

Victorian Grain Harvest Management Scheme

2020 - 2021
Harvest Period
Report



Grain Harvest Management Objectives

- Promote the safe movement of grain
- Encourage use of newer, safer vehicles
- Facilitate the movement of grain from farms to grain receivers during the peak harvest season
- Maximise the productivity of the existing fleet of vehicles to complement an increase in on-farm productivity
- Minimise the number of vehicle trips between farm gate and receival point
- Maintain existing statutory obligations, including Chain of Responsibility laws
- Protect road and bridge infrastructure
- Support the competitiveness of the Victoria grain industry on national and international market

Grain Harvest Management Scheme 2020/21

The Victoria Grain Harvest Management Scheme (GHMS) improves the productivity, safety, and efficiency of heavy vehicles during the harvest season. It provides up to 5% mass allowance for productivity and minimises the risks associated with the variable conditions of loading trucks on farms. The Scheme benefits the grain and road transport industries as well as the wider community. It allows for an efficient grain harvest while eliminating overloading on our roads through appropriate administration procedures and compliance activities.

The GHMS full year reporting is based on data provided to National Heavy Vehicle Regulator (NHVR) by Participating Grain Receivers (PGRs) during the 1st Oct 2020 to 31st May 2021 period.

For the 2020-2021 harvest period, the total harvest size increased by 25% (4.2 million to 5.2 million tonnes) from the previous season. The percentage of grain delivered under the GHMS remained consistent (slightly increased from 9.5% in 2019-2020 to 9.8% in 2020-2021). Overall total breaches have decreased significantly by 1.6% (18.44% to 16.90%) from the previous season. A total of 8,524 trips were saved in the same period.

Key Points on the Reporting Period

Key points to highlight from this reporting period include the following:

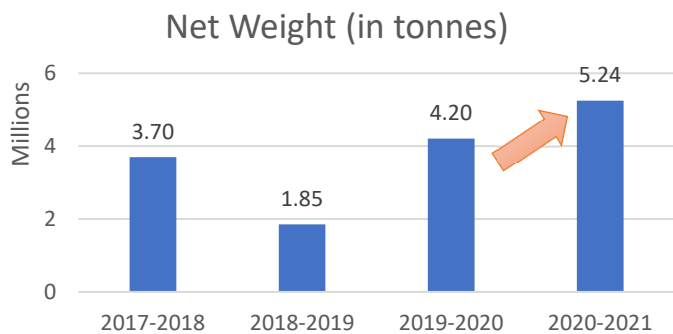
- The 2020-21 season saw a substantial growth (25%) in harvest.
- Participation vehicles in the GHMS increased (32.6%).
- Non-compliant rate decreased (from 18.44% to 16.90%).
- Non-compliant of GHMS dropped significantly (from 25.32% to 9.35%).
- 57% of all deliveries in 2020-2021 have utilised the allowable weight limit of 95-100% (8% increase in last 4 seasons), whereby 100% represents the Legal Weight Limit.
- The average year of manufacture for the fleet completing the grain transport task has increased from 1982 to 1995 since the introduction of the Scheme 4 years ago.
- A total of 8,524 trips were saved. The increase in trips saved 4.78% to 5.02% (2020- 2021) was due to the General Mass Limits (GML) concession type being used less and the increased utilisation of Concessional Mass Limits, Higher Mass Limits, Performance Based Standards and GHMS concession types for Full Year 2020-2021.

The National Heavy Vehicle Regulator (NHVR) will continue to work with Victoria Department of Transport to support the safe movement of grain.

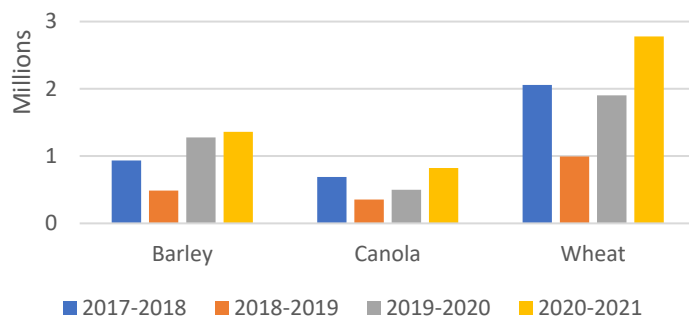
Key Highlights – 2020-2021 Harvest

The Harvest

How big was the harvest?

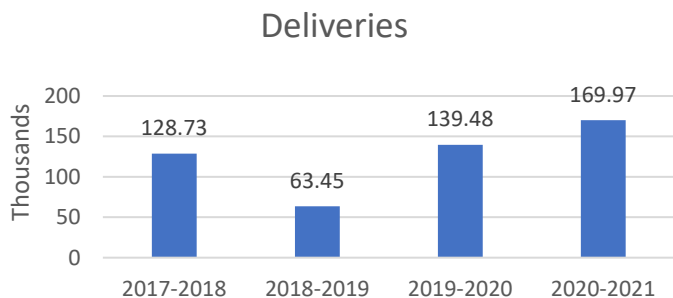


What did we harvest?

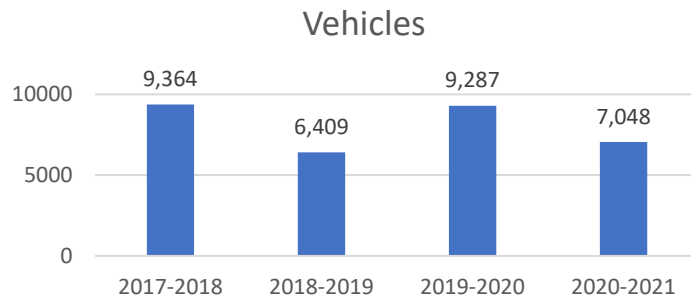


Transportation of Grains

How many deliveries were made?

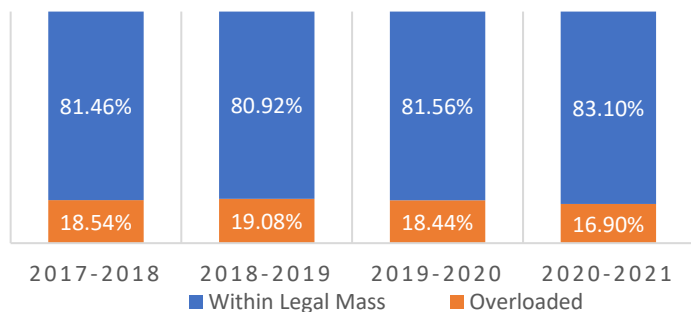


How many trucks were used?

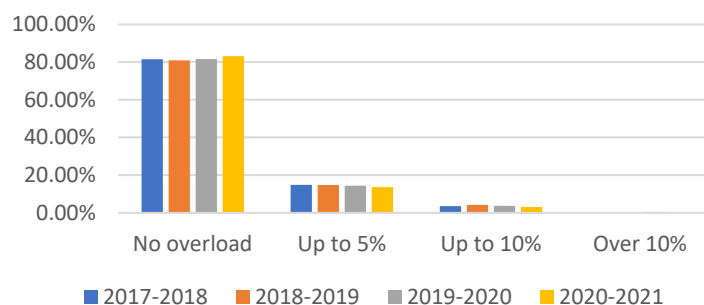


Delivery Compliance

How many overmass breaches?

