

Safe Work Australia

Work-related Traumatic Injury Fatalities, Australia /

2021

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Foreword

This report provides statistics about people who have died from traumatic injuries through work-related activity¹.

Injury is defined as a condition coded to 'External causes of morbidity and mortality' and 'Injury, poisoning and certain other consequences of external causes' in the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM).

The scope of this collection includes all persons:

- who were traumatically, fatally injured, and
- whose injuries resulted from work activity or exposures, and
- whose injuries occurred in an incident that took place in Australian territories or territorial sea.

The report includes:

- workers who died, irrespective of how they were engaged (includes unpaid volunteers, family workers, persons undertaking work experience and defence force personnel killed), and
- persons who died as a result of someone else's work activity (bystander fatalities).

The collection specifically excludes those who died:

- of iatrogenic injuries—those where the worker died due to medical intervention
- due to natural causes such as heart attacks and strokes, except where a work-related injury was the direct cause of the heart attack or stroke
- as a result of diseases, such as cancers
- by self-inflicted injuries (suicide), and
- commuting to or from work.

The data presented in this report is based on the information available about the fatalities as at October 2022 when the 2021 dataset was finalised. A series of electronic tables are also available on the Safe Work Australia website that provide the full time series (2003 to 2021) for key data variables.

Historical data are updated as additional information from finalised coroners' reports and workers' compensation claims becomes available.

For explanatory notes on the data for this publication, refer to <https://www.safeworkaustralia.gov.au/resources-and-publications/statistical-reports/explanatory-notes-traumatic-injury-fatalities-database>.

¹ See Glossary for explanation of 'traumatic injury'

Key findings

Worker fatalities

/ in 2021

Worker fatalities In 2021



169

workers were
fatally injured
at work



Fatality rate

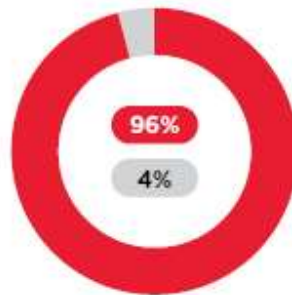
1.3 per 100,000
workers



decreased by 57%

from a peak of 3.0 per
100,000 in 2007

6
fatalities were
female



163
fatalities were
male

Industry fatalities In 2021

65% of fatalities were in three industries

Transport, postal
and warehousing

52



Agriculture, forestry
and fishing

33



Construction

24



fatality rates have **decreased since the peak in 2007**

49% decrease

7.9 compared to 15.5
per 100,000 workers

31% decrease

10.4 compared to 15.0
per 100,000 workers

56% decrease

2.1 compared to 4.8
per 100,000 workers



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Worker fatalities

/ in 2021

Causes of worker fatalities In 2021

vehicle collision



38%

(64 workers)

hit by moving objects



14%

(24 workers)

falling from height



11%

(19 workers)



7 of 10 fatalities involved a vehicle

Causes of bystander fatalities In 2021



Vehicle collision

49%

(28 bystanders)



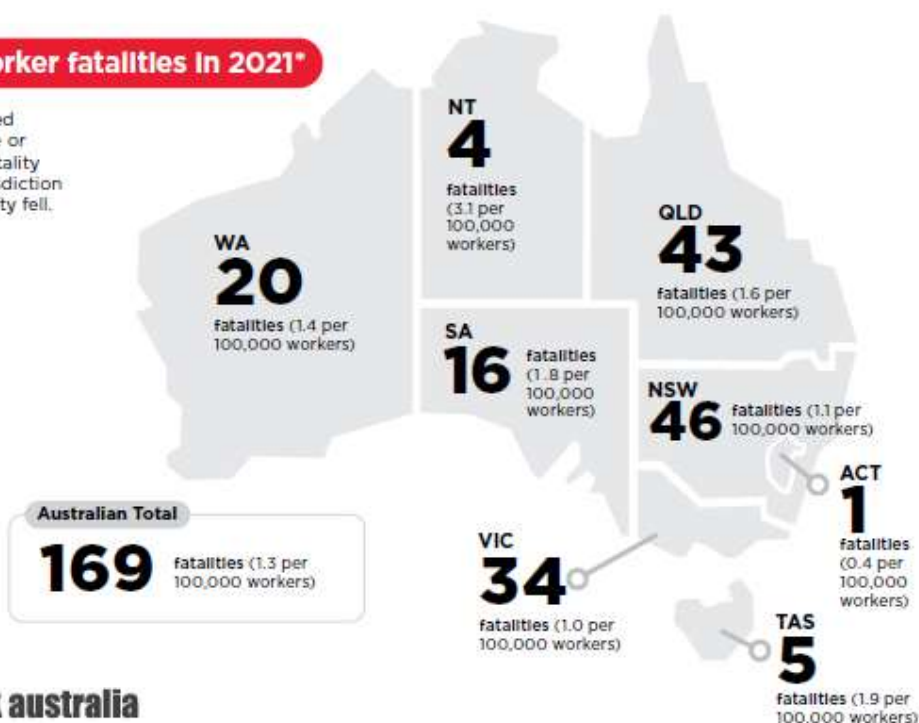
Falls from a height

21%

(12 bystanders)

Location of worker fatalities In 2021*

* Fatalities are presented according to the state or territory where the fatality occurred, not the jurisdiction under which the fatality fell.



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Section 1:

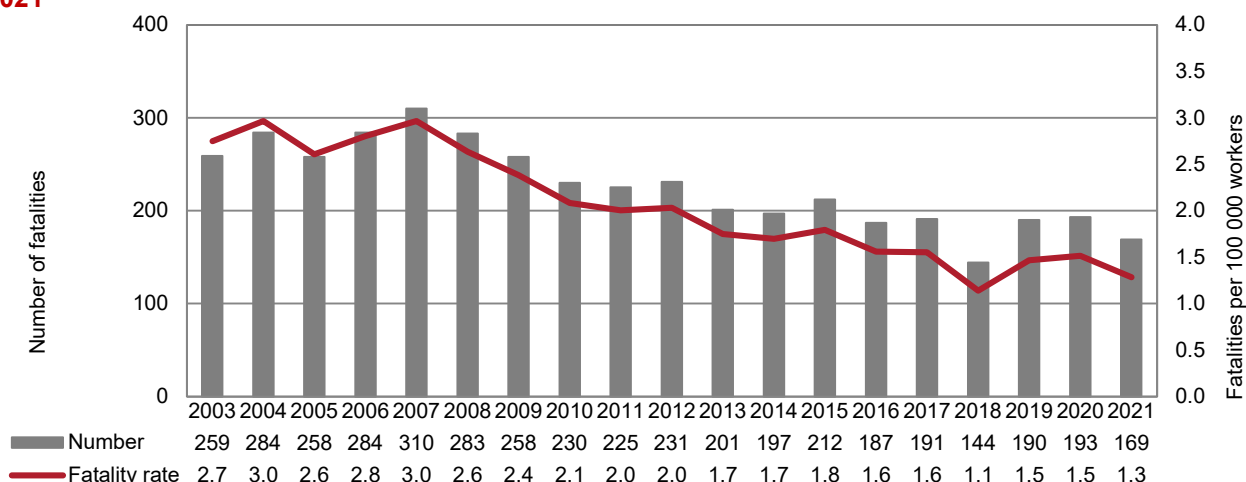
Worker fatalities

1.1. Fatalities and fatality rate

There were 169 worker fatalities in 2021 due to injuries sustained in the course of a work-related activity. Overall, the number of fatalities has been trending downward since 2007 (Figure 1). The highest number of work-related injury fatalities was recorded in 2007 when there were 310 deaths.

Similarly, the fatality rate (the number of fatalities per 100,000 workers) has decreased by 57% since the highest rate recorded in 2007. In 2007 the fatality rate was 3.0 fatalities per 100,000. This has decreased to 1.3 fatalities per 100,000 workers in 2021. The lowest recorded fatality rate of 1.1 fatalities per 100,000 workers was recorded in 2018.

