



Transport
Roads & Maritime
Services

NSW Grain Harvest Management Scheme

October – December 2014 Harvest Period Report



1. Introduction

The NSW Grain Harvest Management Scheme (the GHMS) promotes the safe and productive movement of grain. The GHMS provides a mass allowance to minimise the risk associated with the variable conditions of loading trucks at a farm. It is designed to decrease this risk, protect roads and to increase productivity and efficiency. The GHMS allows the grain industry to move the average vehicle load closer to the allowable mass limit, taking into account the variable loading conditions. The GHMS also seeks to provide a productivity benefit for growers and a higher degree of visibility to road managers of the use of their road assets.

The NSW Grain Harvest Management Scheme October to December 2014 Harvest Period Report (the Report) provides information and data on the GHMS, and how the GHMS has operated in Local Government Areas (LGAs). Information was collected from Participating Grain Receivers (PGRs) and analysed to provide an overall evaluation of the GHMS.

The Report is for the harvest period 1 October 2014 – 31 December 2014.

PGRs provided data to Roads and Maritime Services on all grain loads received during this harvest period. Self reported data was not verified by Roads and Maritime. 99.5 per cent of delivery data reported during the period 1 October – 31 December 2014 was the subject of analysis.

The GHMS was designed, implemented and administered by Transport for New South Wales (TfNSW) for the 2013–14 harvest as a ‘proof of concept’ pilot project. Following that harvest, TfNSW conducted a review of the GHMS, which among other things, recommended Roads and Maritime act as the administrator of the GHMS for the 2014 harvest onwards.

Roads and Maritime worked with the National Heavy Vehicle Regulator (NHVR) to implement the TfNSW recommended changes in line with the Heavy Vehicle National Law (HVNL) and the New South Wales Class 3 Grain Harvest Management Scheme Mass Exemption (Notice) 2014 (the Notice) which was published on 25 September 2014.

Disclaimer: Information contained in the Report is reliant on the accuracy of the data recorded by stakeholders. The Report does not represent a complete dataset and is an evaluation based on available information.

2. Highlights/Key report results

GHMS operation:

- 56 LGAs provided consent for grain transport at GHMS masses on their local roads
- 13 PGRs participated, covering 175 grain receival sites across NSW
- 67 per cent of reported grain deliveries (over 3,662,787 tonnes) were delivered by operators under the GHMS
- 104,193 vehicle trips used the GHMS concession
- 5,600 vehicle trips (one way) estimated to have been saved through participation in the GHMS (this method of analysis and assumptions were verified by an independent consultant)
- 14 per cent increase in GHMS participation from 2013 and 2014 harvests (based on GrainCorp data)
- 69 per cent of all grain deliveries were wheat
- Approximately 49 per cent of grain deliveries were made by 6 axle prime mover and semi trailer combinations
- 5.5 per cent (10,028 deliveries) reported as overmass
- 1.5 per cent of GHMS deliveries were over GHMS mass limits. The majority of these deliveries fell in the minor (100 – 105 per cent) range
- 12.8 per cent of non-GHMS grain deliveries fell outside their allowable mass limit. Similarly, the majority of non-GHMS overloads fell in the minor range

- 58 per cent of LGAs respondents agreed that the GHMS achieved its aim of balancing improved productivity with infrastructure costs.

Enforcement:

- Over 240 compliance visits made to PGRs and non participating receiver sites across 36 LGAs
- 2,933 road intercepts (involving 4,974 unit inspections)
- 245 directions to produce were sent to operators for potential severe overmass breaches
- 85 per cent of surveyed industry respondents agreed that Roads and Maritime compliance activity was highly visible.

Grain distribution:

- Urana LGA received the majority of the delivered grain, followed by Parkes and Temora
- Leeton LGA received the smallest number of grain deliveries.

Ongoing issues:

- Improving truck coding accuracy
- Data accuracy
- Improved communications.

3. Primary objectives of the GHMS

The GHMS seeks to provide a productivity benefit for growers and a higher degree of visibility to road managers of the use of their road assets. The primary objectives¹ of the GHMS are to:

1. Promote the safe movement of grain
2. Facilitate the movement of grain off farms to grain receivers during the peak harvest season
3. Maximise the productivity of the existing fleet of vehicles to complement an increase in on-farm productivity
4. Minimise the number of vehicle trips between farm gate and grain receiver point
5. Protect road and bridge infrastructure
6. Manage excess loads on-site, rather than return those loads to the network
7. Support the competitiveness of the NSW grain industry on national and international markets
8. Maintain existing statutory obligations, including Chain of Responsibility laws².