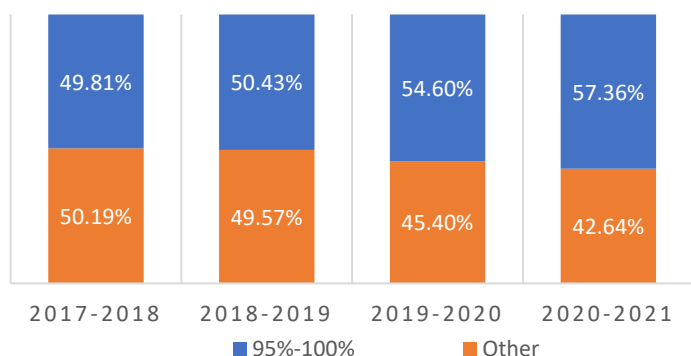


What is the breakdown of overmass breaches?

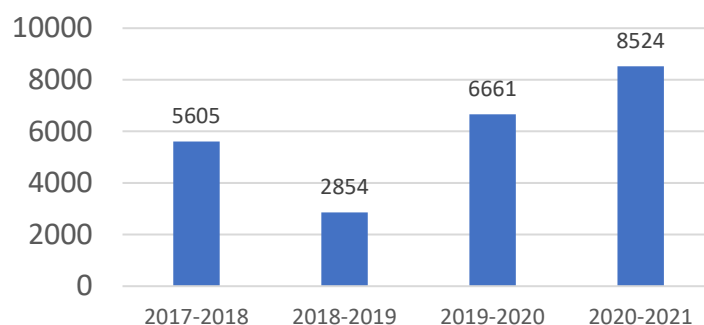


Delivery Productivity

Allowable mass utilised (95-100%) – total deliveries



How many trips were saved?



Overview

How big was the harvest?

- The 2020-21 season saw a substantial growth (25%) in harvest, the total harvest was 5,244,191.89 tonnes.
- The 2020-21 season - Wheat (55.28%), Barley (27.03%) and Canola (16.33%) were the most prominent grains harvested.
- Total grain moved by GHMS vehicles was 512,497.91 tonnes, the percentage of grain delivered under the GHMS remained consistent (slightly increased from 9.5% in 2019-2020 to 9.8% in 2020-2021).



4 Year Comparison

4 Year Comparison	17-18	18-19	19-20	20-21
Total grain moved (All)	3.7m*	1.9m*	4.2m*	5.2m*
Total grain moved (GHMS)	230k*	107k*	400k*	513k*
Total grain moved (PBS)	51k*	27k*	113k*	171k*
GHMS vehicles (operating)	211	161	318	399
% of transport task (GHMS)	6.2%	5.8%	9.5%	9.8%
% of non-compliance rate	18.54%	19.08%	18.44%	16.90%

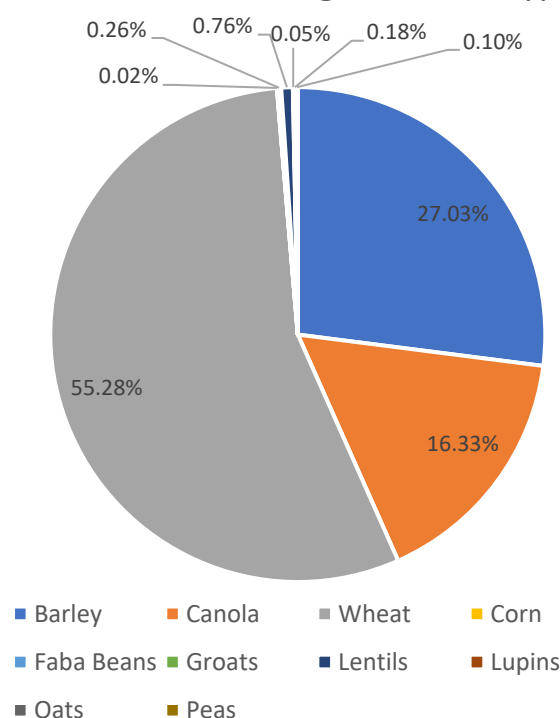
*tonne

Distribution Net Weight of Grain Types

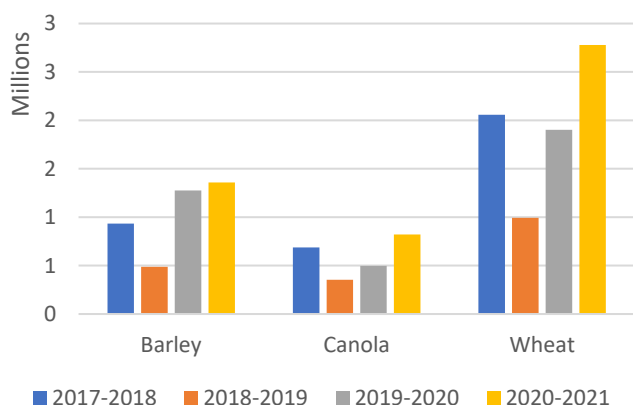
What did we harvest?

- In FY2021, Wheat (55.28%), Barley (27.03%) and Canola (16.33%) were the most prominent grains harvested.

2020-2021 Net Weight of Grain Types



4 Year Net Weight of Grain Types Comparison



Transportation of Grains

Deliveries

How many deliveries?

- In the FY21 reporting period, 169,965 total deliveries (trips) were made.



All vehicles that delivered grain (including GHMS)

7,048 Trucks | 170K Trips | 5.24M tonnes



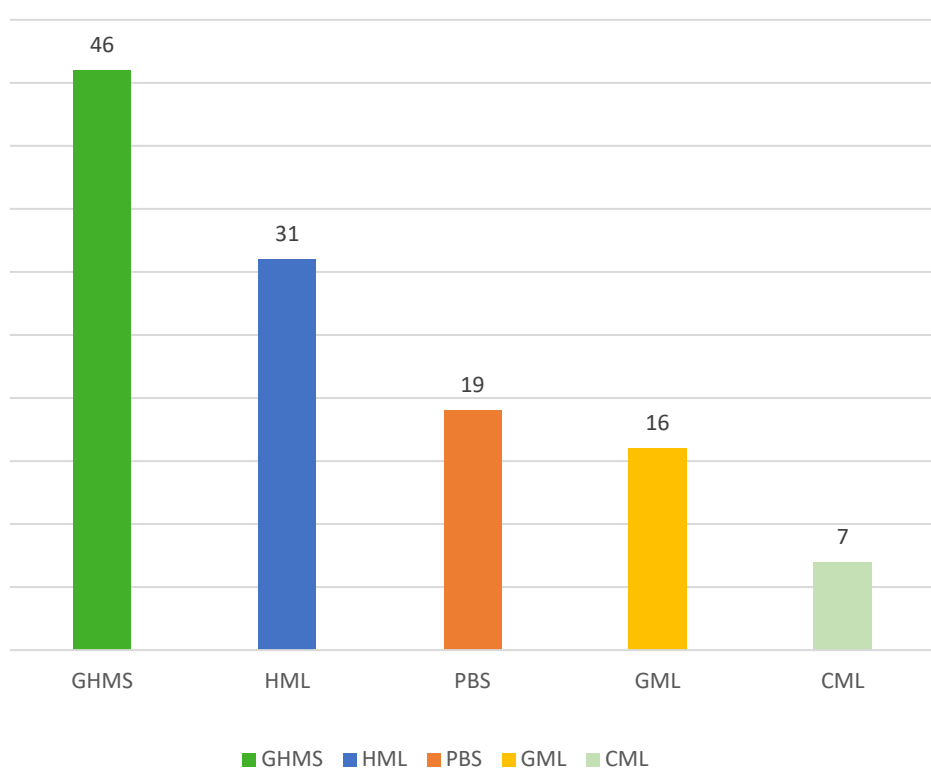
399 Trucks | 18.5K Trips | 513K tonnes

GHMS Deliveries

GHMS deliveries overview

- For the fourth year running, GHMS vehicles were the most utilised when compared to the rest of the fleet.
- 473 vehicles applied to the GHMS, 32.6% increase from last season.
- In FY21, total deliveries made by GHMS vehicles 18,522 (27% increase compared with last season).
- Comparatively in FY20, only 14,619 deliveries were made by GHMS vehicles.