Figure 1: Worker fatalities: number of fatalities and fatality rate (per 100,000 workers), 2003 to 2021

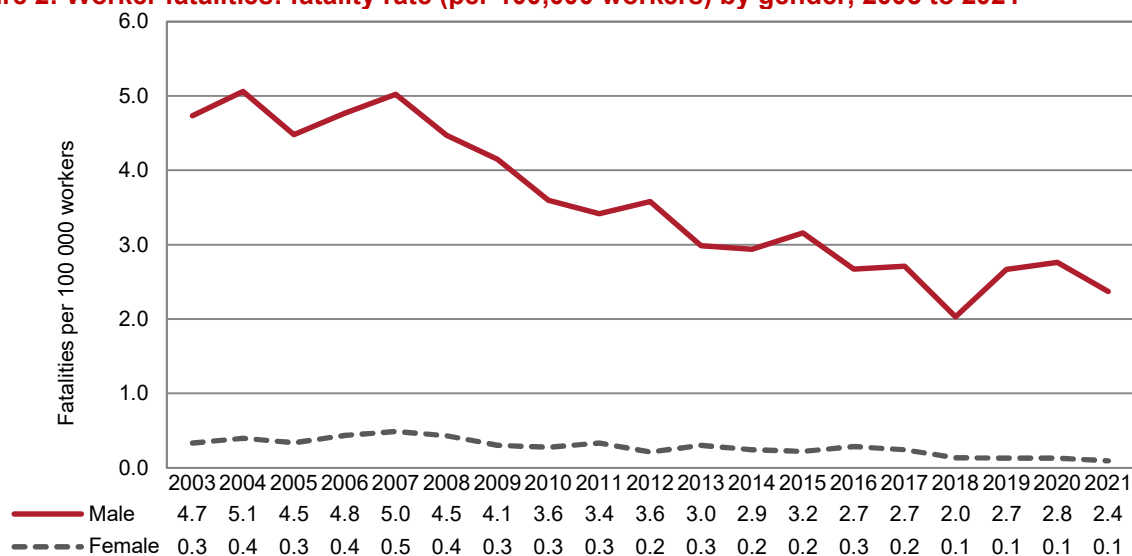


1.2. Gender²

The vast majority of workers killed from work-related activities are men (96%; 163 fatalities in 2021). The male fatality rate has remained relatively steady around 2.5 fatalities per 100,000 male workers in the past 5 years (Figure 2). This rate is half of that recorded in 2007 when the fatality rate for male workers was 5.0 fatalities per 100,000 male workers.

Over the same period, the fatality rate for female workers has also decreased, from 0.5 fatalities per 100,000 female workers in 2007 to 0.1 fatalities per 100,000 female workers. The rate has remained unchanged between 2018 to 2021.

Figure 2: Worker fatalities: fatality rate (per 100,000 workers) by gender, 2003 to 2021



² See Glossary for more detail on gender.

1.3. Age group

The distribution of fatalities by age has remained relatively consistent over the past 5 years (Table 1). As in previous years, workers aged 55-64 years accounted for more deaths in 2021 than any other age group (25%).

In 2021, workers aged 65 and over had the highest fatality rate at 4.5 fatalities per 100,000 workers (more than three times the overall worker fatality rate of 1.3 fatalities per 100,000 workers). Workers aged 55 to 64 had the second highest fatality rate at 2.2 fatalities per 100,000 workers (Table 2). However, both of these age groups were down from 2020, where rates were 5.5 and 2.9, respectively. Considerably fewer young people (aged under 25 years) were fatally injured in 2021. However, compared to the 5 year average, the 2021 fatality rate among this group is slightly elevated (0.9 fatalities per 100,000 workers compared with 0.8).

Table 1: Worker fatalities: number by age group, 2017 to 2021

Age group	2017	2018	2019	2020	2021	5 yr total
Under 25	16	19	15	8	16	74
25–34	32	24	26	30	22	134
35–44	35	26	36	33	26	156
45–54	36	27	33	35	33	164
55–64	48	31	48	55	43	225
65 & over	24	17	32	32	29	134
Total	191	144	190	193	169	887

Figure 3: Worker fatalities: proportion by age group, 2017 to 2021

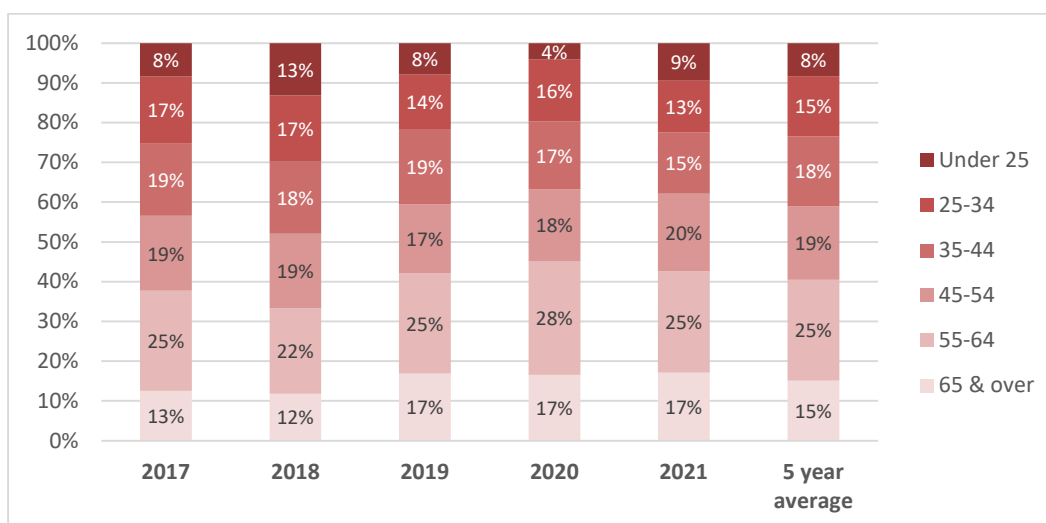


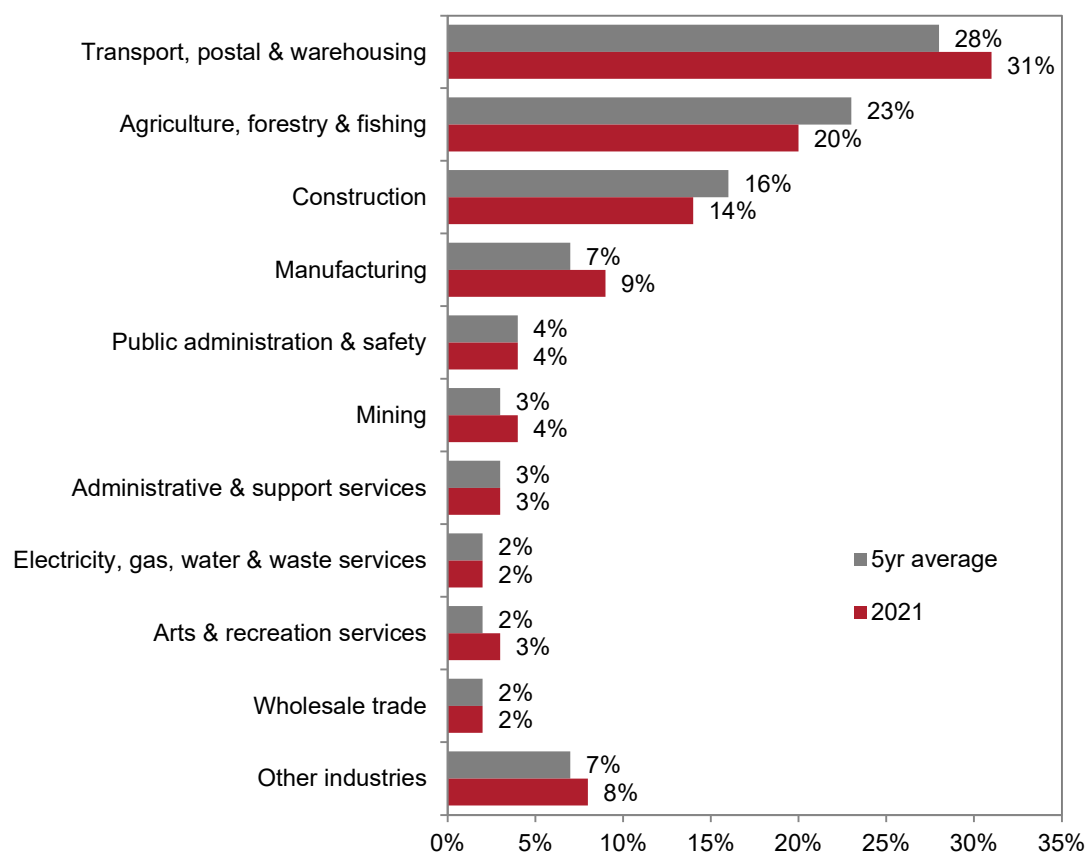
Table 2: Worker fatalities: fatality rates (per 100,000 workers) by age group, 2017 to 2021