4. GHMS framework

The GHMS provides eligible vehicles a mass concession of up to five per cent over General Mass Limits (GML) for travel from farms to the first practicable participating receiver across regional NSW.

Deliveries at GHMS mass limits were only allowed to PGRs. A PGR is a receiver who has signed an agreement with Roads and Maritime to meet a number of requirements, including the regular provision of data on all loads (including overloads) received at their sites.

The agreement with PGRs also requires them to have verified weigh bridges and to have in place a system and process for managing non-compliant, overloaded vehicles. The effective management of overloaded vehicles discourages the re-entry of these vehicles onto the road network, therefore reducing the likelihood of infrastructure damage. This requirement supports PGRs in addressing their chain of responsibility obligations under the HVNL.

In consenting to participate in the GHMS, local councils were able to nominate the timeframe the GHMS concessional mass limits applied in their council areas and were able to apply any relevant road or travel conditions as defined under the HVNL. Participation in the GHMS did not impede a local council's ability to apply normal travel and traffic management procedures.

The GHMS timeframe was extended from 1 October 2014 to 30 June 2016 and amended to include all broad acre grains, in addition to the original wheat, barley, rice, oats, canola and legumes. The GHMS allows 17 eligible vehicle types to travel at this increased mass on all State roads and on approved local roads.

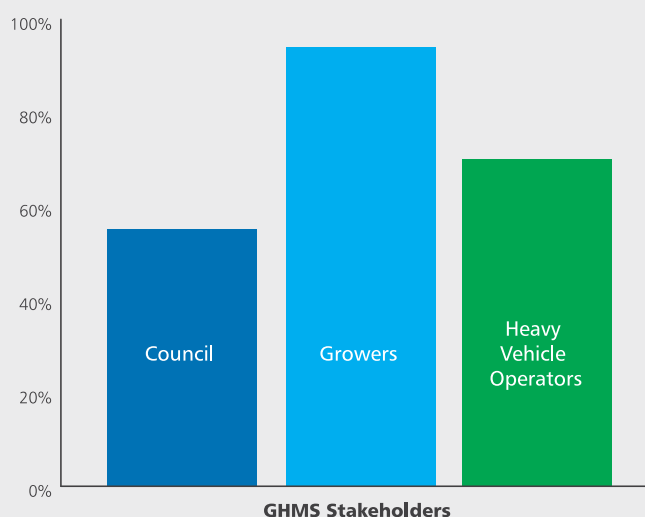


4.1. Council participation

The NHVR in conjunction with Roads and Maritime published the first Notice in the Commonwealth Gazette on 25 September 2014. The first Notice attached a schedule including five participating local councils.

Over the next two months, another 51 local councils joined the GHMS, resulting in a total of 56 participating local councils, including three local councils which had not participated in 2013-14. Thirteen amendments to the Notice were subsequently published as new local councils joined the GHMS or changed conditions of access.

Graph 1 Survey result on perceived beneficiaries of the GHMS



¹ Review of the 2013-14 NSW Grain Harvest Management Scheme, published by TfNSW, September 2014

² Persons and duties in the chain of responsibility are identified in the Heavy Vehicle National Law (NSW).

The majority of local councils will continue to participate throughout their relevant harvest periods until the Notice expires in 2016, providing consistency and reassurance to industry on the application of the GHMS. Some local councils restricted their period of participation.

Roads and Maritime developed two online surveys to assess the views of all participating local councils and industry bodies, including the PGRs. Similar questions were asked in both surveys, which were sent out in early January 2015 and included 17 questions about the 2014-16 GHMS.

Survey responses from local councils indicate a generally positive response to the GHMS, with almost 60 per cent of survey respondents suggesting the GHMS was achieving a balance between road wear concerns and a productivity benefit.

Graph 1 shows that local council respondents to the survey also believed that local councils themselves benefitted from the GHMS, as well as growers and heavy vehicle operators.

The extension of the GHMS timeframe has provided local councils with the opportunity to agree to commit to the GHMS for specific periods of harvest, or grant access for the entire duration of the Notice. Roads and Maritime (State) road access has been granted for the whole period of the GHMS to 30 June 2016. This provides consistency and forewarning to PGRs, growers and operators who now have more advanced notice of GHMS application. Updates were made to the map on the Roads and Maritime website to reflect the participation status of local councils.

