grain Logistics Taskforce Report



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Introduction

After many years of drought, the 2010-11 Victorian grain harvest was a record at just 7.1 million tonnes. This placed significant pressure on the grain supply chain, particularly for exports, with around 30% of the 2010-11 harvest still in storage in October 2011. The 2011-12 grain harvest is expected to be 6.2 million tonnes which will impose further pressure on Victoria's grain transport system.

As a result of the pressure on the grain supply chain, the Government established a Grain Logistics Taskforce in August 2011 to recommend improvements to the efficiency and capacity of Victoria's grain storage and handling system. The Taskforce comprised:

- Simon McNair, CEO of Australian Bulk Alliance
- Peter Tuohy, Vice President, Victorian Farmers Federation
- Jim Cooper, CEO Port of Portland
- Rob Noyes, Commercial Manager, Bulk Rail, Pacific National
- Nigel Hart, Group General Manager, Supply and Logistics, GrainCorp
- Phil Lovel, CEO Victorian Transport Association

The Taskforce appreciated additional input from Peter Marshall, GrainCorp, Stephen Sheridan, Victorian Farmers Federation, Mark Watson, Pacific National, and Neil Chambers, Victorian Transport Association, during the Taskforce meetings.

The Taskforce was requested to:

- obtain data on past and forecast grain flows
- assess the effect of the deregulated grain marketing system on grain storage and transport, including the impact on the grain supply chain caused by changes in grain containerisation

- analyse the domestic and export grain supply chain and identify necessary improvements to handle the future grain task including to the Victorian rail and road networks
- make recommendations to Government on how to improve the grain supply chain.

This report contains the Taskforce's recommendations on how best to cater for the movement of grain in Victoria. The Taskforce acknowledged that various initiatives have been pursued on a commercial basis to improve grain supply chain efficiencies. This has included continued investments in silo efficiencies, grain train capacity and supply chain coordination improvements. While these initiatives will assist in meeting the supply chain demands for the 2011/12 harvest season, the Taskforce saw the need to present the Victorian Government with its views on matters that would have maximum effect in addressing future grain supply chain efficiencies.

Consequently, this Report contains both short and medium term recommendations targeted at Government and industry.

The Taskforce was supported by a Secretariat comprising David Hill, Executive Officer, and Anthony Shaw from the Freight, Logistics and Marine Division of the Victorian Department of Transport. The Secretariat undertook extensive consultations across the grain supply chain to ensure that there was a comprehensive overview of relevant issues.

A list of consultations is provided at the end of the report.



Executive Summary

The grain supply chain has changed significantly in recent years. Abolition of the single desk for Australian wheat exports in 2008 has resulted in there now being 27 accredited wheat exporters with 18 of these actively involved in the export wheat market.

Deregulation of the wheat export market has resulted in very different arrangements between grain growers, grain handlers and grain transport companies than existed prior to 2008 when the grain supply chain was much simpler. These changes have coincided with large grain harvests after many years of drought which has led to the need for a better coordinated grain supply chain.

The grain industry has recognised these changes and, to a large extent, developed ways to manage them in order to improve the efficiency of the grain supply chain. For example, the industry has improved silo efficiency by focusing on larger, more efficient sites and is investing in more grain train capacity in order to increase the amount of grain transported by rail. The industry is also improving the coordination of grain deliveries by truck into ports.

However, the Taskforce has identified that some major issues remain in ensuring the grain supply chain continues to become more efficient and can handle bigger harvests with minimal delay to export grain shipments. Improving train and truck productivity and reducing the incidence of ships failing survey are critical to the grain supply chain in ensuring the grain harvest is moved at least cost and is competitive with overseas grain producers.

Train cycle time depends on network investment by track managers and investment by grain companies in silos which can be loaded and unloaded quickly to reduce train turnaround times. The general industry view is that, provided the rail network is maintained in good condition to enable reliable cycle times which maximise train productivity, the industry will invest in silo capacity which facilitates improved train utilisation. An example of this approach is the joint industry/Government, upgrading of the Dimboola to Rainbow railway and silo capability at Rainbow. This was also the approach used in the 2007 *Rail Freight Network Review* where grain rail lines were upgraded by Government provided industry agreed to upgrade silo capability on the lines.

Truck productivity is also an issue during grain harvests with the industry concerned that truck size, combined with truck queues at silos and ports, is affecting the ability to transport grain to silos or ports quickly and efficiently. These problems could potentially be overcome with increased use of more efficient truck combinations under the Performance Based Standards scheme and more widespread approval of route and infrastructure access for these vehicles by road managers. Investment in silo efficiency is also required to reduce truck turnaround times. Reduced truck turnaround times would enable fewer trucks to be required for the grain transport task with less congestion at silos and ports and fewer problems arising from fatigue management.

The issue of grain ships failing survey has a major impact on the grain supply chain. Every time a grain ship fails survey grain cannot be loaded onto the ship or loaded into the port silo because the silo is full. The Federal Government's Export Certification Process, if approved, will enable ship surveys affecting grain transport to be undertaken at anchor rather than at berth which will greatly reduce delays to grain shipments. Ships being loaded will already have passed survey so will not delay grain loading at berth. The grain industry can also reduce the incidence of ships failing survey by improving ship chartering processes so that ships are less likely to fail survey when they are in Australian waters.

Finally, the Taskforce recognised the value in maintaining dialogue and action between industry participants and government to continue to analyse and address grain supply chain efficiency issues. In this regard, it has been recommended that the Grain Logistics Taskforce is maintained as a forum to review harvest management plans and consider continuous improvements in grain supply chain efficiencies in Victoria.

The recommendations in this report address these issues.



Grain Logistics Taskforce – draft recommendations

Improved train productivity

1. Consistent with Recommendation 12 of the 2007 *Rail Freight Network Review*, The State Government ensure there is an appropriate level of investment in the rail freight network to provide sufficient rail freight network capability, including track speeds, which supports efficient grain train cycle times from silo to port and return.
2. The Victorian Department of Transport work with track managers, rail operators and grain companies to:
 - a) review and assess the merits of funding the rail infrastructure issues referred to in Appendix A.
 - b) assess opportunities to standardise the rail freight network where economic circumstances justify gauge conversion.
 - c) assess the benefits and costs of increasing axle loads on the Victorian regional rail network to at least 21 tonnes to improve rail freight efficiency and reduce transport costs while maintaining grain train cycle times from silo to port and return.
 - d) work with the Port of Melbourne Corporation to improve train turnaround times in the port precinct as well as train stabling facilities.

Improved truck productivity

3. Transport companies increase their use of the Performance Based Standards scheme to improve the efficiency of road transport of grain and road managers approve these vehicles where the route is capable of accommodating them.
4. The Victorian, New South Wales and South Australian Governments identify important differences in truck weight regulations and where possible harmonise, similar to the process used in the Green Triangle region of Victoria and South Australia in order to improve road freight efficiency.
5. VicRoads and the grain industry give further consideration to implementing a Grain Harvest Management Scheme which would assist industry to comply with mass limit regulations in the cartage of grain off farms into receival silos.
6. Encourage industry to adopt improved truck scheduling and notification systems into ports to reduce truck queuing and improve truck throughput.
7. The State Government support the campaign by local governments for continuation of the Federal Government's *Roads to Recovery* program for funding of local roads beyond 2014.





Ship surveys

8. The Victorian Government support the recommendations of the Federal Export Certification Reform process which will enable industry employed AQIS Authorised Officers to undertake inspections of grain ships at anchor.
9. The grain industry review and improve its ship chartering processes to reduce the incidence of ships failing survey.

Other

10. The Grain Logistics Taskforce is maintained as a forum to review harvest management plans and consider continuous improvements in grain supply chain efficiencies in Victoria.
11. The training and competency assessment criteria for train and truck drivers be reviewed by relevant agencies to ascertain if they can be streamlined, without affecting safety, to assist in addressing train and truck driver shortages.

2.0 Background

Australia generally produces around 22 million tonnes of grain per year with 13 million tonnes exported to 52 countries¹ for an annual export value of over \$5 billion² (0.5% of Gross Domestic Product). Domestic grain consumes the remaining nine million tonnes. Export grains include wheat, rice, barley, maize, oats, sunflowers, chick peas and cotton seed.

Wheat is Australia's biggest and most important grain crop worth about A\$4 billion each year, accounting for 14 per cent of the world's export demand³. Average annual Victorian grain production is around 4.5 million tonnes of which 70-80% is wheat, barley and canola. These are the focus of this report because of their importance to the export grain task and its transport requirements.

In 2009-10 Victoria exported 1.8 million tonnes of grain worth \$659 million⁴ and about 10% of Australia's grain exports. Victorian domestic grain consumption is approximately 2.5 million tonnes per annum and is used in the dairy, livestock and flour milling sectors⁵.

Victoria's major grain production has varied over the past decade from 1.6 million tonnes in 2006-07 to 7.1 million tonnes in 2010-11. During that period, the State sometimes had little exportable grain with most used for domestic consumption. The 2011-12 grain harvest is predicted to be 6.2 million tonnes⁶.

In Victoria, grain is grown on 5,500 farms with around 3,000 grain 'specialist' and 2,500 grain producers as part of a mixed farm business⁷. These farms employ about 8,800 people. Victoria's grain farms are predominantly located in western and northern Victoria with most being in the Mallee and Wimmera regions. As rainfall patterns change grain growing may expand into southern Victoria and possibly Gippsland on previously pastoral areas. These changes will have implications for the grain supply chain because of availability of transport options and access to ports.

3.0 Industry structure

The grain supply chain was once a Government monopoly with Governments owning and controlling rail companies, ports and grain companies. However, privatisation and deregulation of rail transport, ports and the grain marketing system since the 1990s has resulted in Australia's grain crop being handled, stored and transported by private companies.

Prior to 1 July 2008, Australia's export wheat market was controlled by the Australian Wheat Board (1939 – 1999) and its privatised successor AWB Limited (1999 – 2008). This was known as the 'single desk'. The major element of the 'single desk' was the national pooling of returns to wheat growers where their price received was the average from sales minus costs incurred by the Board.