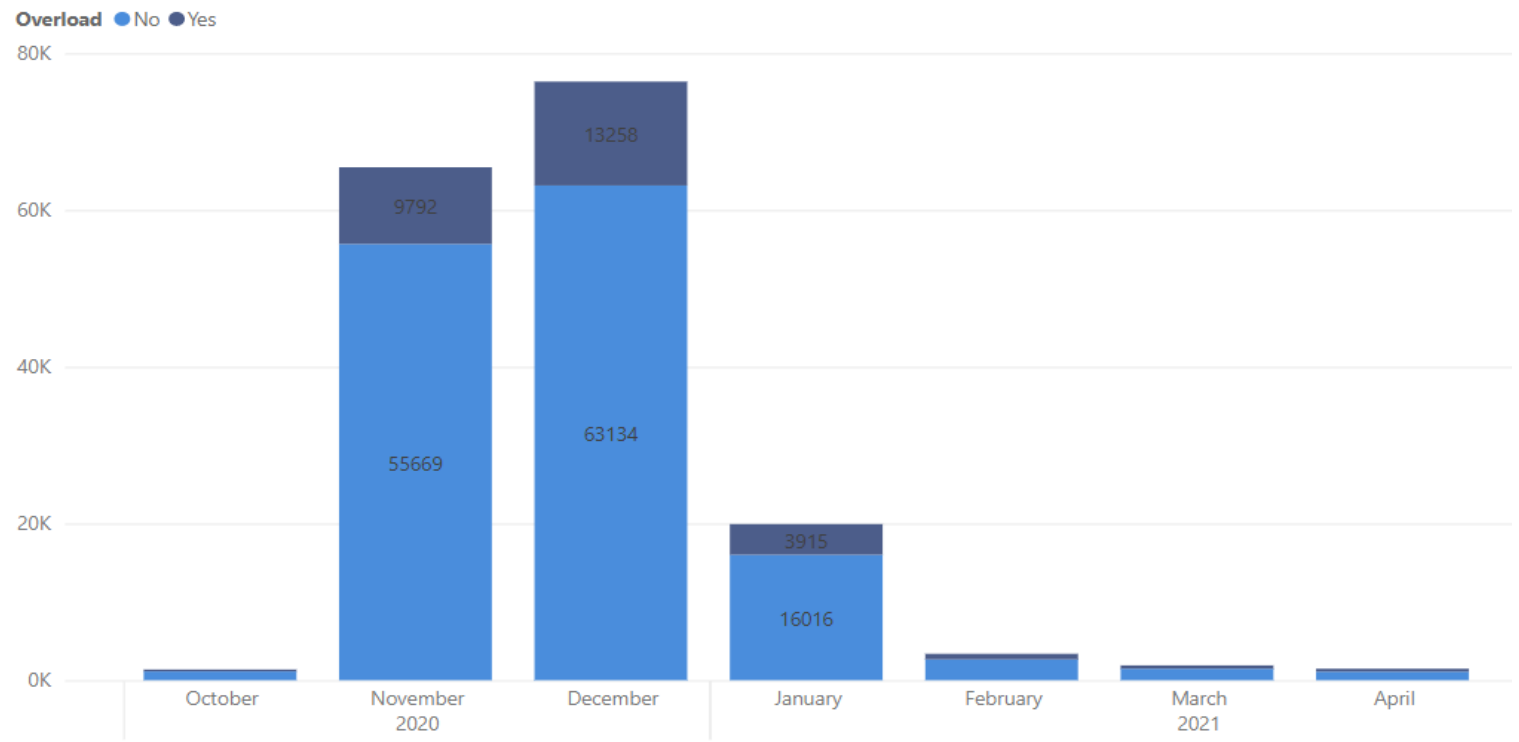
Average deliveries per concession type



Monthly Deliveries

How many deliveries were made per month?

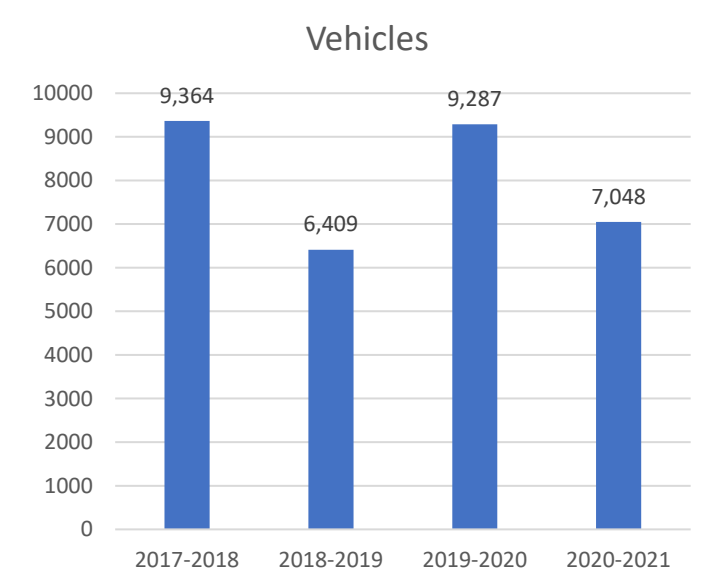
- In the reporting period of FY21, the majority of GHMS and Non-GHMS deliveries occurred in November and December. Both months fall into the winter crop harvest period.



Vehicles

How many trucks used?

In the reporting period of FY21, 7,048 vehicles were used.



What was the most common vehicle type?

- The most common vehicle type reported was Truck Code -12; Prime Mover and semi-trailer combination – 6 axles.
- Most deliveries were made by Truck and trailer vehicles followed by B-Double vehicles.