4.2. PGR participation

At the commencement of the GHMS, GrainCorp, Emerald Grain, Grainflow, BFB Temora and Sunrice agreed to participate. As the harvest progressed, a further eight PGRs joined the GHMS, being Agrigrain, Akazien Hof, Auscott, Derrick and Sons (Preston Grain), GrainLink NSW, Manildra Grain, MC Croker and Mountain Industries.

In line with the PGR agreement, Roads and Maritime received data from PGRs detailing the recorded mass of each vehicle delivery to the PGR. This data is essential to the administration of the GHMS and provides a broad overview of the harvest across NSW, including an estimate of the impact on road assets and estimated levels of compliance associated with the transport of grain over the harvest period.

Data received from PGRs provides a good overview of the GHMS. For this report, the data received from 1 October - 31 December 2014 was used. Data was received in different formats from each of the different receival companies. Self reported data was not verified by Roads and Maritime. Nonetheless, it is apparent from both the 2013-14 GHMS and the current report period that the accuracy of the data relies on the correct identification and reporting of truck types at grain receival sites. While PGRs have systems in place to assist their staff, the variety of heavy vehicle combinations results in some inaccuracy.

Significant work was undertaken by Roads and Maritime to clean and re-format data. A total of 99.5 per cent of delivery data reported to Roads and Maritime during the period 1 October - 31 December 2014 was the subject of analysis. The results of this data analysis are discussed further in section 5 of this report.

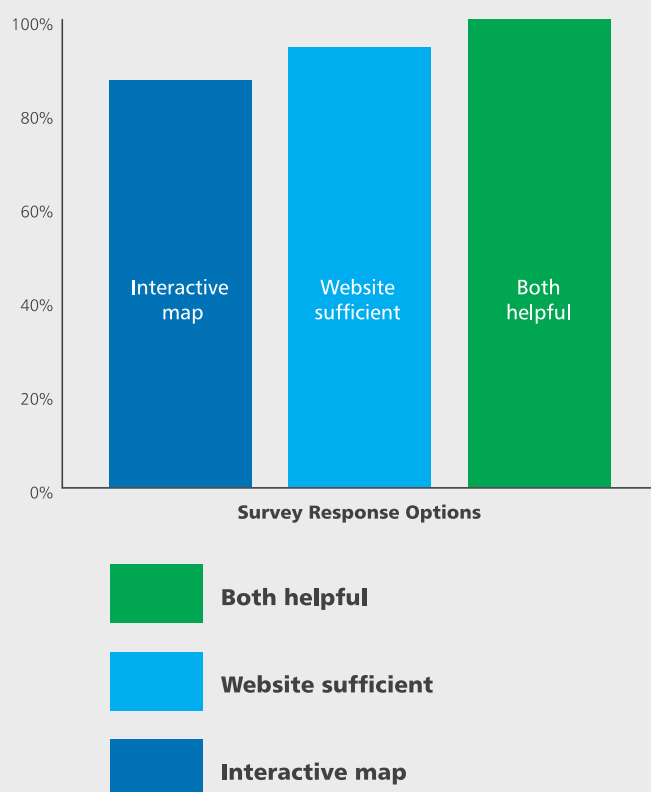
4.3. Interactive map

With the publication of the Notice under the HVNL, the map on the Roads and Maritime website became a key element of the GHMS. If a local council consented to access to areas or roads with conditions, this was published by the NHVR in the Commonwealth Gazette as an amendment to the Notice. This access was then reflected on a map published on the Roads and Maritime website.