The 'single desk' covered domestic and export sales of wheat until 1989, then only export sales until August 2007. From then until its abolition on 30 June 2008 it handled only bulk export wheat sales. The 'single desk' was abolished for various reasons arising from the *National Competition Policy Review of the Wheat Marketing Act 1989* in 2000; the deregulation of barley; increasing dissatisfaction with the 'single desk', particularly in Western Australia; and the *Inquiry into Certain Australian Companies in Relation to the UN Oil-for-Food Program 2006*.⁸

Abolition of the 'single desk' led to a number of changes in wheat export marketing arrangements. On 1 July 2008, Wheat Exports Australia was established under the *Wheat Export Marketing Act 2008* to administer the *Wheat Exports Accreditation Scheme 2008* (WEA). The Scheme provides for the accreditation of bulk wheat exporters who must be considered 'fit and proper' against a wide range of probity and performance criteria.⁹

Deregulation of the export wheat market in 2008 has resulted in 27 accredited wheat exporters with 18 of these companies exporting wheat in 2009-10.¹⁰ Victoria's main wheat exporters are GrainCorp, AWB Grainflow and Australian Bulk Alliance (ABA).

¹ Wheat Exports Australia, *Report for Growers 2009-10*, p3

² About Australia, Department of Foreign Affairs and Trade, *About Australia*

³ Department of Foreign Affairs and Trade, *About Australia*, p2

⁴ Victorian Department of Primary Industries, *Victoria's Grain Industry Summer 2011*, p1

⁵ Op cit, p3

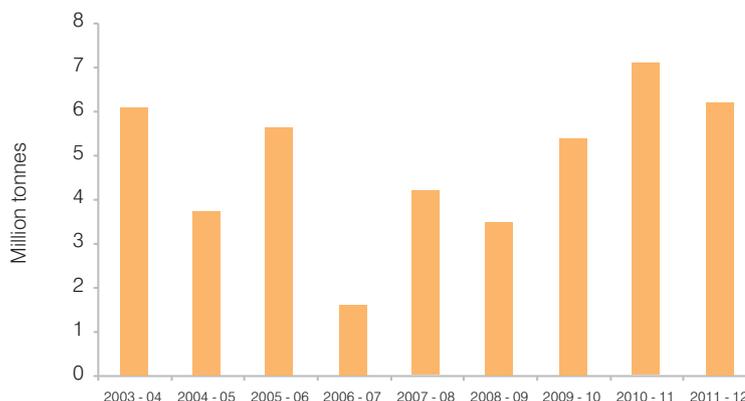
⁶ Victorian Department of Primary Industries, *October 2011 Crop Production Estimates*

⁷ Victorian Department of Primary Industries, *Ibid*, p2

⁸ Productivity Commission, *The Australian Bulk Wheat Export Industry 2010*, p45

⁹ *Ibid*, p45

Victorian grain harvest





Wheat is Australia's biggest and most important grain crop worth about A\$4 billion each year, accounting for 14 per cent of the world's export demand.

4.0 Grain supply chain

Grain classification, combined with its demand and the value of the Australian dollar, determines its use and the amount paid to the farmer. Farmers can sell their grain for cash, store it on or off farm and sell it later or sell it to a pool to obtain the best price through a managed marketing arrangement.

Grain is assessed for its quality once it is received into storage. It is weighed, quality tested, checked for insect infestation, separated into a wide range of grades and segregations and stored in silos or bunkers. The assessment is undertaken by the company which is providing the storage and handling service. Grain classification increases the complexity of the grain supply chain because the storage facility must be able to accommodate segregation of grain into different grades and ensure that the correct grade is delivered to the customer.

Grain is sold to a marketer who contracts with a bulk handler which is responsible for its storage and delivery including ensuring the correct quantity, variety and quality of grain is delivered and loaded at port.¹¹

4.1 Grain storage

Grain can be stored by the grower in either on or off-farm silos or bunkers for subsequent transport by train or truck into the export or domestic markets. Grain is delivered to off-farm storage sites by truck in either the farmer's own truck or by the farmer contracting with a haulage company. Once the grain is delivered to a storage site, grain marketers contract to buy the grain from the grower. Improved grain transport efficiency is resulting in fewer, but larger, off-farm storage sites.

Investment in new 'super-sites' is part of a trend towards rationalisation of the bulk grain handling system. Rail services to port terminals are being concentrated on fewer silos to increase rail efficiencies and economies of scale. Smaller, limited service storage silos have been progressively closed or leased out to third parties for smaller scale segregations of grain.

Export grain can be taken directly to port by a marketer from an on-farm storage site or the marketer can arrange for the grain to be transported to port from an off-farm storage facility. Victoria has three export grain terminals – Melbourne, owned and operated by ABA and Geelong and Portland, both owned and operated by GrainCorp. All three ports receive grain by rail and road.

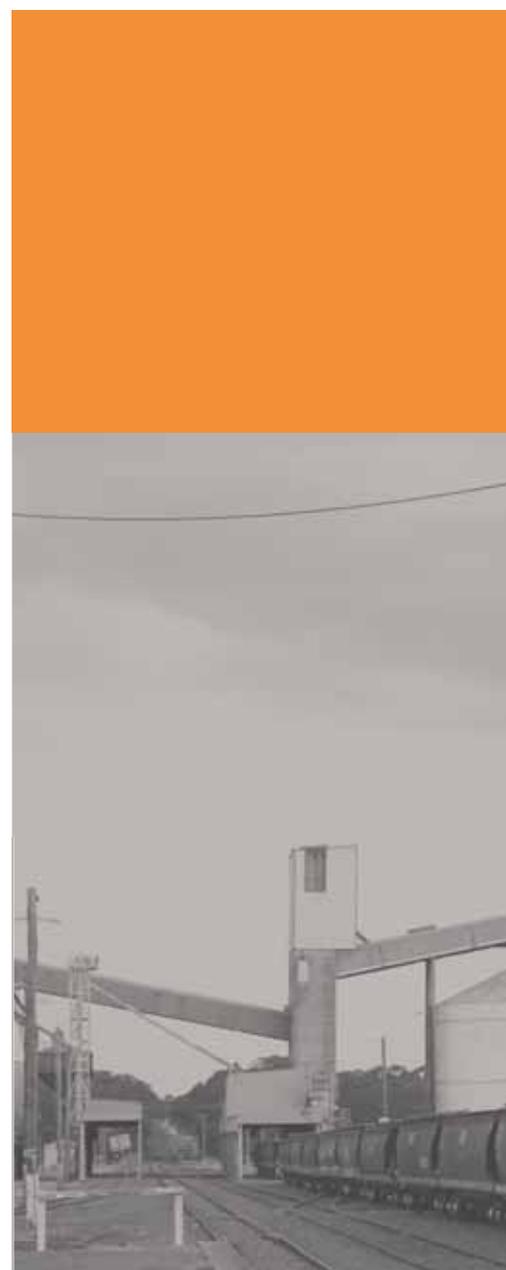
4.2 Grain transport

Grain marketers assess their transport requirements according to the task and will use rail or road depending on the availability of service, price and where the grain is stored. Rail is generally best suited for export grain transport because of its ability to transport large volumes and load ships reasonably quickly – a 40,000 tonne ship can be loaded by 18 trains compared with 900 B-double trucks. Trucks are generally more suited to transporting smaller grain volumes to disparate locations. Although 90% of the domestic grain task is undertaken by truck, rail is used to transport domestic grain to larger volume domestic facilities such as Allied Mills domestic grain facility at Kensington and GrainCorp's Sunshine silos. More domestic grain could potentially be railed to the Sunshine silos if they had standard gauge access, which is discussed later.

Deregulation of the export grain market and increased on-farm storage has seen an increase in the use of trucks for export grain to around 50% of the Victorian export grain task as trucks are used to supplement rail capacity at peak times or transport grain direct from farm to port. Trucks are also used to transport export grain from silos close to ports (eg under 200 kilometres), silos not rail served or for small, specialised grain shipments.