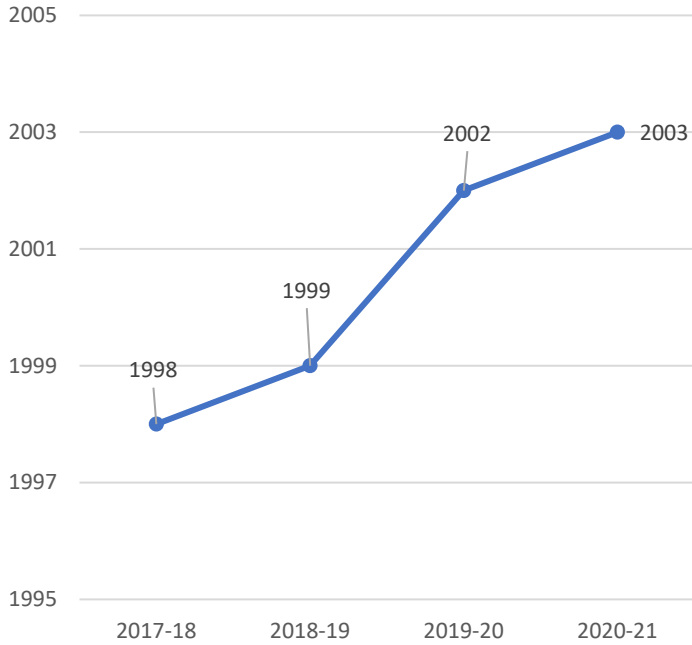
Top 5 vehicle combinations

- 3 Axle Prime mover + 3 Axle semi trailer
- 25/26 metre B-Double: 3 Axle Prime Mover + 3 Axle A Trailer + 3 Axle Semi Trailer
- 3 Axle Rigid Truck + 4 Axle Dog Trailer
- 3 Axle Rigid Truck + 3 Axle DOG trailer
- 3 Axle Prime mover + 2 Axle semi trailer

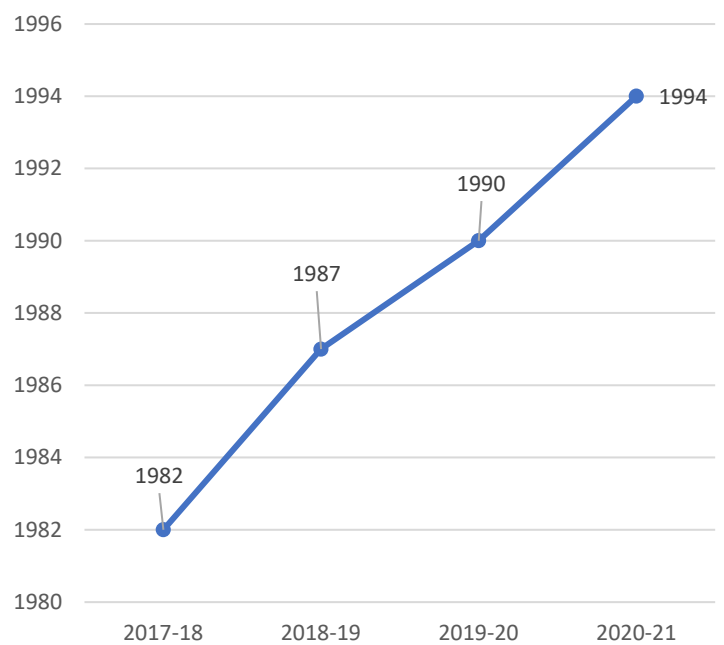
Age of the Fleet

A key component of the Victorian GHMS has been encouraging newer safer vehicles, in line with the towards zero road safety campaign. The average year of manufacture has increased from 1982 to 1994 in last 4 seasons.

Median year of manufacture



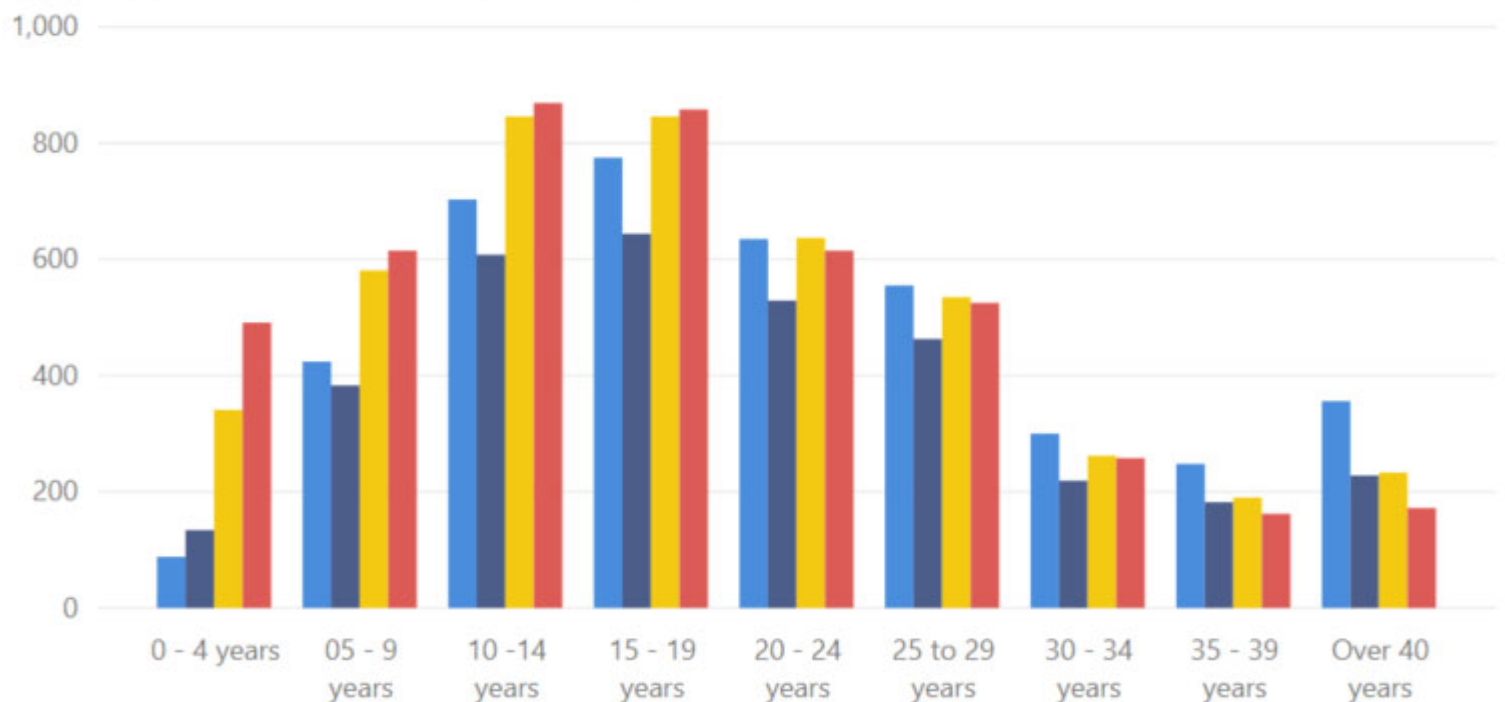
Average year of manufacture



Looking at the vehicle age distribution chart, the number of vehicles over 40 years has significantly dropped in last 4 seasons, combined with the increase in the number of newer vehicles.