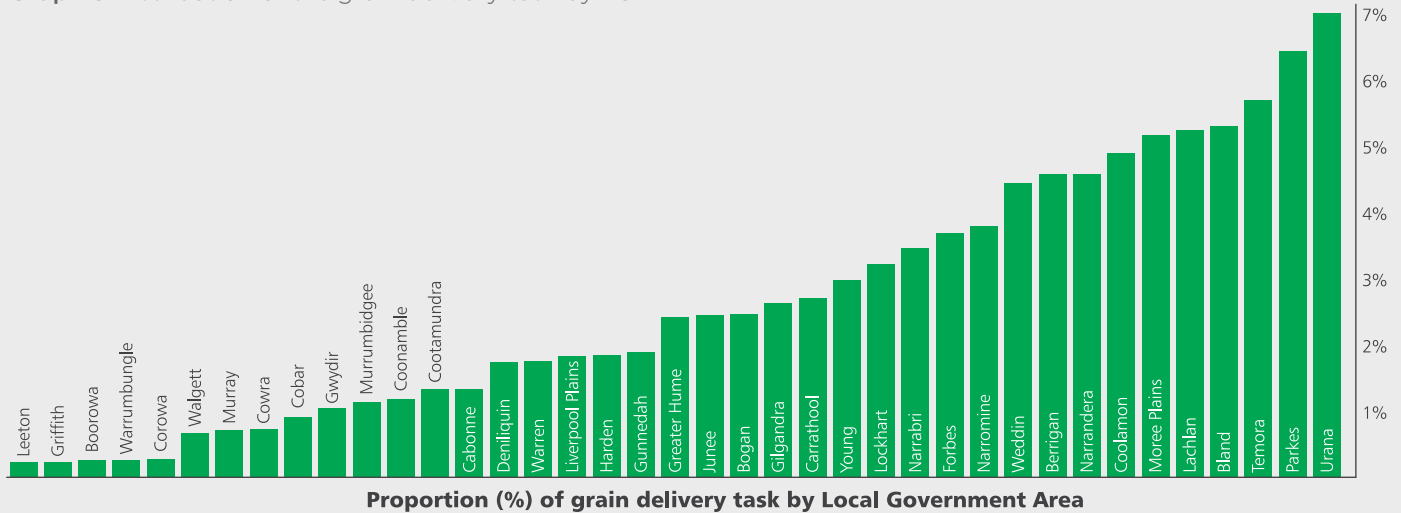
Roads and Maritime developed an interactive map that used colour and text to show the conditions of local council participation so that an operator could plan a route to the nearest practicable site. The map was updated every time a new Schedule to the Notice was published in the Commonwealth Gazette.

The complexity of information articulated by the map in a clear and regularly updated format was one of the key achievements of this project and this was reflected in survey data from local councils and industry in which over 85 per cent agreed the map was a very useful resource.

Graph 2 Utility of Roads and Maritime website and GHMS interactive map



Graph 3 Distribution of the grain delivery task by LGA



5. Results of the GHMS

Overall the data and survey responses show that the majority of respondents reported that the 2014-16 GHMS was as good as or better than the GHMS operation for 2013-14, which likely reflected a growing level of familiarity with the GHMS.

- 67 per cent (over 3,662,787 tonnes) of the grain deliveries reported to Roads and Maritime were delivered using the GHMS
- 104,193 vehicle trips used the GHMS concession
- It is estimated that approximately 5,600 vehicle trips were saved as a result of the GHMS
- 58 per cent of local council respondents agreed that the GHMS achieved its aim of balancing improved productivity with infrastructure costs
- Comparison with the 2013-14 GHMS data shows at least a 14 per cent increase in the uptake of the GHMS.

The results show the GHMS is meeting its key objectives, evidenced both in the data and confirmed by survey perceptions. The wide coverage of the GHMS and the resulting reduction in vehicle trips meet the objectives outlined in section 3.

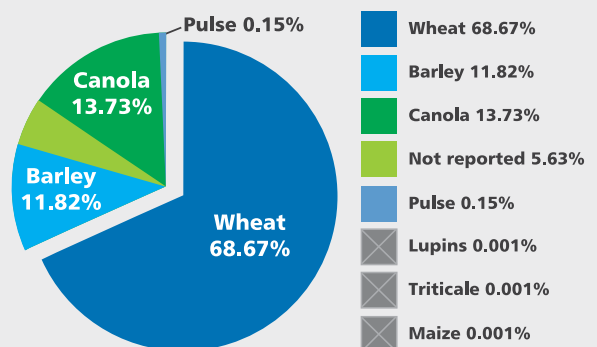


5.1. Comprehensive application of the GHMS and better visibility of the NSW grain transport task

Data provided to Roads and Maritime indicated the size of the harvest (5,493,887 tonnes of grain), utilisation of the GHMS concession (over 3,662,787 tonnes delivered under the GHMS) and total number of deliveries (approximately 182,383).

The GHMS data for the period analysed shows that grain deliveries were distributed across 39 LGAs, with the majority of grain being delivered in the Urana LGA, followed by Parkes and Temora.

Graph 4 Distribution by type of grain



5.2. High levels of compliance by industry

Overall, the data shows that the GHMS experienced a high level of compliance – more so than grain delivered under other concessional schemes with longer standing. The Concessional Mass Limits Scheme, for example, represented a relatively high number of overloaded vehicles reported to Roads and Maritime.