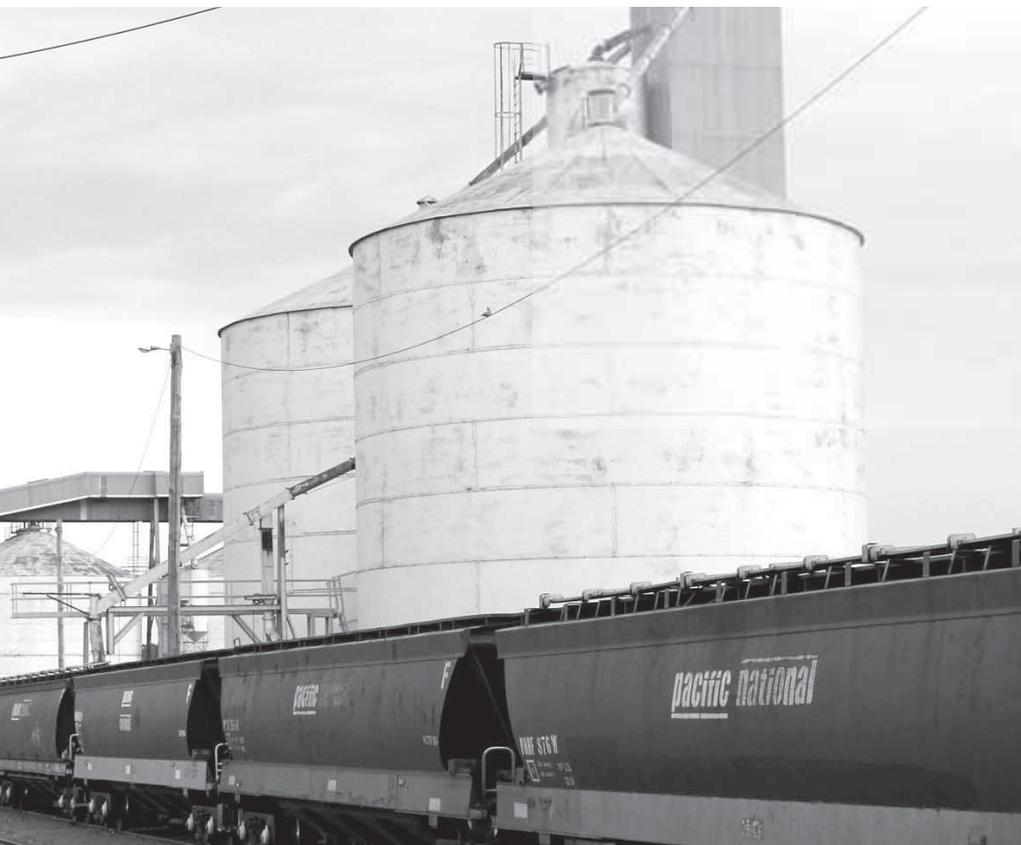
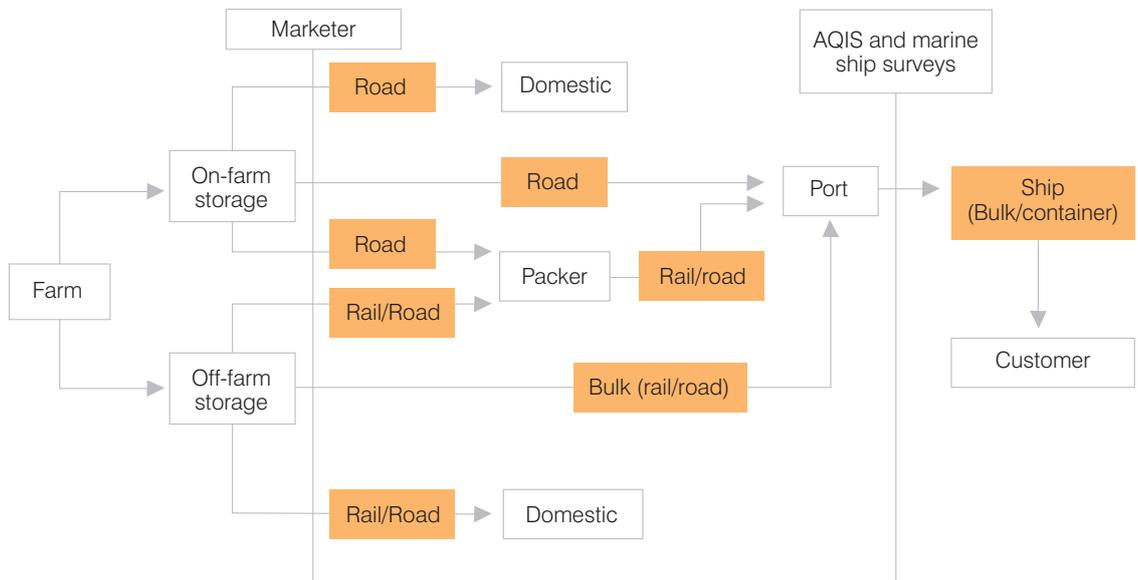
The diagram (right) illustrates the generalised grain supply chain:

Grain is also transported from southern NSW and south-east South Australia to Victorian ports by train and truck which adds to the pressure on the Victorian grain supply chain.



¹⁰ Wheat Exports Australia, op cit, p1

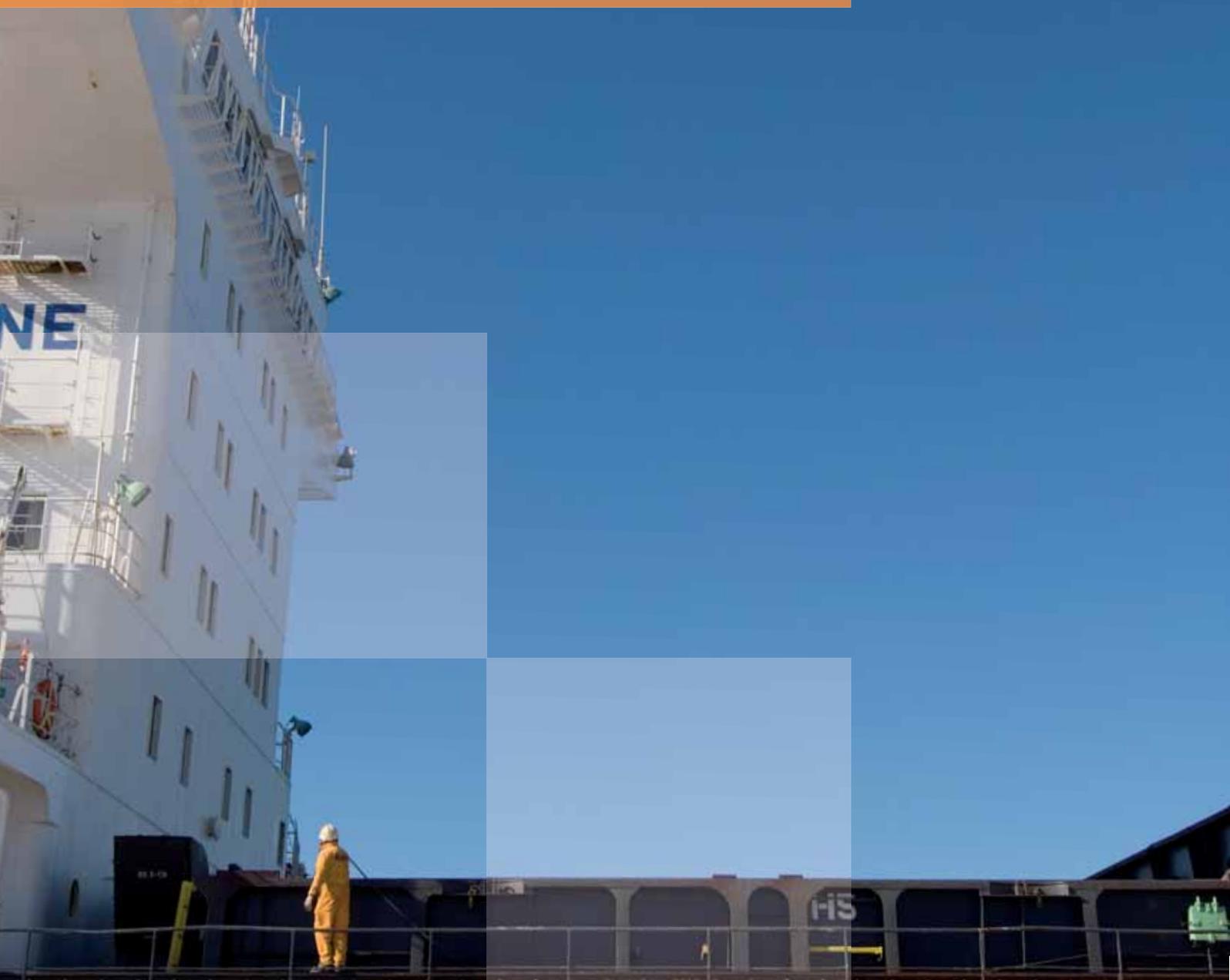
Generalised grain supply chain



Grain exports

Fiscal year	TEU			Mass tonnes		
	Wheat	Barley	Total	Wheat	Barley	Total
2006/07	10,517	7,023	17,540	245,353	151,680	397,033
2007/08	18,817	18,150	37,021	457,483	397,069	854,552
2008/09	20,389	4,379	24,768	484,007	95,383	579,390
2009/10	35,128	8,760	43,888	840,570	183,022	1,023,592
2010/11	40,785	11,783	52,568	958,973	246,236	1,205,209

Source: Port of Melbourne Corporation 2011



4.3 Containerised grain

Containerised grain exports have increased substantially in the past decade despite its higher cost than bulk grain transport. This has been for a variety of reasons including demand for small grain shipments, specialised shipments, reduced availability of bulk ships (there is increasing competition for bulk ships from the mining industry), availability of bulk unloading facilities at the receival port and convenience for end-users of bulk storage and transport capacity.

Nationally, non-bulk grain exports have increased more than 420% since 2000-01 and are consistently in excess of two million tonnes per annum since de-regulation of non-bulk exports (bags and containers) in August 2007. In 2000-01 non-bulk grain exports were only 4% of total grain exports compared with 17% of grain exports in 2009-10.¹² Containerised grain as a proportion of export grain varies by State. It is about 30% of Queensland's grain exports, 20% of New South Wales' and only 6-7% of South Australian and Western Australian grain exports.¹³ This reflects the higher proportion of grain exported from South Australia and Western Australia (90% and 70% respectively) than from the eastern States and is also influenced by the grain marketing process – non-bulk wheat does not require accreditation.

¹¹ South Australian House of Assembly, *Interim Report of the Select Committee on the Grain Handling Industry 2011*, p19

¹² Wheat Exports Australia, p8

¹³ Productivity Commission, op cit, p56

Containerised grain exported through the Port of Melbourne has increased by 200% in the past five years and now represents around 30% of grain exports as shown in the table (left).

Grain is containerised at packing facilities in Geelong, Doon, Horsham, Merbein, Tocumwal (NSW), Lara, Laverton, Sunshine and ABA's grain terminal at the Port of Melbourne. An important point to note with regard to containerised grain is that the Australian Quarantine and Inspection Service advised that grain does not have to be transported in 'food grade' containers. Any container may be used to transport grain provided it is not contaminated by residue.

At Doon and Horsham, containerised grain is either taken to the Horsham intermodal terminal (80% of the terminal's business) and railed to the Port of Melbourne for export or trucked direct from the packer to the port. At Merbein and Tocumwal the grain is containerised at the respective intermodal freight terminals for railing to the Port of Melbourne for export. At Geelong and Sunshine, grain is brought by rail or road to GrainCorp's terminals for containerisation and trucked to port. Similarly, at the Port of Melbourne grain is brought by rail or road for export in bulk or containerisation at the port. Grain packing facilities in Laverton are presently road based, due to their location, with grain delivered by truck direct from farm or silo then trucked to the Port of Melbourne.