Age group	2017	2018	2019	2020	2021	5 yr average
Under 25	0.9	1.0	0.8	0.4	0.9	0.8
25–34	1.1	0.8	0.8	1.0	0.7	0.9
35–44	1.3	1.0	1.3	1.2	0.9	1.1
45–54	1.4	1.0	1.3	1.3	1.2	1.3
55–64	2.6	1.7	2.5	2.9	2.2	2.4
65 & over	4.9	3.1	5.4	5.5	4.5	4.7
Total	1.6	1.1	1.5	1.5	1.3	1.4

1.4. Industry

In 2021, 64% of worker fatalities occurred in three industries (Figure 4). Transport, postal and warehousing fatalities accounted for 31% (52 fatalities), followed by fatalities in the Agriculture, forestry and fishing industry (20%; 33 fatalities) and Construction industry (14%; 24 fatalities).

Figure 4: Worker fatalities: proportion by select industry of employer, 2021 and 5 year average (2017 to 2021) (sorted by 5 year average proportion)



Note: industries with a 5 year average proportion of 1% or lower have been included in 'other industries'.

Fatality rates, expressed as the number of fatalities per 100,000 workers, are useful to compare data across industries because they take the relative size of the population of workers into account (Figure 5 and Table 3).

In 2021, the Agriculture, forestry and fishing industry recorded the highest fatality rate with 10.4 fatalities per 100,000 workers). While this is similar to the 5 year average of 12.1 fatalities per 100,000 workers, this is a decrease of 21% since 2020. Despite the Transport, postal and warehousing industry having the highest number of workers fatalities in 2021, the industry recorded the second highest fatality rate when accounting for the number of workers in the industry (at 7.9 fatalities per 100,000 workers). Further information about the Road Transport and Agriculture sub-industries (which are the areas of the industries with the highest rates) can be found in sections 1.5.1 and 1.5.2 respectively.

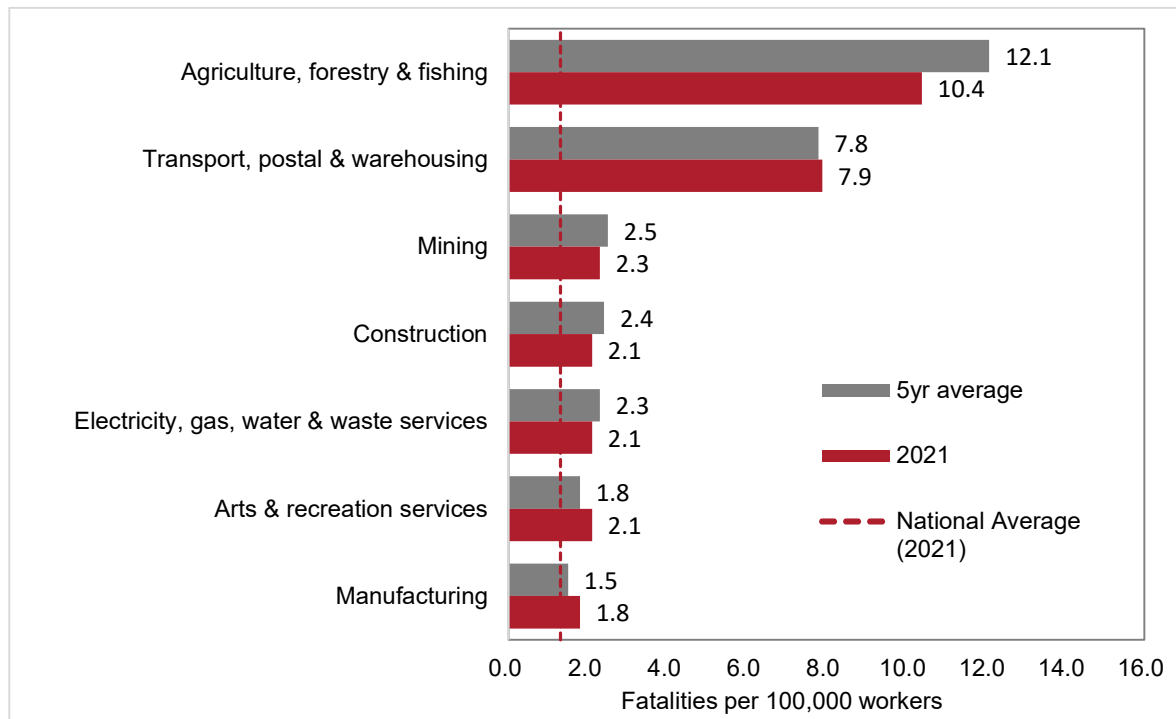
While the Construction industry recorded the third highest proportion of fatalities (14%; 24 fatalities), when accounting for the number of workers in this industry the rate was much lower than the other two industries at 2.1 fatalities for 100,000 workers. More information about this industry can be found in section 1.5.3.

Interpreting fatality rates and averages

As fatality rates are sensitive to the number of workers in each industry, industries that have relatively fewer workers (such as the Electricity, gas, water and waste services industry) may show volatility even when small variations in the number of fatalities are recorded. Therefore, the actual number of fatalities should also be considered when interpreting the fatality rates for smaller industries (see Figure 5 and Table 3 for numbers and fatality rates by industry).

When considering numbers and rates of fatalities, it is also important to consider the 5 year average as figures can fluctuate each year.

Figure 5: Worker fatalities: fatality rates (per 100,000 workers) by selected industry of employer, 2021 and 5 year average (2017 to 2021) (sorted by 5 year average fatality rate)



Note: Only industries with a 2021 fatality rate higher than the national 2021 average rate of 1.3 fatalities per 100,000 workers have been included.

Table 3: Worker fatalities: number of fatalities and fatality rates (per 100,000 workers) by industry of employer, 2020, 2021 and 5 year average (2017 to 2021) (sorted by 5 year average fatality rate)

Industry of employer	Number of fatalities			Fatality rates		
	2020	2021	5yr average	2020	2021	5yr average
Agriculture, forestry & fishing	46	33	40	13.1	10.4	12.1
Transport, postal & warehousing	48	52	50	7.7	7.9	7.8
Mining	6	6	6	2.5	2.3	2.5
Construction	36	24	28	3.1	2.1	2.4
Electricity, gas, water & waste services	3	3	3	2.0	2.1	2.3
Arts & recreation services	1	5	4	0.5	2.1	1.8
Manufacturing	18	16	13	2.1	1.8	1.5
Wholesale trade	2	4	4	0.5	1.1	1.2
Administrative & support services	6	5	5	1.4	1.2	1.1
Rental, hiring & real estate services	2	2	2	0.9	0.9	0.8
Public administration & safety (including Defence)	10	6	7	1.1	0.6	0.8
Other Services	3	3	3	0.7	0.6	0.7
Accommodation & food services	2	2	2	0.3	0.2	0.3
Education & training	2	4	2	0.2	0.4	0.2
Information media & telecommunications	0	0	0	0.0	0.0	0.2
Professional, scientific & technical services	5	1	2	0.4	0.1	0.1
Health care & social assistance	1	2	2	0.1	0.1	0.1
Retail trade	2	1	1	0.2	0.1	0.1
Financial & insurance services	0	0	<1	0.0	0.0	0.1
Total	193	169	177	1.5	1.3	1.4

Note: values of '<1' represents that there have been fatalities in the past 5 years, but the rounded average is less than 0.5.