The data also shows the continued commitment by industry to loading within the GHMS masses, with very low levels of overloading behaviour above GHMS concessions.

Across all deliveries, an average of 93 per cent of the total allowable mass limit for a delivery was utilised. A low percentage, 5.5 per cent of all reporting, represented an overloaded vehicle.

Only 1.6 per cent of GHMS deliveries fell between 100-105 per cent over GHMS limits.

Wheat made up the majority of grain transported over the reporting period, being indicative of the type of grain being harvested over the period.



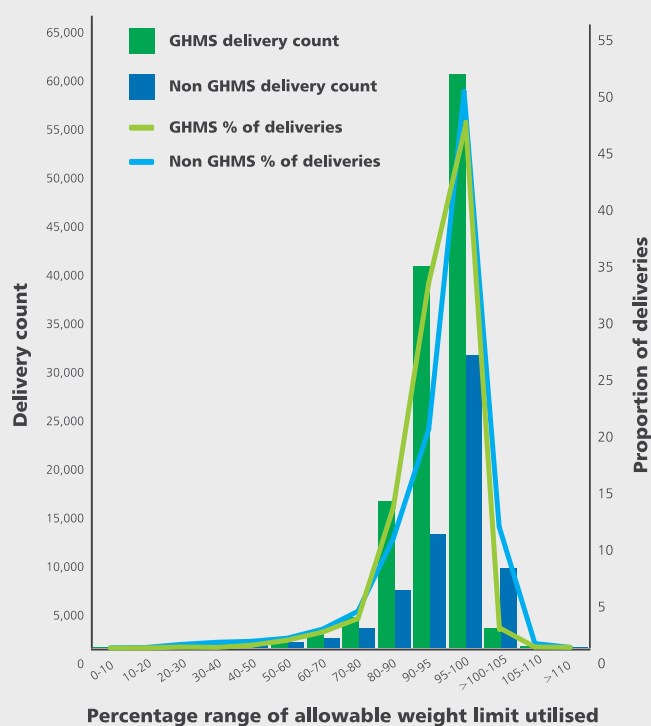
Graph 5 shows a greater likelihood for non GHMS deliveries to exceed their allowable mass limit (>100%) with 12.8 per cent of deliveries above allowable mass limits, as compared to only 1.5 per cent for deliveries under the GHMS.

The high level of continued industry compliance with GHMS limits is an important outcome of the GHMS. It demonstrates reasonably accurate loading combined with a good understanding of the purpose of the GHMS, to provide a productivity benefit by decreasing the risk of overloading given the variable conditions of loading trucks at a farm.

Both the data and industry consultation suggests that growers and operators understand the intent of the GHMS, to allow flexibility when loading grain on the farm, and therefore do not abuse the concession by consistently exceeding mass limits.

These factors will provide increased assurance to local councils and Roads and Maritime as road managers and will ensure the improved, safer movement of grain.

Graph 5 Allowable weight limit utilised by GHMS



5.3. Eligible vehicle types

The 17 vehicle types included in the 2013-14 GHMS and carried over to the 2014-16 GHMS, were estimated to deliver over 96 per cent of the grain harvest task. Analysis also indicated these 17 vehicles were able to transport GHMS masses with an acceptable level of pavement wear.

One vehicle type – the 6 axle prime mover/semi trailer combination – delivered 49 per cent of the grain transport task from farm to receiver.

The two surveys conducted by Roads and Maritime showed that 70 per cent of all respondents (including industry and local councils) believed that the range of vehicle types included within the GHMS was sufficient to cover the grain task in their area.

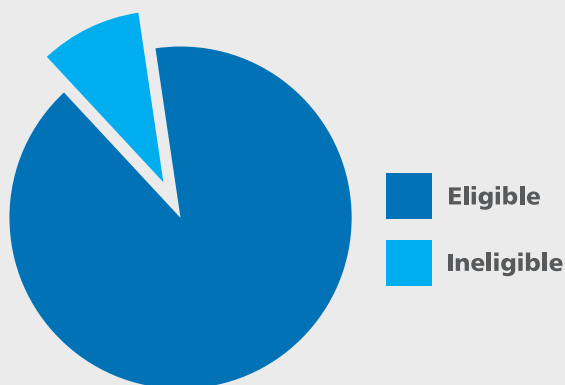
5.4. Compliance and on-road enforcement activity (Operation Harvest Moon) had a demonstrable affect on the prevention of loading above GHMS limits

Local councils, as road managers under the HVNL, have expressed concern relating to pavement wear caused by increased mass on heavy vehicles. Overmass vehicles can cause significant damage to road and bridge infrastructure and also present a safety risk to other road users. Roads and Maritime Compliance Operations Branch were therefore a key component to ensuring the continued safe operation of the GHMS across critical local council areas.