Approximately 22% of containerised grain (around 11,000 teu per annum) is railed to the Port of Melbourne. Containerised grain railed from terminals at Horsham, Merbein and Tocumwal is assisted by the Government's *Rail Freight Support Package* (RFSP) which is due to expire at the end of June 2012. If the RFSP is discontinued and not replaced with a similar scheme it is highly likely that there will be a significant loss of containerised export grain to road transport.

The ability of rail to transport containerised grain is also affected by capacity constraints at the Port of Melbourne. The Patrick terminal, which receives containerised grain railed from Merbein and Tocumwal, is at capacity with consequent delays to train operations and terminal throughput.

As demand for containerised grain increases, containerised grain and other agricultural exports at the Port of Melbourne would benefit from increased capacity at the port to handle containers by rail. This could be achieved by:

- increasing shared use of the nearby Westgate Ports terminal
- re-opening and expansion of the DP World West Swanson Dock rail terminal with the addition of two more dual gauge tracks
- providing a direct rail connection between the Patrick and DP World rail container terminals

Without such improvements, on-port rail operations at the Port of Melbourne will remain inefficient and additional demand via the Dynon terminal will incur the longer slower transfers across Footscray Road by road including possible delays due to truck queuing at terminal access points.



5.0 Supply chain analysis

There are a wide range of issues affecting grain transport. These range from harvester capacity, on and off farm storage, grain testing procedures, availability of trains and trucks, capacity of rail and road networks and ship inspections. The changes to the grain industry through privatisation and abolition of the 'single desk' have required major adjustments which the industry is addressing.

There are more than 550 off-farm storage sites nationally with a capacity of 50 million tonnes. On-farm storage comprises about 16 million tonnes of capacity¹⁴. In Victoria, there are approximately 150 off-farm grain silos located in the main production areas with a storage capacity of around eight million tonnes, about 70% of which is controlled by GrainCorp¹⁵. On-farm grain storage is about three million tonnes.

¹⁴ South Australian House of Assembly, *Interim Report of the Select Committee on the Grain Handling Industry 2011*, p37

¹⁵ Victorian Department of Primary Industries, op cit, p2

5.1 On-farm storage

Farms are increasingly producing larger and more consistent yields due to improved grain quality, economies of scale in production and drought resistant crops and farming practices.

Better farm yields combined with more efficient headers, which can harvest 35 tonnes of grain per hour compared with 8 tonnes per hour twenty years ago, has added to pressure on grain storage capacity. Farmers have an incentive to harvest their crops as quickly as possible in order to reduce the potential impact of any adverse weather conditions.

Higher farm yields, combined with increased grain marketing options to farmers and the slow receipt capability of some off-farm silos, has led to increased on-farm storage. This enables farmers to take advantage of spot pricing opportunities provided by marketers in either the domestic or export markets – grain can be stored on-farm and sold for a higher price later on.

Grain stored on-farm is transported by truck for either domestic or export purposes. If it is exported, the marketer can arrange for it to be delivered to a silo for transport by rail to port or trucked direct from farm to port.

5.2 Grain co-operatives

A recent adjunct to on-farm storage is the development of local grain co-operatives. These are grain storage facilities developed by local farmers to augment grain storage facilities provided by major companies, but at less cost. For example, a co-operative storage facility at Boort in central Victoria has 60,000 tonnes of shared capacity.¹⁶ Similar storage facilities have been built at Werneth, north-west of Geelong, Berrillock in north-west Victoria and at Moulamein in south-west NSW.

The co-operatives provide farmers more control over their grain and reduce their storage and handling costs. Instead of growers investing in their own on-farm storage, they can pool their resources and invest in a bigger, shared facility at less cost per grower. These facilities also increase grain growers' ability to market their grain by pooling their resources – instead of a marketer buying 20,000 tonnes of grain from twenty different growers, they can source the same amount of grain from a co-operative and deal with a single transaction.

However, the location of these new facilities is not conducive to rail transport as they are located where land is available which may not be near a railway line. This further contributes to use of trucks for grain transport. Local governments should work closely with these co-operatives to ensure they are planned and sited with easy access to rail sidings for transport by rail in bulk or containers.

¹⁶ *Loddon Times*, 16/11/11



5.3 Off-farm transport

Trucks are used to transport grain from farms to silos or direct to port for export depending on marketers' arrangements with growers. Some marketers prefer to truck grain direct to port to by-pass the storage and transport systems of the larger bulk handlers. Trucking grain direct to port also avoids queues at silos although this can cause queuing at ports instead. Lack of coordination between truck loading at farm or silo and delivery to port can also lead to truck queues.

Truck queues also occur when silos have slow and inefficient loading capability which increases grain transport costs because of underutilisation of trucks transporting grain. Whether a grain truck's destination is a silo or port, there is a need for adequate truck parking and rest areas in towns and on major transport routes to ensure consignors, truck owners and drivers do not breach chain of responsibility requirements with regard to driving hours, rest and fatigue management. Industry has commented that this is particularly a problem for grain trucks using the GrainCorp facility at the Port of Geelong. There appears to be a significant mismatch between the loading of trucks at silos and their scheduled time at the port, leading to truck queuing and fatigue management concerns.

In recognition of these issues, work is underway by industry to introduce more efficient information visibility, notification and scheduling (timeslotting) between trucks loading at silos and delivering to ports. These initiatives should lead to better coordination of truck arrivals and truck management, resulting in more efficient and reliable grain delivery to port.

The truck queuing problem is managed at the Port of Portland through provision by GrainCorp of an off-port truck marshalling area. Truck drivers can wait there with full rest provisions until they are required at the port which reduces truck queues at the port and truck driver fatigue. However, there is no similar truck marshalling facility near the Ports of Melbourne or Geelong.

One potential way to address the issue of truck coordination is for the major grain marketers to establish a transport committee similar to that established in South Australia by Viterra. This industry committee comprises the South Australian Road Transport Association, the Department of Transport, Energy and Infrastructure, Owner Drivers Association of SA, Livestock Rural carriers Association of SA and individual carriers and meets three to four times per year to provide feedback and initiatives for Viterra to consider on transport related issues. It also provides Viterra a further opportunity to consult with the industry on its proposed actions.

Silo opening hours also affect the efficiency of off-farm storage. The majority of GrainCorp country silos generally operate from 8am to 3-4 pm which limits the daily amount of grain that trucks can deliver to a site. Silo rationalisation and increased distance to silos, with no change in silo operating hours, has resulted in decreased truck utilisation because of fewer truck trips per day to each silo. Grain truck utilisation is further reduced through congestion at either a silo or port. Sometimes grain trucks miss silo opening hours and have to wait overnight, with limited amenities

for drivers, until the silo opens the next day. Longer silo opening hours would alleviate this problem, but there have been problems in finding enough labour to enable this to occur.

Grain testing and segregation also affects the grain supply chain. Grain can be tested at a country silo and accepted, only to be rejected at the port receipt point. Grain rejected at the port must be returned to its originating silo or an intermediate location. Increased consistency in grain sampling and testing procedures is considered to be a critical factor in improving both the efficiency of the grain handling system and providing more consistent prices to growers.

5.4 Local roads

The increase in on-farm storage and greater use of trucks for grain transport has led to a significant deterioration in the condition of local roads with adverse effects on road safety and road user amenity. For grain stored off-farm, closure of small, inefficient rail silos has worsened the problem of damage to local roads by requiring grain to be transported by truck further to bigger rail silos or by road to ports.

Maintenance of local roads is the responsibility of local governments. However, local governments are concerned that they do not have sufficient funds to repair and maintain roads damaged by increasing heavy truck traffic using more local roads because of increased on-farm grain storage. In recognition of the funding shortfall regional local governments have in maintaining their roads, in October 2011 the State Government provided funding of \$160 million over four years to regional local governments for maintenance of local roads.¹⁷

Concern about local road funding is reflected in the campaign by local governments after the National Local Roads and Transport Congress in Mt Gambier in November 2011. Local governments have called for more funding for community roads and bridges and for continuation of the Federal Government's *Roads to Recovery* program for funding of local roads, which comprise more than 80% of the nation's road network.¹⁸

¹⁷ National Party press release 29/10/11

¹⁸ *Stawell Times News*, 6/12/11



The *Roads to Recovery* program is due to expire at the end of 2014, but according to the Australian Local Government Association there is a shortfall in local road funding of around \$1.2 billion annually.¹⁹ The program was introduced in 2009 in recognition of the funding constraints facing local governments with regard to asset maintenance.

In recognition of the need for local governments to improve their asset management practices, the Municipal Association of Victoria (MAV) is working with local governments on a strategic asset management program to be completed by February 2012. The program is assisting local governments identify strategic heavy vehicle routes on local roads and upgrades required for them to be used by such vehicles. The required upgrades, identified as part of overall regional freight strategies, will be the subject of funding submissions to Infrastructure Australia (IA). The submissions will be developed by the MAV in consultation with the Victorian Freight and Logistics Council, the Victorian Department of Transport (DOT) and VicRoads.

The MAV also considers that local governments need to enhance the freight component of their regional transport strategies in order for those strategies to be more successful in obtaining Federal funding, including for local roads.

5.5 Truck capacity

There is significant grain industry support for increased truck size and weights, at least during harvest time, in order to clear harvests more quickly to silos or ports. Road transport of grain is presently undertaken by semi-trailers with a maximum gross vehicle mass of 45.5 tonnes (31.5 tonne load) or B-double trucks with a maximum gross vehicle mass of 68 tonnes (44 tonne load).