Season ● 2017-2018 ● 2018-2019 ● 2019-2020 ● 2020-2021

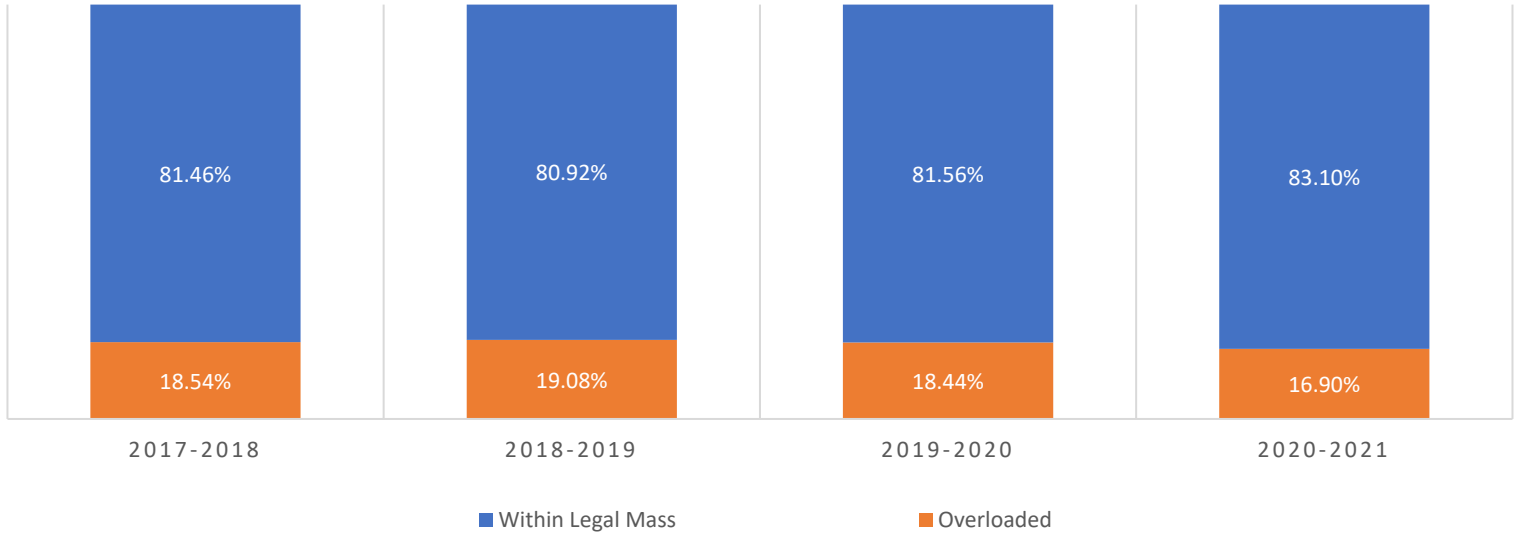


Delivery Compliance

Overall Breach Trends

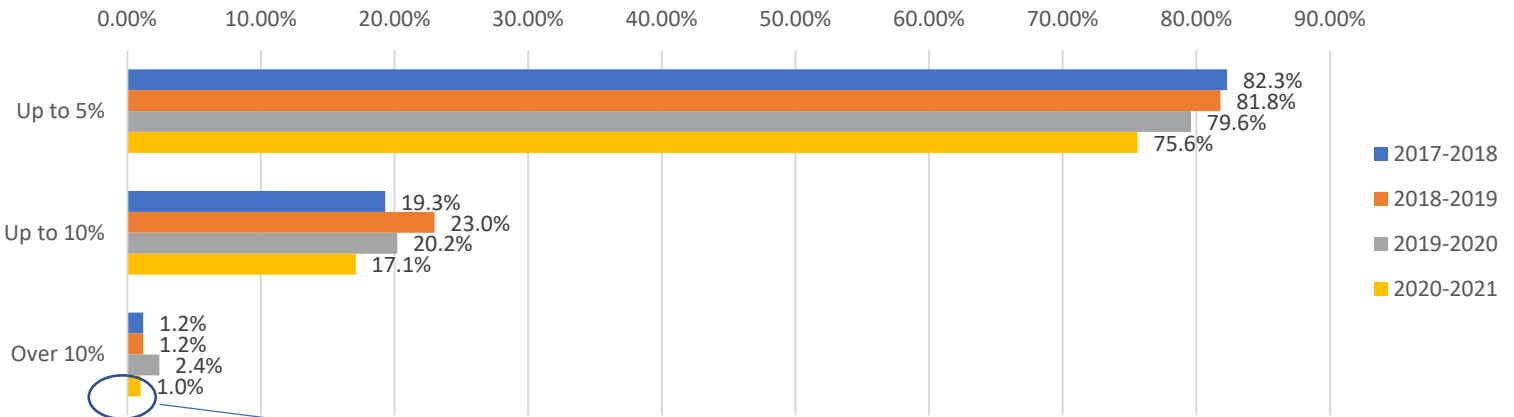
How many overmass breaches?

- The number of total breaches has decreased by 1.6% in FY21, from 18.44% (FY20) to 16.9% of total deliveries. FY21 had the lowest breach rate to date.
- Overmass breaches refer to deliveries made by vehicles that have loaded above their Legal Weight Limit (LWL). LWL is the allowable weight limit vehicles can utilise based on their Concession Type. For vehicles using the GHMS Concession Type, their LWL already includes the additional 5% mass provided under the Scheme.



Compliance Breakdown

The following chart provides a breakdown of all overloaded deliveries.



Operator	Frequency
A	9
B	8
C	4
D	4

Further Compliance Breakdown

Actual Overloads & Incorrectly Recorded

Operator A & B

Recorded as 68 HML at 68.5t
(9 Axle B-double + 0.5mt Steer)



Actual weighed mass – 68.84t
Vehicle not identified as accredited in NHVAS
Mass reduced to GML at **63t**

Operator D

Recorded as 12 GHMS at 45.1t
(6 Axle Semitrailer + 0.5mt Steer)