1.5. Priority industries

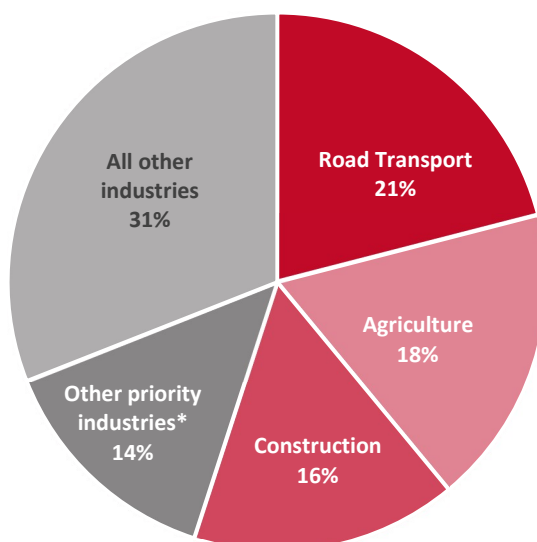
The *Australian Work Health and Safety Strategy 2012–2022* (Australian Strategy) provides a framework to drive improvements in work health and safety (WHS) in Australia. It promotes a collaborative approach between the Commonwealth, state and territory governments, industry and unions and other organisations to achieve the vision of healthy, safe and productive working lives. The Australian Strategy identifies national priority industries and conditions to help direct prevention activities to where they are needed the most.

The following priority industries have high numbers and rates of fatalities and/or injuries, or are by their nature hazardous:

- 1 Agriculture
- 2 Road transport
- 3 Manufacturing
- 4 Construction
- 5 Accommodation and food services
- 6 Public administration and safety, and
- 7 Health care and social assistance.

Figure 6 shows that three priority industries—Agriculture, Road transport and Construction — accounted for 55% of worker fatalities between 2017 and 2021.

Figure 6: Worker fatalities: proportion of fatalities by priority industry of employer, 2017 to 2021 (total)



Note: **Other priority industries' include Manufacturing, Accommodation and food services, Public administration and safety, and Health care and social assistance.

The priority industries are classified using the Australian and New Zealand Standard Industrial Classification (2006) and include a combination of divisions and subdivisions.

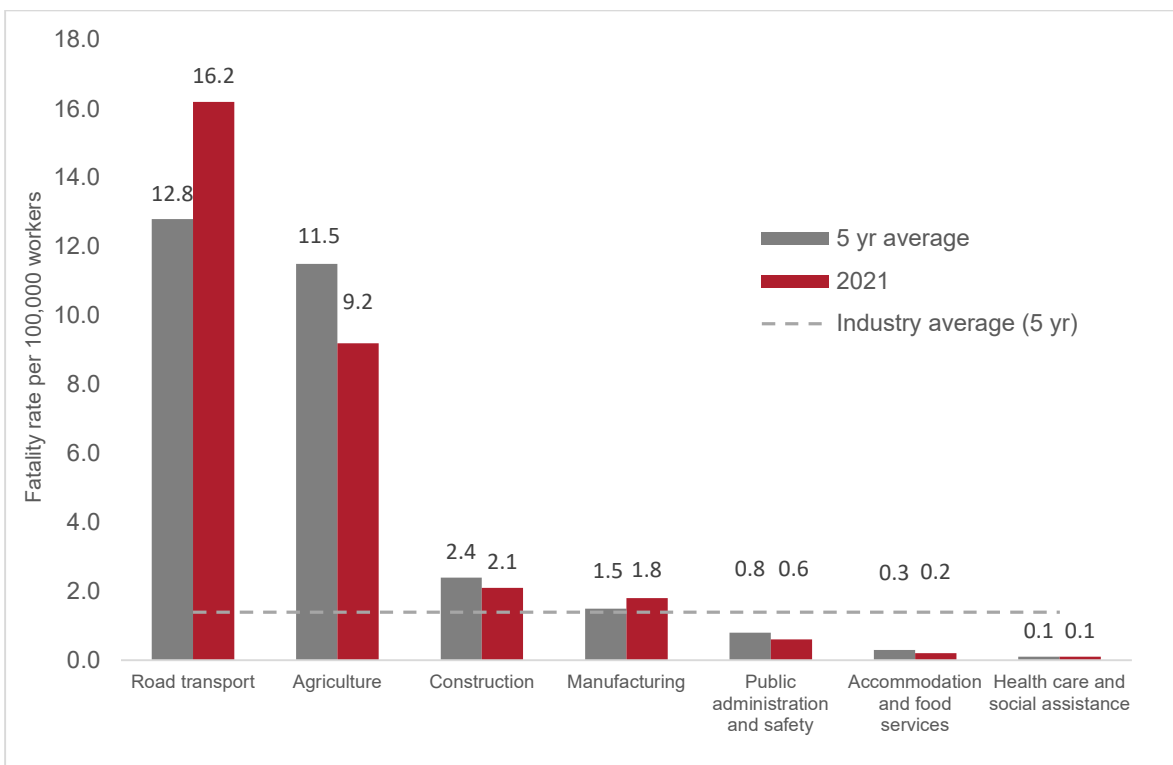
The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

As noted previously, the fatality rates should also be considered when comparing different sized industries.

Figure 7 shows the Road transport, Agriculture and Construction industries had the highest fatality rates. The 5 year average fatality rate for the Road transport industry was 12.8 fatalities per 100,000 workers with the 2021 rate notably higher at 16.2. The Road transport industry was followed by the Agriculture industry at a 5 year average fatality rate of 11.5 fatalities per 100,000 workers and a 2021 fatality rate of 9.2. The Construction industry was the third highest, with a 5 year fatality rate of 2.4 fatalities per 100,000 workers and a 2021 fatality rate of 2.1. Given these higher rates, this report examines these three priority industries in further detail.

Industries such as Manufacturing, Public administration and safety, Accommodation and food services and Health care and social assistance have low fatality rates but are included as priority industries due to high non-fatal injury rates. For information on non-fatal injuries in these industries, refer to the latest *Australian Workers' Compensation Statistics* report.

Figure 7: Worker fatalities: fatality rates (per 100,000 workers) by priority industry of employer, 2021 and 5 year average (2017 to 2021)



1.5.1. Priority industry: Road transport

Over the 5-year period from 2017 to 2021, there were 183 worker fatalities in the Road transport industry, which accounts for 21% of all worker fatalities over the period. The vast majority (178 fatalities; 97%) occurred in the Road freight transport sub-division, with 5 fatalities (3%) in the Road passenger transport industry.

The majority of fatalities (74%) in the Road transport industry over the 5 years to 2021 were due to vehicle collisions³ — 135 in the Road freight transport industry and 3 in the Road passenger transport industry (Table 4). Being hit by moving objects⁴ caused a further 17 fatalities in the Road freight transport industry.