A comprehensive compliance strategy was developed and significant resources were committed to compliance action across the harvest period. Operation Harvest Moon (undertaken by Compliance Operations Branch) was undertaken across the State and included visits to sites of both participating and non-participating grain receivers commencing in the north of the state and following the harvest through to the south of NSW.

Over 240 compliance visits were conducted across 39 LGAs with operating PGRs. A total of 2,933 road intercepts involving 4,974 unit inspections were carried out. A selection of sites from all the participating receivers was visited across the October - December 2014 period. Visits by Roads and Maritime officers were also undertaken across a range of grain receival sites from 20 companies not participating in the GHMS.

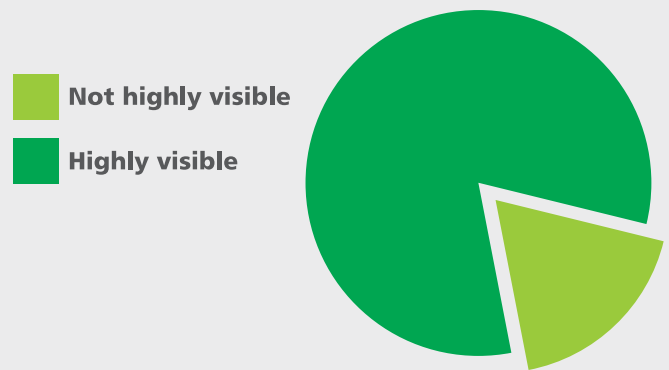
Graph 6 Proportion of delivery task conducted by vehicle eligibility.



Graph 7 above, shows that industry respondents to the Roads and Maritime survey indicated that compliance activity was highly visible.

In addition, using the data provided by PGRs, follow up investigative action is being taken by Roads and Maritime, including the identification of substantial and severe overloads within the data. Over 245 directions to produce have been issued. This work is currently progressing, based on responses requested by Roads and Maritime. The data provided through the GHMS has informed Roads and Maritime current and future compliance activity.

Graph 7 Survey result for visibility of Roads and Maritime Operation Harvest Moon



Roads and Maritime will continue to administer the GHMS, progress the identified opportunities for improvement, and work with the NHVR and TfNSW to implement any further identified changes.

6. Opportunities for improvement

The data and survey results continue to show strong support for the GHMS. As administrator for the 2014–16 GHMS, Roads and Maritime is committed to the continual improvement of the GHMS operation. A number of issues have been raised and highlighted through this report for further consultation to improve the GHMS operation:

- The data request to PGRs is being considered to improve consistency and accuracy without imposing an unachievable burden on PGRs.
- A universal truck code would standardise the identification codes of trucks across the industry and would help improve data accuracy and also make the large data analysis task simpler. Roads and Maritime is working with PGRs and the NHVR to develop a standardised code that will unify industry practice.
- PGRs determined how they managed overloaded deliveries – the most common practice was skimming the excess grain, and once the relevant amount had been sold, providing the profits to charity. Roads and Maritime is working with PGRs to highlight best practice in the management of overloaded vehicles. These practices for managing overloaded vehicles may be applied to all loads received, not just restricting these systems to GHMS vehicles.
- The list of eligible vehicles was based on the contribution of that vehicle type to the grain transport task and calculated pavement wear at the additional GHMS masses.
- Clear communication contributed to a good understanding of requirements under the GHMS. Further opportunities to improve communications, particularly of the map, will be explored.

7. Conclusion

The findings from the GHMS's operation over its first three months indicate positive results for all stakeholders. Roads and Maritime will continue to administer the GHMS, progress the identified opportunities for improvement, and work with the NHVR and TfNSW to implement any further identified changes.

This report will also be provided for consideration by the Grain Harvest Consultative Committee. Roads and Maritime will also continue to monitor the data for compliance purposes to ensure the GHMS continues to provide productivity benefits to compliant operators, while ensuring road safety and road use sustainability is maintained.

Further information on the GHMS is available at:
www.rms.nsw.gov.au/business-industry/heavy-vehicles/grain-transport.html



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