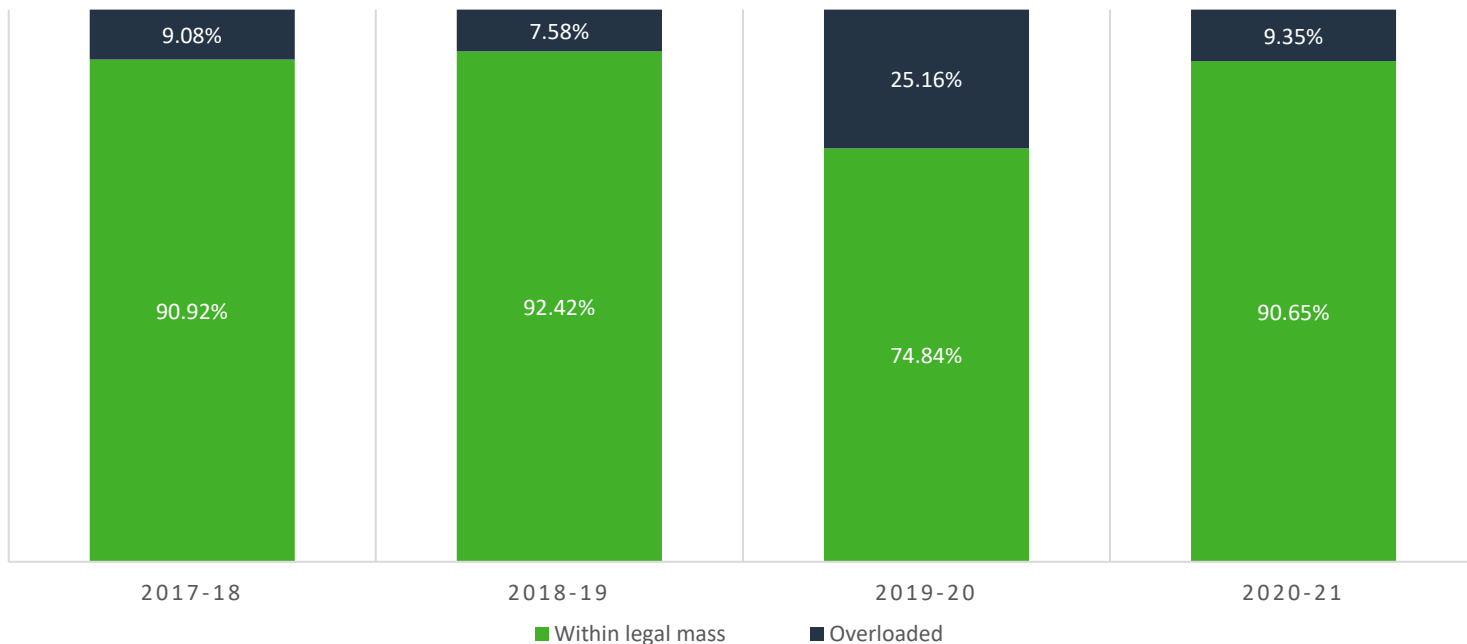


Actual weighed mass – 47.26t
Vehicle wasn't in the GHMS Scheme. If part of Scheme the vehicle would still be 2.16t overloaded.
Mass reduced to GML at **43t**

GHMS Compliance Breakdown

Non-compliance for THE GHMS has dropped significantly:

- In FY21, non-compliant rate was 9.35%.
- In FY20, non-compliant rate was 25.32%.

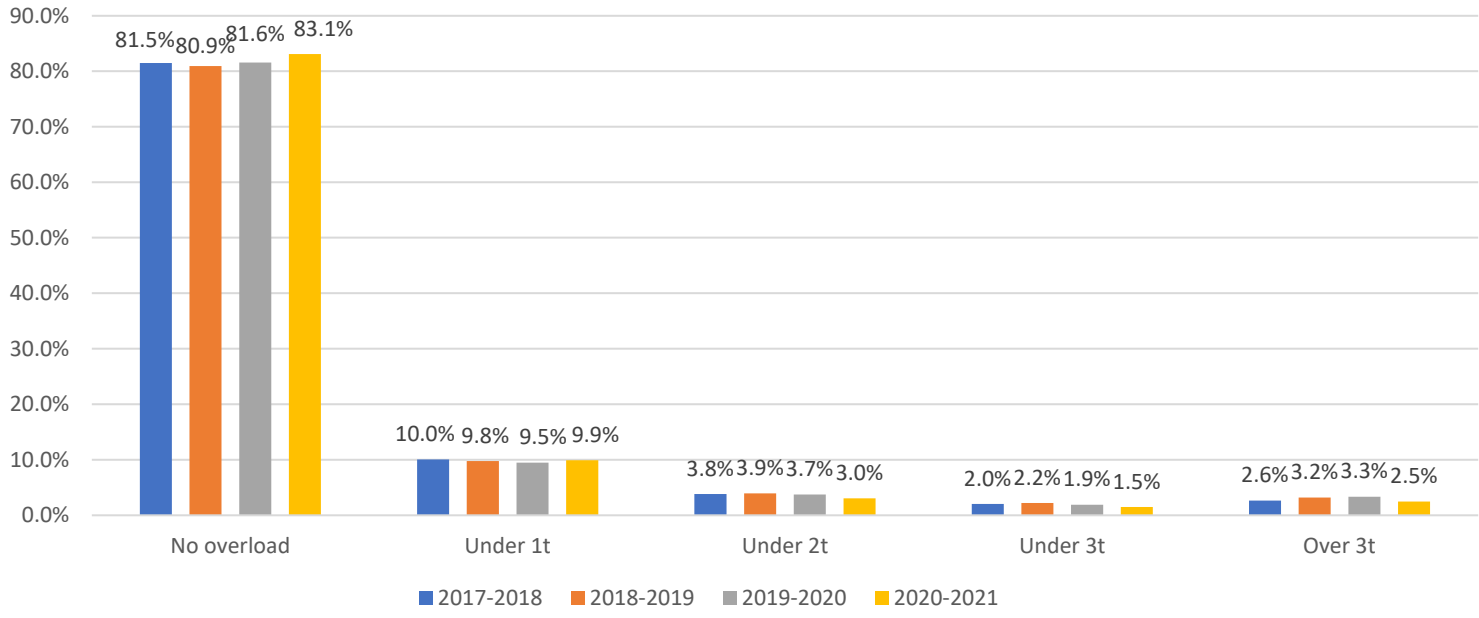


Delivery Compliance

Mass Compliance with Legal Weight Limit in tonnes

- The majority of mass breaches were by under 1 tonne.
- Extreme mass breaches by over 3 tonnes have reduced significantly (from 3.3% in FY20 to 2.5% in FY21).

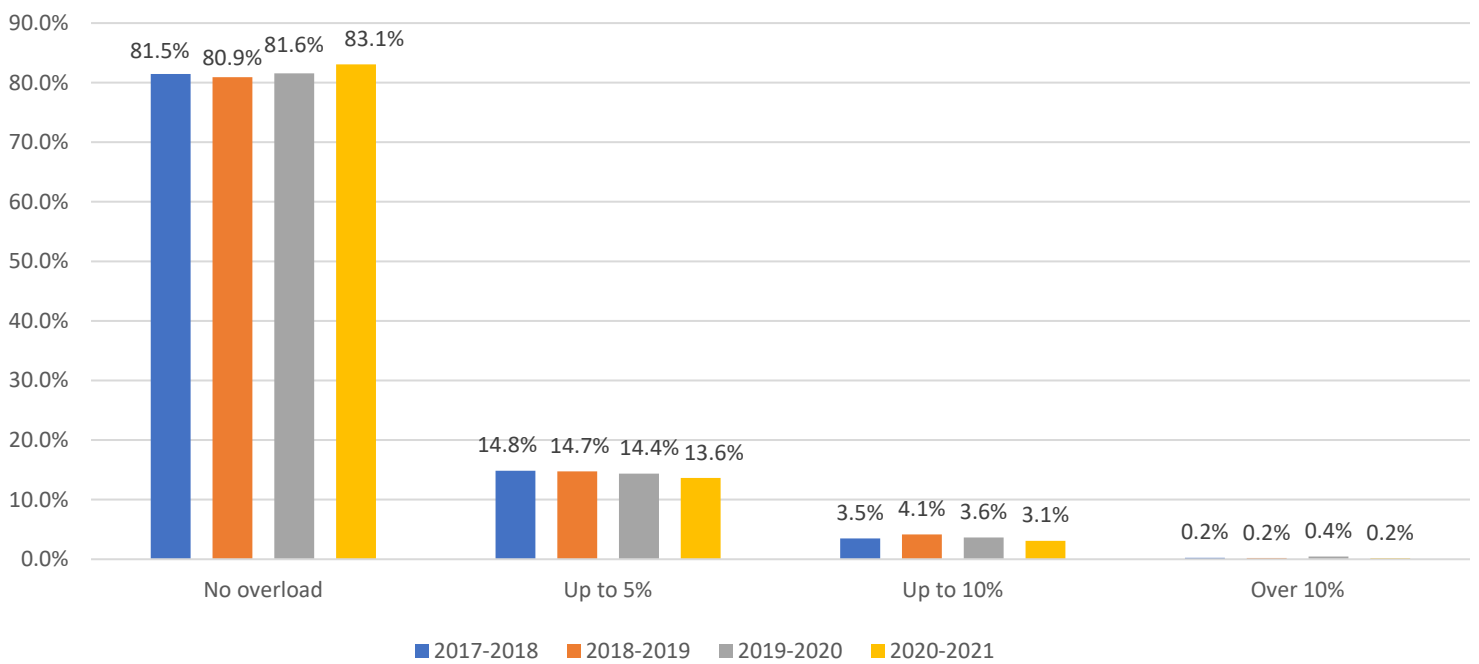
Mass Compliance With LWL in tonnes



Mass Compliance with Legal Weight Limit (as overload%)

- The majority of breaches were in the up to 5% overmass range.
- Extreme mass breaches by over 10% have reduced significantly (from 0.4% in FY20 to 0.2% in FY21).