Table 4: Worker fatalities in Road transport industry groups by mechanism of incident, 2017 to 2021 (total)

Industry group and mechanism of incident	No. of fatalities	% of fatalities
Road freight transport	178	97%
Vehicle collision ³	135	74%
Being hit by moving objects ⁴	17	9%
Being hit by falling objects	8	4%
Being trapped between stationary and moving objects	5	3%
Falls from a height	4	2%
Other mechanisms	9	5%
Road passenger transport	5	3%
Vehicle collision ³	3	2%
Other mechanisms	2	1%
5 year total	183	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Table 5 shows that 176 worker fatalities (96%) in the Road transport industry involved a vehicle, with the majority (145 fatalities) occurring while the worker was in a moving vehicle. A further 8 fatalities occurred while the worker was conducting repairs or maintenance on a vehicle, and 7 fatalities occurred while the worker was loading or unloading a vehicle.,

Table 5: Worker fatalities: Road transport by vehicle involvement and activity of the deceased, 2017 to 2021 (total)

Vehicle involvement/Deceased activity	No. of fatalities	% of fatalities
Vehicle involved	176	96%
Driving/moving freight/people	145	79%
Repair/maintenance	8	4%
Loading/unloading	7	4%
Other	16	9%
No vehicle involved	7	4%
5 year total	183	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

³ See Glossary for explanation of 'Vehicle collision'

⁴ See Glossary for explanation of 'Being hit by moving objects'

1.5.2. Priority industry: Agriculture

Over the last 5-year period from 2017 to 2021, there were 163 worker fatalities in the Agriculture industry, representing 18% of all worker fatalities over the period.

Within the Agriculture industry subdivision, the Sheep, beef cattle and grain farming industry group accounted for 58% of the fatalities over the 5 years (Table 6).

Workers aged 65 years and over accounted for over a third (35%) of fatalities in the Agriculture industry. This is double the proportion of fatalities across all industries (15%) over the same period and age group. The greater number of fatalities among workers is partly explained by the composition of the agriculture workforce which has a higher proportion of older workers compared to other industries.

Table 6: Worker fatalities: Agriculture industry groups by age group, 2017 to 2021 (total)

Agriculture industry group	Under 25	25–44	45–64	65 & over	5 year total
Sheep, beef cattle & grain farming	5	18	34	37	94
Other livestock farming	2	4	8	3	17
Fruit & tree nut growing	1	4	8	4	17
Other crop growing	1	6	4	5	16
Mushroom & vegetable growing	0	2	2	4	8
Dairy cattle farming	1	1	3	3	8
Other agriculture subdivision	1	0	1	1	3
5 year total	11	35	60	57	163

The most common mechanism of incident⁵ causing worker fatalities in the Agriculture industry over the 5 years was vehicle collisions⁶, which caused 26% of fatalities (Table 7). This was followed by Being hit by moving objects⁷ (18%) and Rollover of non-road vehicles (10%).

Table 7: Worker fatalities: Agriculture by mechanism of incident, 2017 to 2021 (total)

Mechanism of incident	No. of fatalities	% of fatalities
Vehicle collision ⁶	42	26%
Being hit by moving objects ⁷	30	18%
Rollover of non-road vehicle	16	10%
Being hit by falling objects	12	7%
Being trapped by moving machinery	12	7%
Falls from a height	11	7%
Being trapped between stationary and moving objects	10	6%
Being hit by an animal	6	4%
Other mechanisms	24	15%
5 year Total	163	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Over the 5 years to 2021, the majority of fatalities (73%) in the Agriculture industry involved a vehicle (Table 8). The most common vehicles involved were tractors (26%) and quad bikes or all-terrain vehicles (13%).

⁵ See Glossary for explanation of 'Mechanism of incident'

⁶ See Glossary for explanation of 'Vehicle collision'

⁷ See Glossary for explanation of 'Being hit by moving objects'

Table 8: Worker fatalities: Agriculture by vehicle involvement and type of vehicle, 2017 to 2021 (total)

Vehicle involvement and type of vehicle	No. of fatalities	% of fatalities
Vehicle involved	119	73%
Tractor	43	26%
Quad bike/All-terrain vehicles	21	13%
Truck	10	6%
Ute or car	10	6%
Forklift	6	4%
Aircraft	5	3%
Motorbike	5	3%
Other vehicles	19	12%
No vehicle involved	44	27%
5 year Total	163	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

1.5.3. Priority industry: Construction

Over the 5-year period from 2017 to 2021, there were 142 worker fatalities in the Construction industry in Australia. The majority of these (56%) occurred in the Construction services industry sub-division (Table 9). Younger workers aged under 25 accounted for 15% of fatalities in the Construction industry, compared with only 8% of fatalities across all industries during the 5-year period (Table 10).

Table 9: Worker fatalities: Construction industry sub-divisions and groups, 2017 to 2021 (total)

Industry sub-divisions and groups ⁸	No. of fatalities	% of fatalities
Construction Services	79	56%
Building installation services	21	15%
Other construction services	17	12%
Land development & site preparation services	16	11%
Building structure services	15	11%
Building completion services	10	7%
Building Construction	39	27%
Residential building construction	24	17%
Non-residential building construction	15	11%
Heavy & Civil Engineering Construction	24	17%
Construction 5 year total	142	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Table 10: Worker fatalities: Construction industry and all industries by age group, 2017 to 2021 (total)

Age group	Construction industry – No. of fatalities	Construction industry – % of fatalities	All industries – % of fatalities
Under 25	22	15%	8%
25–34	16	11%	15%
35–44	18	13%	18%
45–54	28	20%	18%
55–64	44	31%	25%
65 & over	14	10%	15%
5 year total	142	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

For occupations within the Construction industry, Labourers (both Construction & mining and Miscellaneous) accounted for 39% of fatalities (56 fatalities) from 2017 to 2021 (Table 11). Electricians (12 fatalities) and Truck drivers (11 fatalities) accounted for a further 16% of Construction industry fatalities.

⁸ See Glossary for explanation of 'industry' classifications

Table 11: Worker fatalities: Construction industry occupations, 2017 to 2021 (total)

Occupation minor groups	No. of fatalities	% of fatalities
Construction and Mining Labourers	29	20%
Miscellaneous Labourers	27	19%
Electricians	12	8%
Truck Drivers	11	8%
Bricklayers, and Carpenters and Joiners	10	7%
Mobile Plant Operators	7	5%
Electronics and Telecommunications Trades Workers	6	4%
Floor Finishers and Painting Trades Workers	6	4%
Glaziers, Plasterers and Tilers	6	4%
Stationary Plant Operators	6	4%
Other occupations	22	15%
Construction 5 year total	142	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Falls from a height was the main cause (mechanism⁹) of fatalities in both the Construction services and Building construction industry sub-divisions over the 5 years to 2021, resulting in 42 deaths across the Construction industry (Table 12).

Table 12: Worker fatalities: Construction industry sub-divisions by mechanism of incident, 2017 to 2021 (total)

Construction sub-division and mechanism ⁹	No. of fatalities	% of fatalities
Construction services	79	56%
Falls from a height	24	17%
Contact with electricity	13	9%
Vehicle collision ¹⁰	10	7%
Being hit by moving objects ¹¹	10	7%
Being hit by falling objects ¹²	10	7%
Being trapped between stationary and moving objects	4	3%
Slide or cave-in	2	1%
Being trapped by moving machinery	2	1%
Other mechanisms	4	3%
Building construction	39	25%
Falls from a height	18	13%
Being hit by falling objects ¹²	7	5%
Vehicle collision ¹⁰	3	2%
Being hit by moving objects ¹¹	3	2%
Contact with electricity	3	2%
Being trapped by moving machinery	3	2%
Other mechanisms	2	1%
Heavy & civil engineering construction	24	17%
Being hit by moving objects ¹¹	10	7%
Vehicle collision ¹⁰	5	4%
Being hit by falling objects ¹²	4	3%
Slide or cave-in	2	1%
Falls from a height	2	1%
Other mechanisms	1	1%
Construction 5 year total	142	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

⁹ See Glossary for explanation of 'Mechanism of incident'

¹⁰ See Glossary for explanation of 'Vehicle collision'

¹¹ See Glossary for explanation of 'Being hit by moving objects'

¹² See Glossary for explanation of 'Being hit by falling objects'

Fatalities from Being hit by moving objects¹³ (23 fatalities) and being hit by falling objects¹⁴ (21 fatalities) were also common mechanisms of worker fatalities across the Construction industry (Table 13).