These mass limits contrast with the following higher productivity freight vehicle (HPFV) types for use during the grain harvest:

- Super B-doubles: 77.5 tonnes (on designated freight routes in Victoria)
- Super B-doubles (restricted to Port precinct usage): 109.0 tonnes
- Road Trains (A-doubles): 79.5 tonnes and up to 85.5 tonnes
- B-Triples: 82.5 tonnes and up to 91.0 tonnes

¹⁹ Australian Local Government Association, *The Local Roads Funding Gap 2010*, p10

The grain industry considers that use of higher productivity freight vehicles would improve truck utilisation, reduce truck queues and reduce supply chain costs by requiring fewer truck movements per grain harvest. VicRoads has completed a two-year trial of higher productivity freight vehicles (HPFVs), including increased truck mass in the Green Triangle region of south-west Victoria and south-east South Australia using nominated arterial roads and connections between highways, timber plantations, processing plants and the Port of Portland. A roll-out of HPFV access criteria on a broader and permanent basis would greatly assist industry to invest in safer, more productive heavy vehicle combinations for the transport of grain.

5.6 Grain Harvest Management Scheme

Under Chain of Responsibility laws, grain growers, transport operators, grain receivers and others in the grain supply chain have an obligation to ensure that trucks are loaded within specified mass limits. In Victoria, a measure adjustment is applied for enforcement weighing. This is a nationally agreed guideline where vehicles are afforded an adjustment to the detected weight depending on the method of weighing (i.e. weighbridge or portable scales) and the category of the site where the weighing was conducted.

However, in other States such as South Australia and Queensland, sanctioned Grain Harvest Management Schemes are in place in recognition of the difficulty in accurately weighing grain trucks ex farm, due to loading conditions and the varying moisture content and densities of grain.

In South Australia, during a designated harvest time, grain trucks operating from the farm gate to a grain receiver are permitted to be overloaded provided the Gross Vehicle Mass (GVM) is no more than 5% over the legal mass limit for the vehicle type.





The increase in on-farm storage and greater use of trucks for grain transport has led to a significant deterioration in the condition of local roads with adverse effects on road safety and road user amenity.

In Queensland, the Grain Harvest Management Scheme managed by AgForce Queensland and regulated by the Queensland Department of Transport and Main Roads, has been successful in achieving better mass compliance on the road. Vehicles operating under the scheme are loaded according to the regulated mass limit wherever possible, but do not incur a penalty provided they operate no more than 7.5% above the regulated gross mass of the vehicle, or 10% above the regulated limit on axle group mass limits. Vehicles are only allowed two breaches above regulated mass limits within a year without being removed from the Scheme. Vehicles found to be “grossly exceeding” the mass limit (by more than 15%) are removed from the Scheme immediately.

Further consideration of an approved Grain Harvest Management Scheme in Victoria would assist industry to meet mass limit regulations in the cartage of grain off farms into receival silos.

However, sometime ago, VicRoads held lengthy discussions with the VFF and grain receivers in an effort to establish a Victorian grain scheme. Despite best endeavours an agreement could not be reached that satisfied the needs of all parties. VicRoads sought to negotiate a scheme that provided a tolerance for loading uncertainty without creating a defacto mass limit increase.

VicRoads concerns in relation to a grain scheme like the one in operation in Queensland centre around:

1. a scheme being inconsistent with Government policy position of having more grain transported by rail;
2. the scheme becoming a defacto increase in mass limits, and therefore increased road wear without off sets;
3. the potential for the scheme to set a precedent for other transport tasks (i.e. grape carters and the quarry industry), also giving rise to increased road wear;
4. having a large tolerance that is inconsistent with the penalty structure associated with overloading where transport operators not part of a scheme would be subject to heavy penalties for carrying weights permissible under a scheme with no penalty.

5.7 Mass limit differences between states

Other issues affecting the efficiency of grain truck transport are the difference in truck mass limits between States, different procedures and accreditation requirements for loads and different requirements for the monitoring of driver activity. There is significant scope for increased harmonisation of these differences. In the Green Triangle region, the Victorian and South Australian Governments have achieved some progress in achieving cross-border regulatory alignment for road freight transport.

The 2007 *Victorian Rail Freight Network Review* recognised the need for increased road freight transport efficiency. The Review recommended (Recommendation 9e) that over-dimensional trucks be allowed to operate within an 83 kilometre radius from intermodal terminals where road freight is transferred to rail, which includes grain silos.

5.8 Performance Based Standards

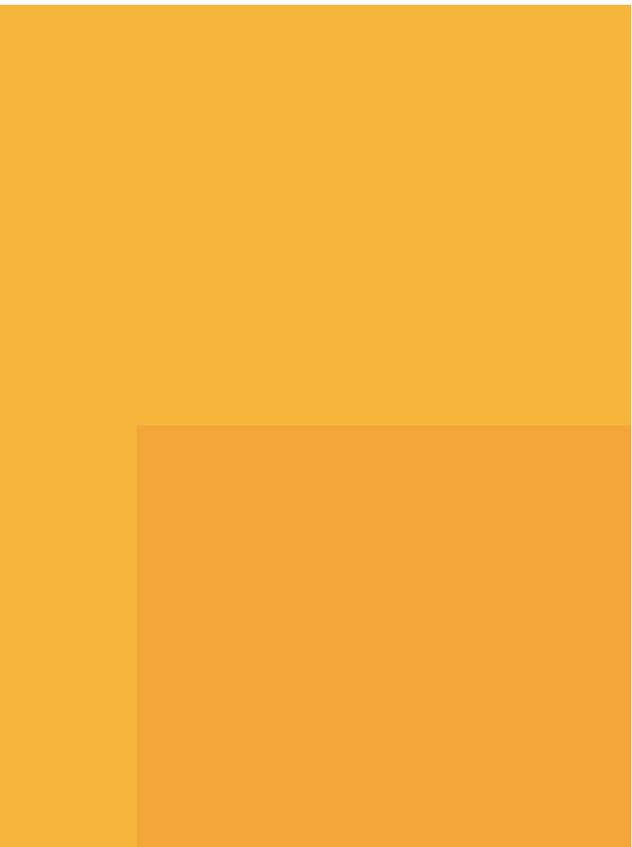
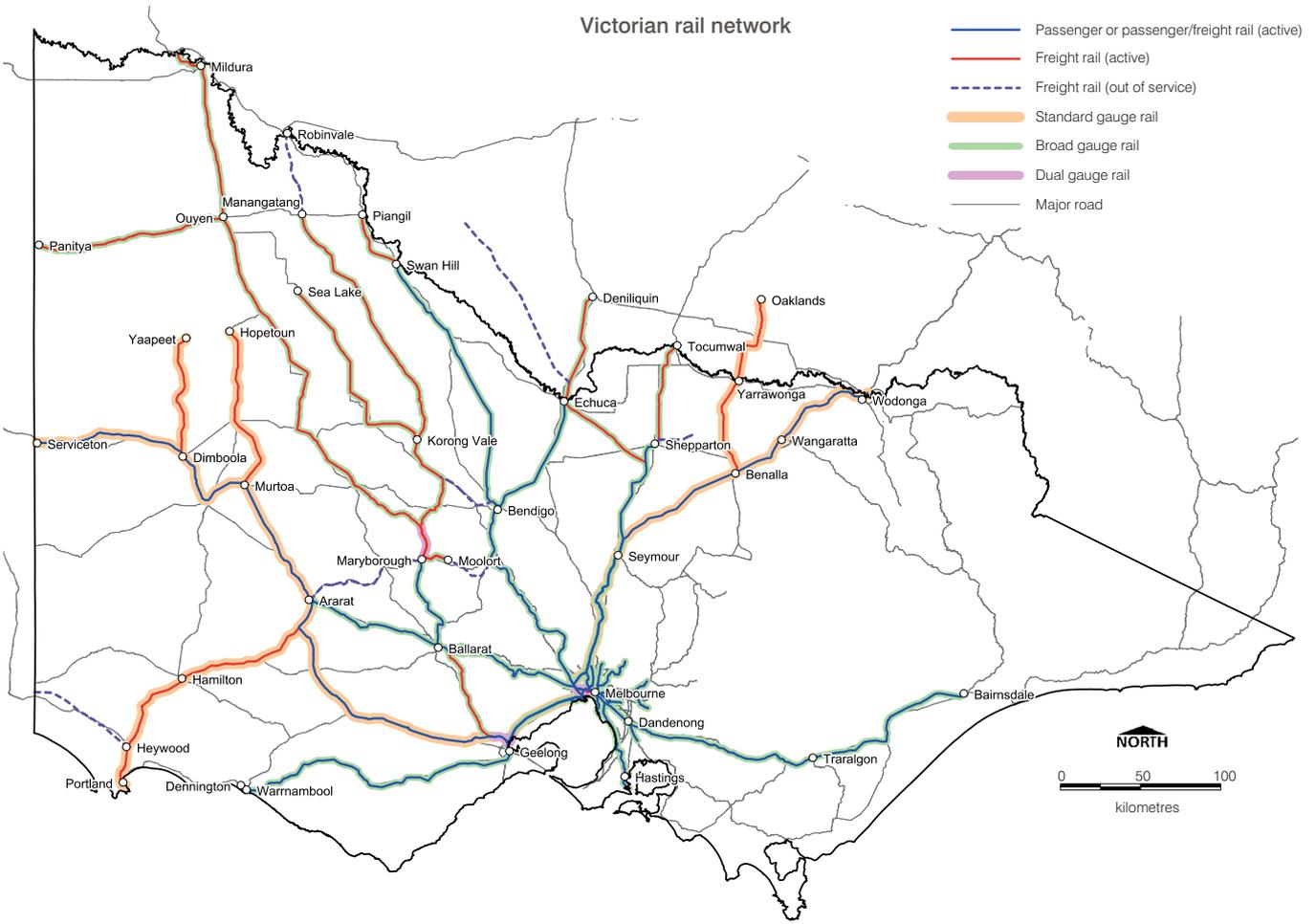
Performance Based Standards (PBS) is a combination of twenty safety and infrastructure standards that aims to develop innovative, stable and productive vehicles which do not necessarily meet the current prescriptive requirements, but which can operate safely at higher mass. PBS is considered to be a more effective way of introducing increased truck mass for the grain harvest than the AgForce scheme operating in Queensland, where PBS is also used.