Mass Compliance With LWL (as overload%)



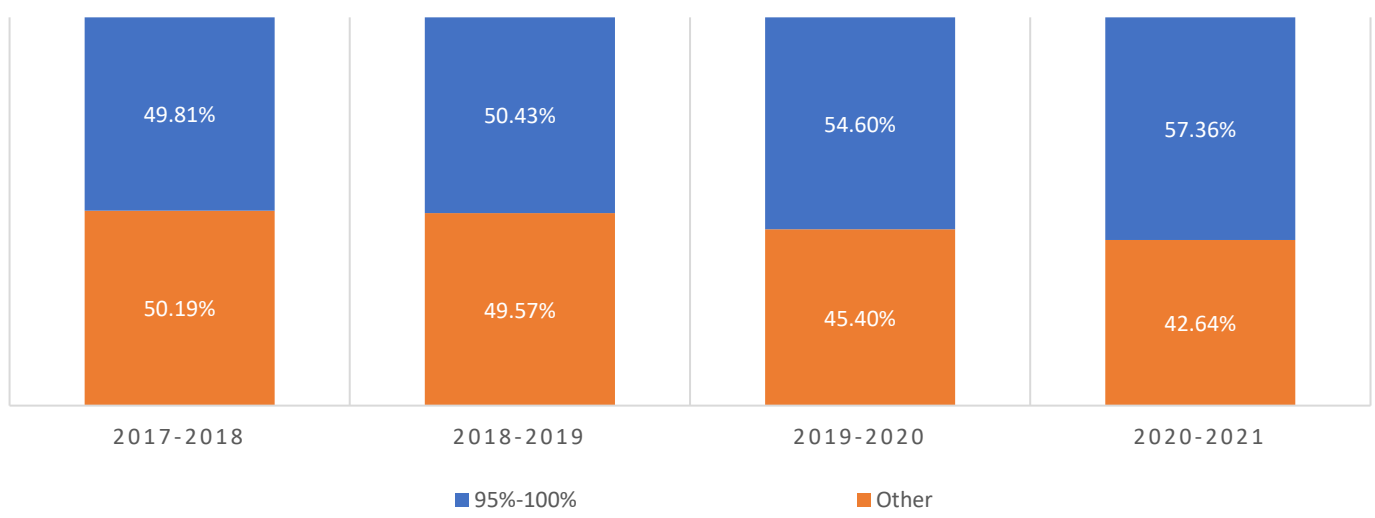
Delivery Productivity

Allowable Mass Utilised

How productive were deliveries?

- Over half of the deliveries for both GHMS and Non-GHMS utilised the allowable weight limit of 95-100% (57.4%) whereby 100% represents the Legal Weight Limit (i.e. for GHMS deliveries, 100% includes the additional up to 5% mass provided under the GHMS).
- For all deliveries, 57.36% were loaded within 95-100% of the allowable mass limit.
- For GHMS deliveries, 54.56% were loaded within 95-100% of the allowable mass limit.
- There is an opportunity to increase productivity levels, with more total deliveries (both GHMS and non-GHMS) falling within the 95%-100% mass utilised bracket.

Allowable Mass Utilised (95-100%) – Total Deliveries

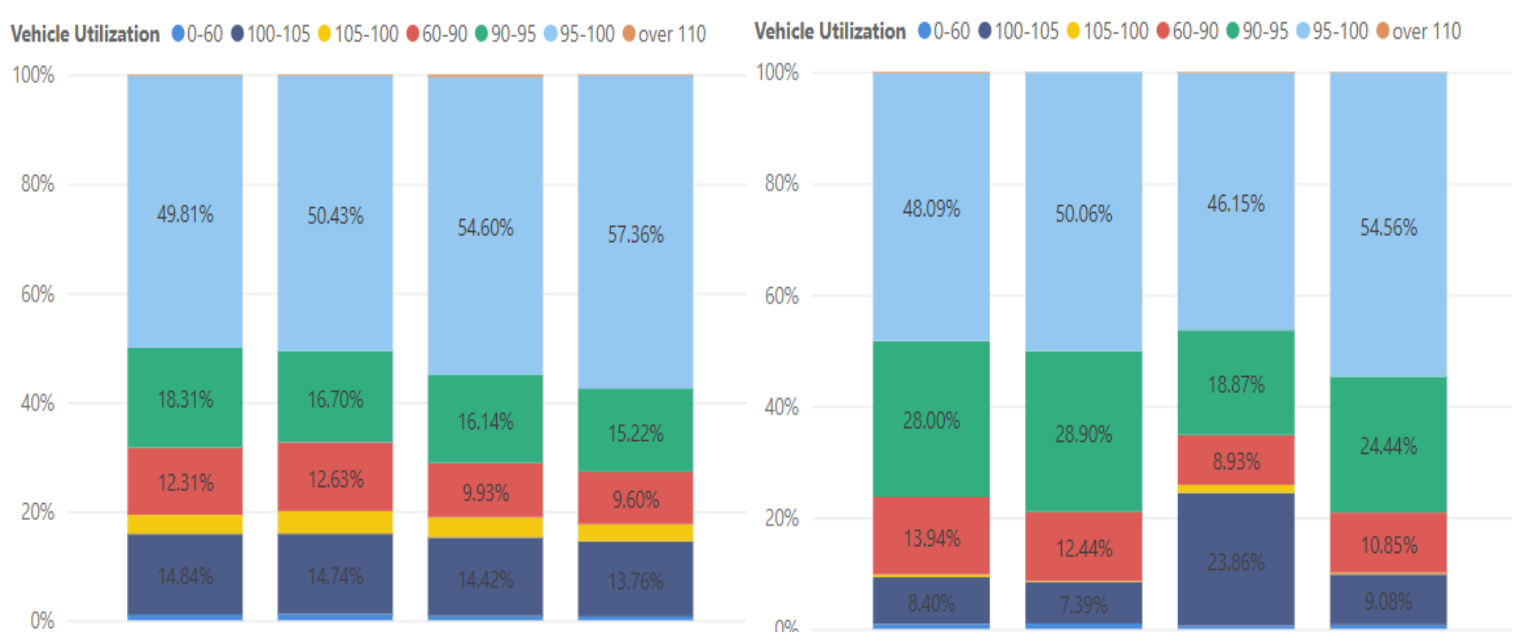


Vehicle Mass Utilisation Breakdown

Over half of deliveries for all vehicles utilised the allowable weight limit of 95% to 100% (49%), whereby 100% represents the Legal Weight Limit.