Table 13: Worker fatalities: Construction industry by mechanism of incident, 2017 to 2021 (total)

Construction industry and mechanism	No. of fatalities	% of fatalities
Falls from a height	44	31%
Being hit by moving objects ¹³	23	16%
Being hit by falling objects ¹⁴	21	15%
Vehicle collision ¹⁵	18	13%
Contact with electricity	16	11%
Being trapped between stationary and moving objects	6	4%
Being trapped by moving machinery	5	4%
Other mechanisms	9	6%
Construction 5 year total	142	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Table 14 shows that more than a quarter (27%) of fatalities in the Construction industry due to falls from a height involved falls from a building or other type of structure (e.g. the roof). This was followed by falls from a ladder (18%).

Table 14: Worker fatalities: Construction industry, falls from a height fatalities by breakdown agency, 2017 to 2021 (total)

Falls from a height: Breakdown agency	No. of fatalities	% of fatalities
Buildings and other structures	12	27%
Ladders	8	18%
Openings in floors, walls or ceilings	7	16%
Scaffolding	3	7%
Other agencies	14	32%
Construction 5 year total - falls from a height	44	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

¹³ See Glossary for explanation of 'Being hit by moving objects'

¹² See Glossary for explanation of 'Being hit by falling objects'

¹⁵ See Glossary for explanation of 'Vehicle collision'

1.6. Gig Workers

The safety of workers performing gig work has been an area of increasing concern. In 2019, Safe Work Australia expanded its data collection to identify injury fatalities of gig workers.

There are limitations to this data. Information about whether a worker had been performing work obtained via a digital platform at the time of an injury fatality is often not available. A worker may operate their own business as an independent contractor obtaining work both through traditional arrangements as well as via one or more digital platforms. Given the sources from which work-related injury fatality data are collated (e.g. policy reports, coronial data), this level of detail is often not readily available.

The majority of the gig worker fatalities identified in the Traumatic Injuries Fatalities dataset to date relate to food delivery.

Over the past 3 years, Safe Work Australia has identified 9 gig workers that have died working for food delivery platforms and one that died working for a ride-share platform (Table 15). Most workers were using a two wheeled vehicle and all fatalities involved a collision with another vehicle (e.g. truck, car, bus).

Table 15: Worker fatalities: gig workers and vehicle type, 2019 to 2021 (total)

Worker vehicle type	No. of fatalities	% of fatalities
Scooter	4	40%
Pushbike	3	30%
Motorbike	2	20%
Car	1	10%
Total	10	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

These gig workers primarily worked in Transport, postal and warehousing, were male and between the ages of 25 and 44.

1.7. Occupation

In 2021, 68 Machinery operators and drivers were killed, accounting for the largest proportion (40%) of all worker fatalities by occupation (Table 16). This is higher than in 2020 (when 35% of workers killed were Machinery operators and drivers) and above the 5 year average (36%). The majority (76%) of the 68 Machinery operators and drivers killed were Road and rail drivers.

Labourers accounted for a further 20% of fatalities in 2020 (34 fatalities), followed by Managers (14%; 24 fatalities).

Table 16: Worker fatalities: number of fatalities by major and select sub-major occupation groups, 2020, 2021 and 5 year average (2017 to 2021)

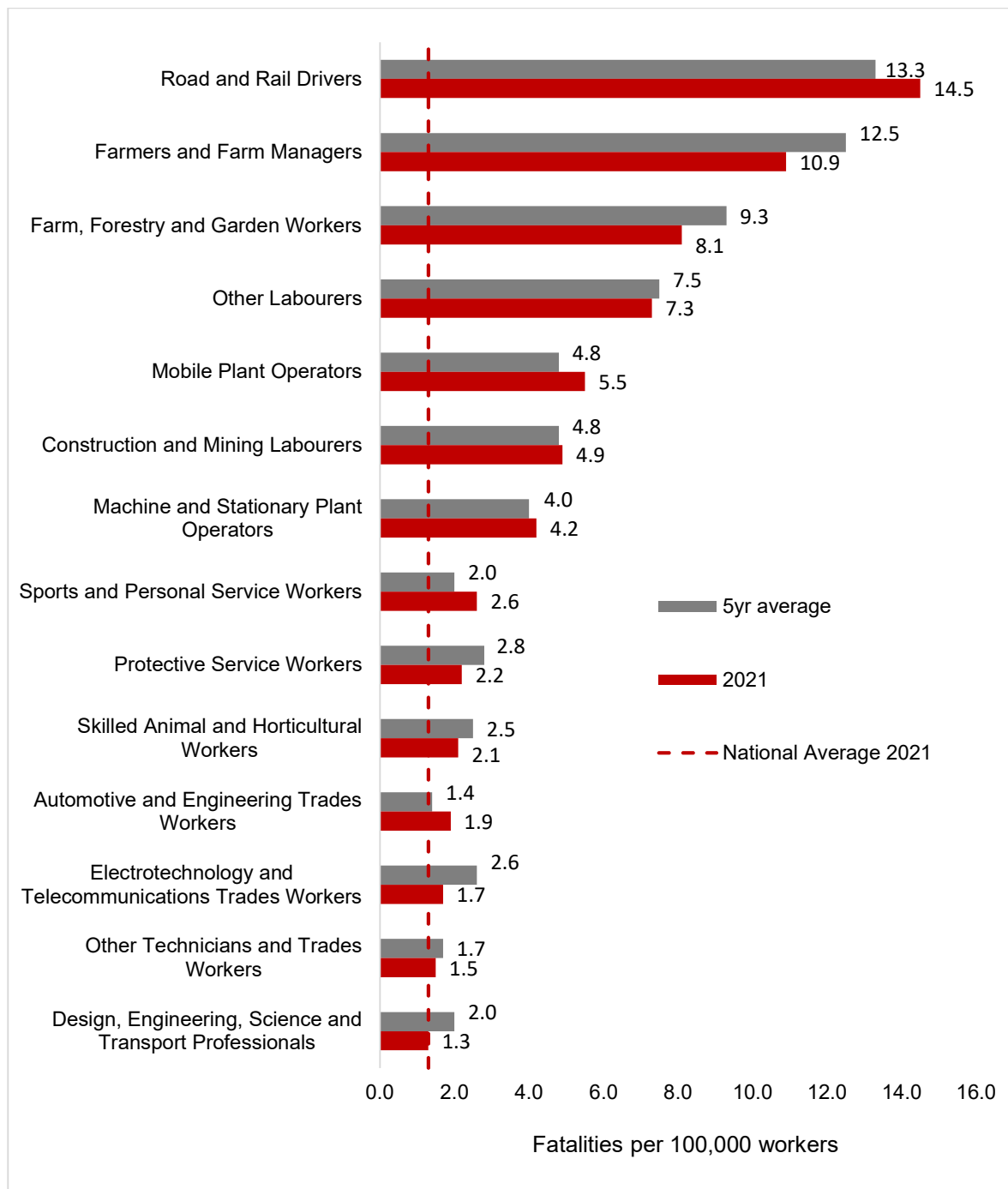
Occupation	Number of fatalities		
	2020	2021	5yr average
Machinery Operators and Drivers	67	68	63
Road and Rail Drivers	51	52	49
Mobile Plant Operators	8	8	7
Machine and Stationary Plant Operators	8	7	7
Labourers	42	34	40
Other Labourers	20	17	17
Farm, Forestry and Garden Workers	10	9	11
Construction and Mining Labourers	7	8	9
Managers	34	24	25
Farmers and Farm Managers	29	19	22
Technicians and Trades Workers	26	22	24
Automotive and Engineering Trades Workers	3	7	5
Electrotechnology and Telecommunications Trades Workers	5	4	6
Skilled Animal and Horticultural Workers	6	3	3
Other Technicians and Trades Workers	4	3	3
Community and Personal Service Workers	11	12	12
Protective Service Workers	10	5	6
Sports and Personal Service Workers	0	5	4
Professionals	10	6	10
Design, Engineering, Science and Transport Professionals	10	6	9
Sales Workers	2	2	1
Clerical and Administrative Workers	1	1	1
Total	193	169	177

Note: Not all sub-groups have been included for each sub-major occupation group. Only sub-major occupations with a 2021 fatality rate higher than the national 2021 fatality rate of 1.3 fatalities per 100,000 workers have been included. The averages shown in this table have been rounded to the nearest whole number; therefore the sum of the figures for the 5yr average column may not equal the total average.