In the last three years, Victoria has seen an increase in the approval of combinations that meet PBS standards. For example, truck and dog trailer combinations are used to transport grain throughout Victoria. Under PBS, these combinations may now operate on Higher Mass Limit routes at up to 57.5 tonnes for 7-axle truck and dog trailers and as much as 68.5 tonnes for a 9-axle truck and dog trailer combination. This is a substantial increase in productivity over previous truck and dog trailer vehicle mass limits of 50.0 tonnes. This initiative is one way truck operators can obtain a productivity improvement in the transport of grain.

To further support more innovative truck combinations, the MAV has obtained funding from Infrastructure Australia, the National Transport Commission, the Victorian Department of Transport, VicRoads and the Port of Melbourne Corporation to have ARRB Transport Research develop a route assessment tool for trucks operating under the PBS Standards scheme. This web-based tool will improve the capacity of local governments to process route applications on local roads in a timely and consistent manner. The intention is that the National Heavy Vehicle Regulator will make the system available to all councils nationally in 2012 – 13 after an initial trial in Victoria.

Assessment and approval of route applications for PBS vehicles is an integral part of applying PBS.

Victorian rail network



6.0 Silo to port

6.1 Grain train availability

Grain transport requirements are determined by the grain marketers. Marketers who can afford to contract their own train or trains (\$2-3 million fixed cost per train as well as operating costs) primarily use rail transport for their own purposes, but can sell capacity to other marketers who buy capacity on a booked or spot basis depending on demand.

Grain trains in Victoria are primarily provided by Pacific National (PN) in partnership with GrainCorp and El Zorro in partnership with AWB Grainflow (Cargill). For the 2011/12 grain harvest GrainCorp has contracted with PN for three broad gauge export grain trains, two standard gauge export grain trains and one broad gauge domestic grain train.

Over the same time, El Zorro will base one broad gauge and two standard gauge export grain trains in Victoria. South Australian based Genesee and Wyoming Australia (GWA), under contract to Viterra, has three standard gauge export grain trains primarily for use in South Australia. One of the GWA trains is used to transport grain from silos in western Victoria to Port Adelaide, Geelong or Melbourne in accordance with customer requirements.

In total, for the 2011-12 Victorian grain harvest, there will be nine export grain trains (four broad gauge and five standard gauge) and one domestic grain train (broad gauge) available for use in Victoria. For an expected 2011 – 12 Victorian grain harvest of about six million tonnes, of which around 3.5 million tonnes will be exported, PN, El Zorro and GWA's grain trains could transport around three million tonnes of export grain and 300,000 tonnes of domestic grain.

Emerald Group, through its imminent purchase of Australian Bulk Alliance's grain assets comprising silos and port capacity, is also negotiating to lease two trains for grain transport from southern New South Wales and regional Victoria to the Port of Melbourne. This will augment other grain trains operating in Victoria.

Grain marketers can also contract their own trains to transport grain from other companies' silos. Glencore, for example, in April 2011 contracted QR National for three years in NSW for a bulk train to transport grain to port from silos around the State where Glencore has purchased or stored grain. However, in Victoria the company uses trucks or other companies' grain trains as required because the average grain transport haul in Victoria is about half that of NSW (300 kilometres compared with 600 kilometres).

Grain marketers who do not have their own trains often contract with trucking companies because of price, convenience, flexibility or lack of availability of rail capacity.

Government ownership of a limited amount of grain rollingstock was suggested by some as a way of augmenting contracted grain trains at times of peak harvest. However, other consultations indicated that providing track infrastructure was maintained to a level which enabled efficient grain train cycle times then the private sector would contract as many grain trains as required to meet the harvest, assuming rollingstock availability.

6.2 Rail network capacity

Over the past four years, the Victorian and Federal Governments, as well as the ARTC, have invested \$1.2 billion in improving Victoria's rail freight infrastructure. This includes the \$73 million upgrade of the Geelong to Mildura railway line to improve its operational performance for grain and container trains and \$82 million on upgrading and maintaining grain lines in the State's north-west. There have also been improvements in rail access to the ports of Melbourne, Geelong and Portland as well as rail capacity improvements in the critical rail freight corridor in Melbourne's inner west which is used by interstate and regional freight trains including grain trains going to and from the Port of Melbourne.

These investments have significantly improved the freight capability of Victoria's interstate and regional rail networks, which has facilitated reduced grain train cycle times. For example, a grain train cycle time of 36 hours from silo to port and return will enable the train to transport 300,000 tonnes of grain per annum. A train cycle time of 24 hours can increase the train's productivity to 500,000 tonnes per annum. However, improved grain train productivity is not just dependent on improved rail infrastructure. It also requires improvements to the train loading capability of silos and silo opening hours, which are the responsibilities of silo operators.

The rail network improvements proposed in Appendix A will enable 36 hour train cycle times to be achieved more reliably and consistently as well as reduce 48 hour grain train cycle times to 36 hours for a 25% improvement in train productivity.

V/Line, Victoria's regional track manager, works with rail freight customers to address their train path requirements and other issues in order to improve train operating efficiency. Generally, V/Line considers that there is adequate capacity on the regional rail network for existing and potential rail freight flows.

However, Victoria's two major grain train operators, Pacific National and El Zorro, and their major customers, GrainCorp and AWB Grainflow, have expressed concern about the ability of parts of Victoria's regional rail network to handle the grain task. For example, there are concerns about the potential for delays to grain trains between Maryborough and Warrenheip, 10 kilometres east of Ballarat, because there are no crossing loops in that 75 kilometre section. The concern arises because this section of track will be used by up to five grain trains during the grain harvest in addition to Merbein container trains and Maryborough passenger trains.

Delays to grain trains cause delays to the entire grain supply chain through delays to grain clearance at silos which affects harvest clearing with consequent delays to grain ships at ports. In turn, this can lead to increased truck use for grain transport to port to meet shipping schedules. Increased train cycle times due to infrastructure constraints reduces train productivity which increases costs to growers from decreased train productivity and increased train operating costs.

Summary of Victorian grain trains 2011-12

Operator	Export	Domestic
Pacific National/GrainCorp	3 broad gauge	1 broad gauge
	2 standard gauge	
El Zorro/AWB Grainflow	1 broad gauge	
	2 standard gauge	
GWA/Viterra	1 standard gauge	

6.3 Rail network improvements

Pacific National and GrainCorp have provided a detailed submission on rail infrastructure improvements (Appendix A) which would increase capacity of the Victorian regional rail network for all rail freight operators. El Zorro and AWB Grainflow share Pacific National's and GrainCorp's views on Victorian rail network capacity. El Zorro has also commented that there are insufficient or inefficient train stabling and refuelling locations across the network, particularly in Melbourne and its port.

El Zorro also commented that a refuelling facility at Maryborough would improve the efficiency of north-west grain trains by avoiding delays and costs associated with refuelling locomotives in Melbourne or Geelong. In recognition of the locomotive refuelling issue, V/Line is developing a business case for an open access fuel point at Maryborough. The Department of Transport is also working with V/Line to consider the business case to automate North Geelong C Signal Box which would enable more reliable grain train operation into the Port of Geelong.

Industry has also commented that improved communication is required between track managers to increase the reliability of grain trains operating over tracks managed by different companies. For example, on approach to the Geelong grain loop the ARTC approves train paths, but does not coordinate with V/Line which can then cause delays gaining access to the grain loop.

In an excellent example of grain industry collaboration, GrainCorp and the Victorian Department of Transport developed an agreement to reopen the Dimboola to Rainbow railway line for the transport of an average 120,000 tonnes of grain per year. GrainCorp agreed to contribute to the cost of the line's upgrade, in conjunction with the Department, and also invest in more efficient silo capacity and loading at Rainbow. The grain supply chain improvements to be funded under the agreement will provide rapid truck turnaround time at the Rainbow silo, with no truck queues, and fast train loading. This will reduce the amount of grain truck transport in the region by enabling grain trains to be loaded quickly and efficiently to transport export grain to port.

Reopening the rail line from Shepparton to Dookie was also supported by industry to enable the 120,000 tonnes of grain on the line to be transported by train rather than truck with reduced road damage and improved road safety.

6.4 Rail gauge standardisation

Industry consultations indicated strong support for standardising Victoria's regional rail freight network to improve connectivity with the national network, promote competition on the regional network and improve locomotive and wagon utilisation.

Standard gauge access is provided from Dunolly to Ararat and Portland via Maryborough through provision of dual gauge track between Dunolly and Maryborough. Although the Maryborough – Ararat line has not been used since late 2003, it has strategic importance for future grain and mineral sands transport from the State's northwest to Portland if the north-west rail lines are standardised.

Standardisation of the regional rail freight network will be determined to a large extent by the support for a rail link between Mildura and the Broken Hill line east of Broken Hill. For this to occur, the Mildura line would have to be standardised which would then likely require standardisation of the Sea Lake and Robinvale lines which connect with the Mildura line at Dunolly. The 2008 Mildura line upgrade used gauge convertible timber sleepers to facilitate the line's future gauge standardisation including installing a third rail in sealed level crossings.

If the north-west lines are standardised, consideration would need to be given to standardising the north-eastern broad gauge lines through Seymour to Shepparton, Tocumwal and Echuca/Deniliquin to avoid them being isolated broad gauge freight lines. Standardising the north-eastern broad gauge lines could provide a connection into southern NSW via a reopened Tocumwal to Narrandera railway line. If the Tocumwal line was standardised it would also provide an alternative to the Albury corridor for a Melbourne to Brisbane inland railway line.

Rail improvements to the ports of Melbourne and Geelong have been dual gauge to provide for both broad and standard gauge trains and the broad gauge north-east line between Seymour and Albury has been standardised along with the connecting Benalla to Oaklands line. Improved rail freight links to Melbourne's south-east and the Port of Hastings will also have standard gauge capability.