Vehicle Mass Utilisation Overview

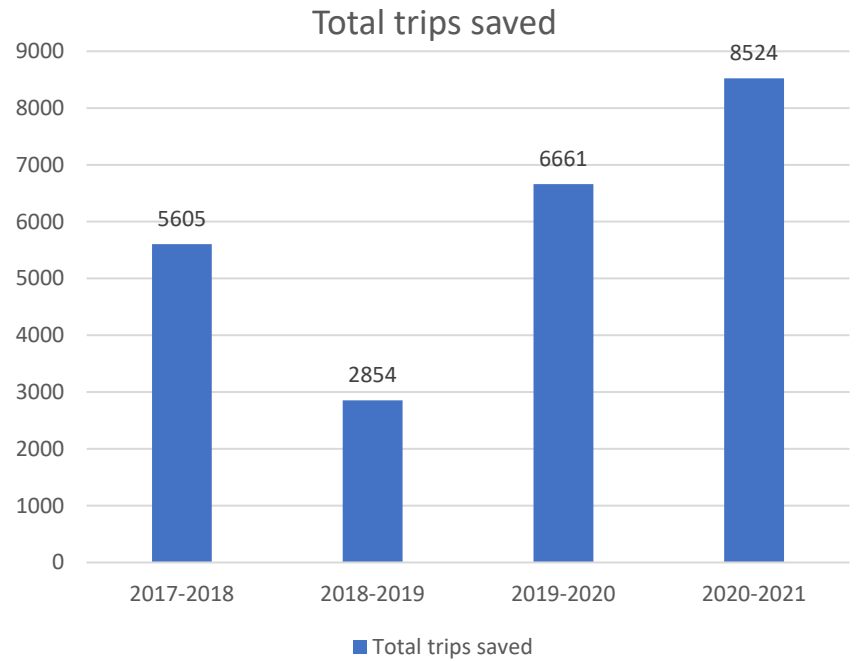
GHMS Vehicle Mass Utilisation



Trips Saved

How many trips saved?

- A total of 8,524 trips were saved. This was due to more deliveries utilising Grain Harvest Management Scheme (GHMS), Concessional Mass Limits (CML), and Higher Mass Limits (HML), Performance Based Standards (PBS) and other concession types, combined with a decrease in usage of the General Mass Limits (GML) concession type, which increased the percentage of trips saved from 4.78% to 5.02% (2020-2021).
- By utilising the GHMS concession type, a total of 961 one way trips were saved this season.



Season	Trips saved	Delivery	Percentage trips saved
2017-2018	5,605	128,734	4.35%
2018-2019	2,854	63,453	4.50%
2019-2020	6,661	139,480	4.78%
2020-2021	8,524	169,965	5.02%

Summary

What has been achieved in this reporting period?

- The data and scheme participation by councils and industry continues to show strong support for the GHMS. The National Heavy Vehicle Regulator (NHVR) will continue to administer the scheme, progress previously identified opportunities for improvement, and work with Victoria's Department of Transport to implement any further changes.
- The National Heavy Vehicle Regulator (NHVR) will also continue to monitor the data for compliance purposes to ensure the scheme continues to provide productivity benefits to compliant operators, while ensuring road safety and road use is sustainably maintained.

The future

What is the progress on the future visioning for the GHMS?

- **Stakeholder Engagement:** It was identified that there is room to improve the integrity and format of data reporting received from Participating Grain Receivers (PGRs). The National Heavy Vehicle Regulator (NHVR) are continuing to work with Participating Grain Receivers (PGRs) to simplify the data collection processes to improve data accuracy and reporting efficiency.
- **Increase Participation:** Participating Grain Receiver (PGR) participation has remained steady. The Victoria Department of Transport is currently engaging industry to help identify and engage prospective grain receivers.
- **Compliance Action:** Compliance letters issued by the National Heavy Vehicle Regulator (NHVR) have been sent to non-compliant operators monthly. The National Heavy Vehicle Regulator (NHVR) are continuing to use monitoring and investigative powers under the HNVL or State-based law to prevent harm before it arises.



Participated Grain Receivers

Grain receivers that participated in the GHMS in FY21

- Emerald Grain
- Viterra
- CHS Broadbent
- GrainFlow
- Ridley Agriproducts
- GrainCorp
- Teys

Truck Chart

Truck Chart Types referenced in this report were extracted from the charts below, for more details, please refer to <https://gtsn.com.au/resources/truck-book/>

Maximum Length		12.5m	19.0m	26.0m	36.5m									Grain Harvest Management			
Category	Code	Image		Description	GML	Vic RFS ¹	GML + Permit ²	CML	HML	0.5mt Steer ³	1.1mt Steer ⁴	QLD ⁵	NSW ⁶	VIC ⁷	SA ⁸		
Rigid Truck	9			3 Axle Rigid Truck	22.50	23.00		23.00 Qld +0.25t		✓		24.20	23.00	23.60	24.20		
Truck & Dog	16			Common 3 Axle Rigid Truck and 3 Axle Dog Trailer ⁹	42.50		45.00 NSW = 48.00t	43.50		✓		45.70	44.63		45.70		
Truck & Dog	76			Common 3 Axle Rigid Truck and 4 Axle Dog Trailer ¹⁰	42.50		50.00	43.50		✓		45.70	44.63		45.70		
	87			3 Axle Rigid Truck and 5 Axle Dog Trailer	PBS truck: Refer footnote ¹¹												
Prime Mover & Trailer	11			Common 5 Axle Semitrailer	39.00	40.00		40.00		✓		41.90	40.00	41.00	42.00		
	12			Common 6 Axle Semitrailer	42.50	43.00		43.50	45.50	✓		45.70	44.63	44.60	45.70		
B Double	83			Common 7 Axle B-double	55.5	57.00	50.00 ¹²	57.00		✓		59.70 ¹³	57.00	58.30	59.90		
	68			Common 9 Axle B-double	62.50	63.00		64.50	68.00	✓		67.10	65.63	65.60	67.70		
Road Train	28			Common 11 Axle Road Train (A Double) ¹⁴	79.00			81.00	85.00	✓	✓	84.90	83.00		85.05		
	91			Common 12 Axle Road Train (A Double)	82.50			84.50	90.50	✓	✓	88.70	86.63		86.60		
AB Triple	88			Common 14 Axle AB Triple Road train and 2 Axle Dolly	99.00			101.00	107.50 Qld = +1.00t	✓	✓	106.40	104.00		106.05		
	96			15 Axle AB Triple Road train and 3 Axle Dolly	102.50			104.50	113.00 ¹⁵ Qld = +1.00t	✓	✓	110.10	107.63		109.73		
<p>All masses are in metric tonnes GML = General Mass Limit CML = Concessional Mass Limit - Must be registered in NHVAS mass and display sticker on driver's side of the truck HML = Higher Mass Limit - Must be registered in NHVAS + IAP in NSW and Qld and be on a HML route Mass Limits are the maximum limit and it is important drivers know the Gross Combination (GCM) and Gross Vehicle Mass (GVM) and do not exceed that if it is lower than the mass limit Legal Disclaimer: data is provided for information only</p>					<p>New NHVAS Mass Sticker</p>					<p>Old NHVAS Mass Sticker</p> 