Similar to industry, fatality rates are best used when comparing data across occupations to take account for the relative number of workers within each occupational category.

Figure 8 presents 2021 and 5 year average (2017 to 2021) fatality rates for the 'sub-major' classification tier of occupations. Only sub-major occupations with a 2021 fatality rate higher than the national 2021 average fatality rate of 1.3 fatalities per 100,000 workers are shown. Road and Rail Drivers had the highest rate in 2021 with 14.5 fatalities per 100,000 workers, followed by Farmers and Farm Managers (10.9 fatalities per 100,000 workers). The rate for Farmers and Farm Managers was 13% lower than the 5 year average, however the rate for Road and Rail Drivers was 9% higher.

Figure 8: Worker fatalities: worker fatality rate (per 100,000 workers) by selected occupations, 2021 and 5 year average (2017 to 2021)



Note: Not all sub-groups have been included for each sub-major occupation group. Only sub-major occupations with a 2021 fatality rate higher than the national 2021 fatality rate of 1.3 fatalities per 100,000 workers have been included.

1.8. Mechanism of incident

The mechanism of incident¹⁶ refers to the overall action, exposure or event that describes the circumstances that resulted in a worker fatality. Three mechanisms accounted for 63% of worker fatalities in 2021; Vehicle collisions¹⁷, Being hit by moving objects¹⁸ and Falls from a height (Table 17).

In 2021, 38% of worker fatalities were due to a Vehicle collision, which is equal to the 5 year average of 38%. Vehicle collisions includes incidents where an occupant of a vehicle is killed following a collision with another vehicle or a stationary object. Vehicles include not only road vehicles such as cars and trucks, but also machines such as aircraft, boats, loaders, tractors and quad bikes.

Being hit by moving objects and Falls from a height accounted for the next highest proportion of worker fatalities in 2021 (14% and 11% respectively). Being hit by moving objects includes fatalities involving pedestrians hit by vehicles, as well as being hit by other moving equipment or objects.

Table 17: Worker fatalities: number and proportion by mechanism of incident, 2020, 2021 and 5 year average (2017 to 2021) (sorted by 5 year average)

Mechanism of incident ¹⁶	Number of fatalities			% of fatalities		
	2020	2021	5 yr average	2020	2021	5 yr average
Vehicle collision ¹⁷	79	64	67	41%	38%	38%
Being hit by moving objects ¹⁸	25	24	24	13%	14%	14%
Falls from a height	23	19	22	12%	11%	12%
Being hit by falling objects	17	16	17	9%	9%	10%
Being trapped between stationary and moving objects	11	7	9	6%	4%	5%
Being trapped by moving machinery	12	11	9	6%	7%	5%
Contact with electricity	7	7	6	4%	4%	3%
Rollover of non-road vehicle	6	5	5	3%	3%	3%
Drowning	2	4	4	1%	2%	2%
Slide or cave-in	1	2	2	1%	1%	1%
Being hit by an animal	3	2	2	2%	1%	1%
Other mechanism	7	8	11	0%	0%	6%
Total	193	169	177	100%	100%	100%

Note: The percentages and averages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

¹⁶ See Glossary for explanation of 'Mechanism of incident'

¹⁷ See Glossary for explanation of 'Vehicle collision'

¹⁸ See Glossary for explanation of 'Being hit by moving objects'

1.9. Breakdown agency

The breakdown agency identifies the object, substance or circumstance principally involved at the point at which things started to go wrong and ultimately led to a worker fatality¹⁹.

The breakdown agency category of Mobile plant and transport, which includes objects such as cars, tractors and excavators, accounted for well over half (63%) of fatalities in 2021 (Table 18). Environmental agencies, which includes objects such as buildings (e.g. roof and other fixed structures of the building) and vegetation, was the second most common breakdown agency in 2021, accounting for 12% of worker fatalities.

Table 18: Worker fatalities: number and proportion by breakdown agency, 2020, 2021 and 5 year average (2017 to 2021) (sorted by 5 year average)

Breakdown agency	Number of fatalities			% of fatalities		
	2020	2021	5 yr average	2020	2021	5 yr average
Mobile plant & transport	111	106	101	58%	63%	57%
Environmental agencies	28	20	23	15%	12%	13%
Machinery & (mainly) fixed plant	23	24	21	12%	14%	12%
Non-powered handtools, appliances & equipment	10	6	12	5%	4%	7%
Animal, human & biological agencies	11	5	8	6%	3%	5%
Materials & substances	7	4	7	4%	2%	4%
Powered equipment, tools & appliances	2	4	3	1%	2%	2%
Chemicals & chemical products	1	0	2	1%	0%	1%
Other & unspecified agencies	0	0	<1	0%	0%	<1%
Total	193	169	177	100%	100%	100%

Note: The percentages and averages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

¹⁹ See Glossary for explanation of 'Breakdown agency'

1.10. Vehicle involvement and collisions

Safe Work Australia's Traumatic Injury Fatalities database collects two sources of information relating to vehicles:

- Whether a vehicle was principally involved in the incident leading to a worker fatality, referred to as 'vehicle involvement'
- 'Vehicle collision', where a vehicle crash occurred and an occupant of the vehicle was killed²⁰

Over the 5-year period from 2017 to 2021, 68% of worker fatalities (603 fatalities) involved vehicles (Table 19). Of these, just under half (272 fatalities) occurred on a public road²¹. The majority (85%) of worker fatalities involving vehicles on public roads were the result of a Vehicle collision (232 fatalities).

Table 19: Worker fatalities: number of fatalities with vehicle involvement by public road status, and proportion of fatalities involving a vehicle of all fatalities, by mechanism of incident, 2017 to 2021 (total)

Mechanism of incident	On a public road	Not on a public road	Total fatalities involving a vehicle	% of all fatalities
Vehicle collision ²⁰	232	103	335	38%
Being hit by moving objects	29	64	93	10%
Being hit by falling objects	2	40	42	5%
Being trapped between stationary and moving objects	3	32	35	4%
Rollover of non-road vehicle	1	24	25	3%
Falls from a height	1	22	23	3%
Other mechanisms	4	46	50	6%
5 year total	272	331	603	68%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Being hit by moving objects includes fatalities involving pedestrians hit by vehicles, as well as being hit by other moving equipment or objects.

Being hit by falling objects includes fatalities where the worker was unloading/loading the vehicle and was hit by falling stock or was hit by the vehicle while conducting maintenance underneath it.

²⁰ See Glossary for explanation of 'Vehicle collision'

²¹ See Glossary for explanation of 'Public road'

The number of worker fatalities resulting from a vehicle collision in 2021 (64 fatalities) was lower than the 5 year average (67 fatalities).

In 2021, two thirds (66%; 42 fatalities) of the 64 workers who died in a vehicle collision died in a vehicle collision involved a single vehicle (Table 20). Of those single vehicle collisions, 70% (30 fatalities) involved a heavy vehicle. There were 22 worker fatalities in 2021 due to multi-vehicle collisions.

Table 20: Worker fatalities due to vehicle collision: number by type of collision and type of vehicle, 2017 to 2021 (sorted by 5 year average)

Type of collision	2017	2018	2019	2020	2021	% of 2021	% of 5yr average
Single vehicle collision*	45	27	53	55	42	66%	66%
Heavy vehicle	20	15	29	25	30	47%	36%
Aircraft	13	5	8	13	5	8%	13%
Light vehicle	3	3	11	4	3	5%	7%
Quad bike/All-terrain vehicle	5	1	2	0	0	0%	2%
Motorbike/scooter	3	1	1	1	0	0%	2%
Other single vehicle	1	2	2	12	4	6%	6%
Multi vehicle collision*	20	16	31	24	22	34%	34%
Two heavy vehicles	6	10	14	5	11	17%	14%
Two light vehicles	4	0	3	1	3	5%	3%
Occupant in a light vehicle killed in collision with a heavy vehicle	5	1	2	2	2	3%	4%
Occupant in a heavy vehicle killed in collision with a light vehicle	1	4	3	2	1	2%	3%
Other multi-vehicle collision	4	1	9	14	5	8%	10%
Total – vehicle collision	65	43	84	79	64	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

1.11. Being hit by moving objects

In 2021, 24 workers were killed as a result of Being hit by moving objects²² (Table 21). These fatalities involve workers who were not occupants in a vehicle – vehicle occupant fatalities are analysed separately in *Section 1.10. Vehicle involvement and collisions*.