Providing standard gauge access into the Sunshine grain silos from Brooklyn would enable domestic grain trains from the state's west to gain access to the silos. It would also enable domestic grain to be railed from Oaklands to Sunshine (although this would require grain trains to go to Laverton to reverse because of the cost and difficulty of providing standard gauge access into the silos from the north).



6.5 Track standards

Victorian regional rail freight train standards of 80 km/h (or less) at 19 tonne axle loads (tal) have applied for over 40 years (the exception to this is intermodal trains on the Mildura and Maryvale lines which are allowed 20 tonne axle load). A 19 tonne axle load translates into a 76 tonne gross wagon mass which is generally a 55 tonne load for a wagon with 21 tonne tare weight.

In contrast, truck productivity since 1995 has increased nearly 60% from 42.5 tonne gross six axle semi-trailers carrying 28 tonnes of freight to 68 tonne 9 axle B-doubles carrying 44 tonnes of freight.

The ARTC's track standards are 19 tal at 115 km/h, 21 tal trains at 110 km/h (the general standard for interstate intermodal trains) and 23 tal at 80 km/h (eg heavy ore trains and loaded grain trains). A 21 tonne axle load wagon is 15% more productive than a 19 tal wagon while a 23 tal standard provides a 30% productivity increase compared to the regional Victorian rail freight network. To further increase productivity and rail freight competitiveness the ARTC is increasing the latter two standards by the end of 2011 to 23 tal at 100 km/h and 25 tal at 80 km/h respectively on the Melbourne – Sydney and Sydney – Whyalla corridors.

Grain wagons with suitable capability are allowed to operate up to 23 tonne axle load on the ARTC network into the Port of Melbourne and Port of Portland, but the Geelong grain loop is presently restricted to 19 tonne axle load despite connecting to the ARTC network. A 50 wagon standard gauge 23 tal grain train using new wagons can transport 3,500 tonnes compared with 2,200 tonnes for a 40 wagon 19 tal grain train using older wagons.

Industry advice is that 19 tal broad gauge Victorian grain wagons could be increased to 21 tal subject to track and bridge capability. This would enable a 40 wagon grain train to transport 2,500 tonnes rather than 2,200 tonnes with consequent benefits for silo clearance.

Although increased freight train axle loads require higher track maintenance costs, this needs to be compared with the lower road maintenance costs and improved road safety arising from mode shift to rail from increased rail freight competitiveness.

6.6 Train and truck drivers

An issue affecting both train and truck capacity is availability of train and truck drivers. There is presently a national shortage of both due partly to the time it takes for them to become qualified (18 – 24 months to train a driver). The present shortage of train drivers is affecting the rail industry's ability to provide more grain trains.

However, there is a lag between demand for trains and driver availability and even when they are trained they are sometimes offered jobs with other companies. The trucking industry has a similar problem in recruiting and training drivers and then having become appropriately qualified to drive grain trucks.

It was suggested by industry that the criteria for the training and competency assessment of train and truck drivers be reviewed by relevant licensing authorities and the Department of Transport to ascertain whether they could be streamlined to assist in addressing driver shortages in each mode, but without compromising safety.



7.0 Port issues

7.1 Port capacity

Deregulation of the export grain market has led to a decline in rail's share of the Victorian export grain task from about 70% to 50% or less. More grain marketers and increased on-farm storage has resulted in more grain being trucked direct to port. In the 2010-11 financial year, rail market share of export grain was approximately 40% based on the following port throughputs:

- Melbourne: 1.1 million tonnes throughput; rail 20% = 0.2 million tonnes
- Geelong: 2.1 million tonnes throughput; rail 40% = 0.8 million tonnes
- Portland: 1.0 million tonnes throughput; rail 40% = 0.4 million tonnes

In part this arose from the floods in early 2010 which stranded an export grain train in northern Victoria for some months, but it also arose because of general lack of rail capacity to transport the record export grain harvest (although at increased costs because of the higher cost of truck transport).

The use of two extra export grain trains in Victoria for the 2011-12 grain harvest should increase rail's share of the export grain task and enable more efficient grain aggregation at ports with less truck queuing at or near ports.

However, irrespective of delivery mode port capacity and operating hours affect port usage for export grain. The capacity of each grain port terminal is:

- Melbourne: 48,000 tonne capacity; 100,000 tonne/month throughput; 24/7 operation
- Geelong: 230,000 tonne capacity; 300,000 tonne/month throughput; seven day/week operation, but not 24 hours
- Portland: 60,000 tonne capacity; 80,000 tonne/month throughput; seven day/week operation, but not 24 hours

Port capacity, port throughput and port operating hours all influence grain aggregation (amount and type of grain) at the port and ship calls. Congestion at one port may result in a ship calling at another with consequent diversion of the landside transport task and associated implications for the supply chain. Awaiting a ship call also causes problems in the grain supply chain because silos remain full with no ability to clear them or deliver to them.

The Port of Portland is investigating improving its grain throughput by rail by extending the grain siding to the end of the grain wharf which would avoid the need to break grain trains into smaller groups of wagons for unloading which adds time and cost to the unloading process.





Train stabling at the Port of Melbourne is also an issue. El Zorro has commented that broad gauge grain trains cannot be stabled at Appleton Dock once discharged or that grain wagons are unable to be left in common user tracks at Appleton Dock causing delays and increased operating costs because of the need to move the train elsewhere for stabling.

7.2 Ship surveys

The most significant issue affecting port efficiency for grain transport is a ship being presented for inspection in an unacceptable condition and consequently failing survey.

Ship surveys are undertaken by marine surveyors who assess the ship's seaworthiness and who check for things like rust, minerals or contamination and Australian Quarantine and Inspection Service (AQIS) officers who check the ship's ability to hygienically transport grain by checking for things like grain residues, insects or scale.

It is the responsibility of the grain exporter to book the marine and AQIS inspections and 24 hours notice is required. Marine surveyors occasionally conduct surveys while the vessels are at anchor. AQIS surveys are undertaken at berth because AQIS inspectors are not trained to board ships at sea. Each ship inspection takes between two and three hours and must be undertaken during daylight hours. Marine Surveyors and AQIS inspectors usually conduct a joint vessel inspection however marine surveyors may conduct a preliminary inspection at the request of the shipper.

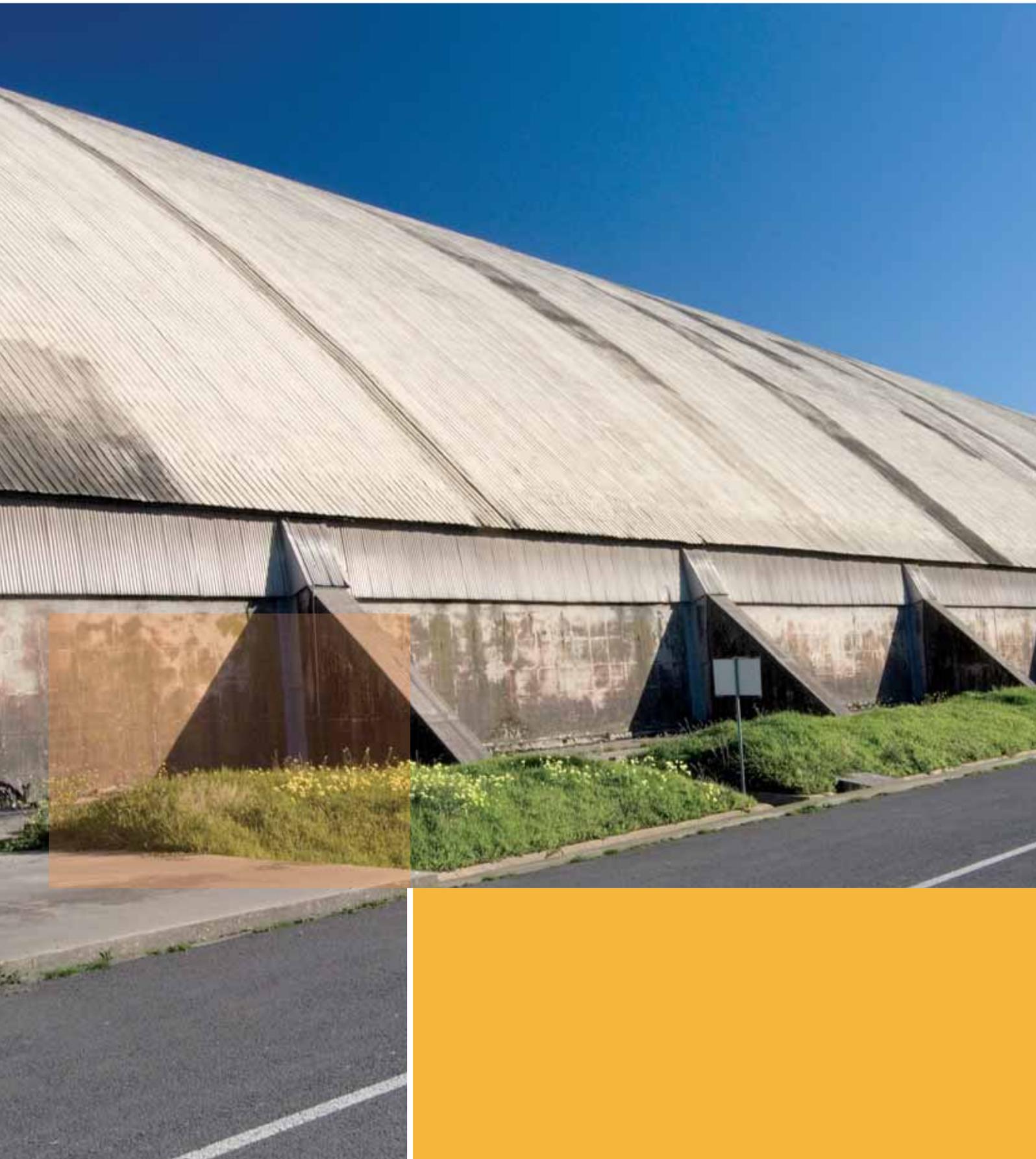
AQIS estimates that about 20% of ships fail survey with consequent delays to the grain supply chain all the way back to the farm because grain cannot be unloaded from port silos or delivered to them. AQIS has advised the percentage has not increased relative to the number of ships being surveyed.

If a ship fails a marine survey at anchor another ship can be scheduled in its place until the problems are rectified. A ship that fails an AQIS survey at berth has repercussions all the way back up the supply chain because loading cannot begin until remedial action is taken, which can take from a few hours to several days. If major remedial work is required, the ship may be moved off the berth freeing up space for another vessel.

The Federal Government is undertaking an Export Certification Reform Package to examine ways in which the export certification process can be improved. One of the recommendations of the Reform Package is to allow industry to engage its own AQIS Authorised Officers (AAOs). These will be people trained in export inspection functions in accordance with Australian export legislation. Under this reform, ship surveys could potentially be undertaken at anchor by inspectors who also conduct marine surveys. This may provide cost savings and fewer delays to industry.

It would also assist the efficiency of ship surveys if grain exporters were more particular about the ships chartered to export grain from Australia. Greater focus on the quality of ships used by shipping companies would reduce the incidence of ships failing survey which would reduce delays throughout the grain supply chain.

AQIS inspections are undertaken at off-port terminals by 30-40 AQIS trained staff, but there is potential to expand this program by training more staff.





8.0 Conclusion

The grain industry has undergone significant changes in the past few years. These changes, including abolition of the wheat export 'single desk' and the increase in export grain marketers to 27, increased on-farm storage, the more recent development of local grain co-operatives, increased use of trucks for grain transport and increased containerisation of grain have all led to an increasingly complex grain supply chain. Combined with record harvests arising from good rainfalls, the grain logistics supply chain from farms to ports has been significantly tested.

It is apparent that increased coordination is required across all sectors of the grain supply chain to improve infrastructure utilisation and transport capacity. The recommendations attached to this report, developed by the Grain Logistics Taskforce after extensive industry consultation, should greatly assist improving the efficiency of the grain transport task.

Consultations

Alliance of Councils for Rail Freight Development
Australian Bulk Alliance
Australian Quarantine and Inspection Service
AWB/Cargill
Bunge
CBH
Department of Primary Industries
El Zorro
Emerald
Glencore
GrainCorp
GrainCorp (Geelong)
Municipal Association of Victoria
Pacific National
Port of Portland
Riordans
VicRoads
Victorian Farmers Federation
Victorian Transport Association
VicTrack
Viterra
V/Line
Wimmera Regional Transport Group

Appendix A



6 October 2011

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GRAIN LOGISTICS TASKFORCE

GrainCorp wishes to table the following for the next meeting of the Taskforce.

Rail supply chain

Pacific National (PN) and GrainCorp have identified a number of quick wins and long-term actions that will –

- Enhance operational productivity
- Contribute to efficiency and operational competitiveness.

Both parties agree that the broad gauge network in Victoria is compromised due to a range of infrastructure inadequacies between the Geelong grain loop and Dunolly via Meredith.

Resolving the infrastructure shortcomings referred to below will significantly reduce train cycle times and increase productivity. This will lead to an increase in the effective capacity of both the rail network and the grain export elevators.

Road supply chain

In addition to these rail supply chain related matters, GrainCorp proposes that consideration be given to implementation of a Grain Harvest Management Scheme (GHMS), applicable to the transportation of grain from farm to designated grain storage location.

As a template, GrainCorp is proposing that Victoria adopt the GHMS used in Queensland.

The following data related to the 2010/11 grain harvest clearly indicates that under loading of vehicles is –

1. Unnecessarily increasing the number of truck movements
2. Decreasing the overall productivity of the road supply chain
3. Increasing supply chain costs.

Inward truck movements ex-farm	188,806
Average truck weight	42.16t
5+% under loaded	34.86%
Number of additional truck movements cause by under loading	10,703

Yours sincerely

Peter Marshall
Transport Manager

Infrastructure/Network Issue	PN/GrainCorp Comments	Benefit	Long Term Fix
<p>The lack of a crossing loop between Gheringhap and Ballarat - train movements are delayed waiting for paths at Gheringhap or Ballarat (provided space is available).</p> <p>The crossing loop at Meredith provided the flexibility needed.</p>	<p>Quick win</p> <p>Signaller required at various crossing locations Train access fees to cover this cost.</p>	<p>Benefits - improved train cycle times 48 to 36 hrs = 25% improvement = abt 100,000 tonnes per train @ 4 trains = 350,000 tonnes over BG,</p>	<p>Long term - automate crossing loops .</p>
<p>The lack of a crossing loop between Ballarat and Maryborough - train movements are delayed waiting for paths at Ballarat or Maryborough. The crossing loop at Tourello Loop provided the flexibility needed.</p>	<p>Quick win</p> <p>Signaller required at various crossing locations Train access fees to cover this cost.</p>	<p>Contributes to above-mentioned gain</p>	<p>As above</p>
<p>The combination of the inability to operate multi services between Ballarat and Maryborough and the passenger train congestion at Ballarat restricts and delays freight services.</p>	<p>Quick win</p> <p>Signaller required at various crossing locations Train access fees to cover this cost.</p>	<p>Contributes to above-mentioned gain</p>	<p>As above</p>
<p>Allowing services from Geelong and to Geelong to cross between Ballarat and Warrenheip to cross - could this be achieved with infrastructure changes such as the installation of cross over tracks.</p>	<p>Quick win</p> <p>Achieved with infrastructure changes, such as the installation of cross over tracks.</p> <p>Allow as block point</p>	<p>Contributes to above-mentioned gain</p>	<p>Long term - Need to look at yard configurations</p>



<p>The lack of a suitable safe working arrangement Ballarat and Maryborough - a safe working arrangement which provides the ability for multi train running between same</p>	<p>Quick win Establish block points</p>	<p>Contributes to above-mentioned gain</p>	<p>Long term, reinstate crossing loop at Tourello Loop and look at trailable points UP/DN crossing loop.</p>
<p>The safe working hours for Dunolly - Dunolly will be an important grain handling and train operational site during 2011/12 and there will be need for manning Dunolly 24/7 when required.</p>	<p>Quick win Man locations 24/7</p>		<p>Allows Dunolly to be used as an inland terminal when port blocks out,</p>
<p>The crossing loop at Watchem</p>	<p>Quick win The crossing loop at Watchem requires manning for a cross to be performed - automating the task would allow 24/7 operation.</p>	<p>Cycle time improvements</p>	<p>Longterm- automate for improvement and allow 24/7 operation. Also lets be mindful of future Mildura passenger service</p>
<p>There are 97 x Track Speed Restrictions on the Grain Line Network and 69 x TSR are between Gheringhap and Yelta.</p>	<p>Quick win Review if speed restriction are required during day and night time. Review night time operation. Most time lost between Ballarat and Ouyen.</p>	<p>Would improve cycle time by 4 to 5 hours per round trip</p>	<p>Long term, improve /upgrade level crossings,</p>
<p>Reopen the line between Dimboola and Rainbow.</p>	<p>Done</p>		
<p>Reopen the line between Shepparton and Dookie.</p>	<p>Need to have a think about, full benefit, improved cycle times, tonnes on line about 28 km, maybe split train Dookie/Murchison East</p>		



GrainCorp

<p>No confirmation of the safeworking arrangements on the Murtoa to Hopetoun line to cope with 2 trains operating at the one time, eg. Iluka and a grain train.</p>	<p>Quick win Block points at Warrackneabeal and Beulah ST</p>	<p>Capacity improvement</p>	<p>Long Term – automate for improvement</p>
<p>The safeworking arrangements on ARTC's Benalla to Oaklands line will not permit 2 trains to operate on the line at a time.</p>	<p>Quick win Block points at Yarrawonga and Wangamong, and Locking Away ability at Oaklands AWB.</p>	<p>Capacity improvement</p>	<p>Long Term – look at Crossing Loop</p>
<p>Reopen the line between Eaglehawk and Inglewood</p>	<p>Operating all services via Maryborough restricts movements and will be impacted between Sunshine and Bacchus Marsh during the RRL project.</p>	<p>Provide route options and faster cycle times</p>	<p>Long Term option</p>
<p>Poor track conditions resulting in low track speeds - servicing sites on the branch lines reduces productivity due to the low track speeds.</p>	<p>Low track speeds impact network and cycle times.</p>	<p>Capacity and cycle time improvements</p>	<p>Long Term – review track speeds and infrastructure improvements required</p>
<p>A more flexible safe working arrangement which permits a train to be stabled on a line during loading or during train crew changeover/train crew rest.</p>	<p>Quick win Need to review loco being stable in sidings, treat no different to wagons. Risk assess to meet TSV requirements, rule change</p>	<p>Improved cycle times</p>	<p>Long Term – rule change</p>
<p>The manning hours for Nth Geelong C Box - ideally provision for manning 24/7 when</p>	<p>Quick win 24/7 manning</p>	<p>Efficiency and Cycle time improvements</p>	<p>Long term - automate</p>



GrainCorp

required. Automation of this location would be an ideal solution

The Regional Rail Link Project

The Regional Rail Link project will place extra pressures on PN's ability to meet 24 - 36 hour train turn rounds. It is proposed trains would operate via Geelong to Melbourne during the project.

Cycle time improvements

Give some preference to freight, Capacity issue on Gheringhap to Ballarat line See above

Capacity issue with Geelong Grain Loop

Need more flexibility in Geelong, Grain Loop, remove staff and call a siding, allow 2 trains past block point. Need ability to load wagons to max. 92.0t or 23.0t axle load.

Capacity improvements

Quick fix.

Dual gauge in to Sunshine allows SG ex Western part of state,

Allows SG ex Western part of state,

Capacity improvement

Long Term infrastructure improvement

More information

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