The majority of fatalities resulting from Being hit by moving objects in 2021 (75%) were caused by Mobile plant and transport (Table 21). Within the Mobile plant and transport category, most fatalities were caused by Trucks, semi-trailers and lorries (accounting for 29% of 2021 worker fatalities). This was followed by Tractors, agricultural or otherwise (21%), and Cars, station wagons, vans, utilities (17%). The proportion of fatalities caused by these Mobile plant and transport categories were higher in 2021 than the 5 year average.

Table 21: Worker fatalities due to being hit by moving objects: number by breakdown agency, 2017 to 2021 (sorted by 5 year average)

Breakdown agency ²³	2017	2018	2019	2020	2021	% of 2021	% of 5 yr average
Mobile plant & transport	18	17	9	19	18	75%	67%
Trucks, semi-trailers, lorries	7	4	3	10	7	29%	26%
Tractors, agricultural or otherwise	4	5	3	2	5	21%	16%
Cars, station wagons, vans, utilities	4	2	2	4	4	17%	13%
Self-propelled plant	1	3	1	2	1	4%	7%
Other mobile plant & transport	2	3	0	1	1	4%	6%
Machinery & (mainly) fixed plant	4	2	2	2	5	21%	12%
Powered equipment, tools & appliances	3	1	2	0	1	4%	6%
Materials & substances	3	2	0	0	0	0%	4%
Environmental agencies	1	0	1	3	0	0%	4%
Non-powered handtools, appliances & equipment	3	1	0	1	0	0%	4%
Animal, human & biological agencies	2	0	0	0	0	0%	2%
Chemicals & chemical products	0	1	0	0	0	0%	1%
Other & unspecified agencies	0	0	0	0	0	0%	0%
Total – Being hit by moving objects	34	24	14	25	24	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Not all sub-groups have been included for each breakdown agency.

²² See Glossary for explanation of 'Being hit by moving objects'

²³ See Glossary for explanation of 'Breakdown agency'

1.12. Falls from a height

In 2021, 19 workers died as a result of a Fall from a height; a slight decrease from 23 fatalities in 2020 and lower than the 5 year average of 22 fatalities (Table 22). Over the last 5 years, Falls from a height most commonly involved falls from a Roof (13%), Ladders (13%) and Openings in floors, walls or ceilings (8%).

Table 22: Worker fatalities due to falls from a height: number by breakdown agency and selected sub-groups, 2017 to 2021 (sorted by 5 year average)

Breakdown agency ²⁴	2017	2018	2019	2020	2021	% of 2021	% of 5yr average
Environmental agencies	11	7	5	11	7	37%	38%
Roof	3	4	1	5	1	5%	13%
Openings in floors, walls or ceilings	3	0	1	2	3	16%	8%
Non-powered handtools, appliances & equipment	6	4	10	6	4	21%	28%
Ladders	4	1	5	3	1	5%	13%
Scaffolding	0	0	2	1	1	5%	4%
Mobile plant & transport	6	1	1	5	4	21%	16%
Trucks, semi-trailers, lorries	2	1	0	1	0	0%	4%
Tractors, agricultural or otherwise	3	0	0	0	0	0%	3%
Excavators, backhoes, other digging plant	0	0	1	1	0	0%	2%
Machinery & (mainly) fixed plant	2	2	2	1	2	11%	8%
Elevating work platforms	0	1	1	1	0	0%	3%
Animal, human & biological agencies	3	1	2	0	2	11%	7%
Horses, donkeys, mules	3	1	2	0	2	11%	7%
Other & unspecified agencies	0	2	0	0	0	0%	2%
Materials & substances	1	0	1	0	0	0%	2%
Total - Falls from a height	29	17	21	23	19	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Not all sub-groups have been included for each breakdown agency.

²⁴ See Glossary for explanation of 'Breakdown agency'

1.13. Location

Based on the location where the fatality occurred, only one of the state and territory out of the eight (South Australia) recorded higher fatality rates in 2021 compared to the 5 year average (Table 23).

Please note, jurisdictional responsibility for a fatality may be different to the state or territory where the fatality occurred (see Table 25 for a breakdown by jurisdiction).

Table 23: Worker fatalities: number and rate (per 100,000 workers) by location of death, 2020, 2021 and 5 year average (2017 to 2021)

State/Territory	Number of fatalities			Fatality rates		
	2020	2021	5yr average	2020	2021	5yr average
New South Wales	53	46	55	1.3	1.1	1.4
Queensland	33	43	40	1.3	1.6	1.6
Victoria	51	34	38	1.5	1.0	1.1
Western Australia	29	20	20	2.1	1.4	1.5
South Australia	11	16	13	1.3	1.8	1.5
Northern Territory	6	4	5	4.6	3.1	4.1
Tasmania	8	5	5	3.2	1.9	2.0
Australian Capital Territory	2	1	1	0.8	0.4	0.4
Total	193	169	177	1.5	1.3	1.4

Based on the location of where the fatality occurred, over the 5 years to 2021, the Transport, postal and warehousing industry accounted for the highest number of worker fatalities in New South Wales, Western Australia, Victoria and South Australia (Table 24). Whereas the Agriculture, forestry and fishing industry accounted for the highest number of worker fatalities in Queensland, Northern Territory and Tasmania.

Table 24: Worker fatalities: number by location of death and industries with the highest number of fatalities, 2017 to 2021 (total)

Industry of employer	NSW	Qld	Vic	WA	SA	NT	Tas	National total
Transport, postal & warehousing	83	56	45	26	29	6	7	252
Agriculture, forestry & fishing	53	59	38	19	13	7	10	199
Construction	43	22	36	22	7	5	4	142
Manufacturing	17	14	19	7	7	1	1	66
Public administration & safety	15	5	11	2	0	4	0	37
Mining	5	10	0	9	3	2	1	30
Administrative & support services	6	8	4	3	1	0	1	23
Wholesale trade	8	3	10	1	0	0		22
Arts & recreation services	3	4	5	5	0	2	1	21
Other industries	40	19	22	8	5	0	0	95
5 year total	273	200	190	102	65	27	25	887

Note: The Australian Capital Territory was not included separately due to the low number of fatalities, however, the total includes the Australian Capital Territory.

As noted above, worker fatalities may not necessarily fall within the jurisdictional responsibility of the state or territory where the fatality occurred. In addition, while the model WHS safety laws apply many jurisdictions separately count fatalities at a physical workplace from those that occur on public roads. As a result, Table 25 breaks down the 2021 worker fatalities by jurisdiction and public road status²⁵.

The jurisdiction with the highest number of worker fatalities in 2021 was Queensland, with 40 worker fatalities (Table 25). Of these, 27 did not occur on a public road. This was followed by New South Wales (36 fatalities of which 18 did not occur on a public road) and Victoria (33 fatalities of which 25 did not occur on a public road). Aircraft incidents resulted in eight worker fatalities in 2021.

Table 25: Worker fatalities: number by jurisdiction and public road status, 2021

Jurisdiction	Not on a public road	On a public road	Total
Queensland	27	13	40
New South Wales	18	18	36
Victoria	25	8	33
Western Australia	15	4	19
South Australia	10	6	16
Comcare	1	8	9
Aircraft incidents	8	0	8
Tasmania	2	2	4
Northern Territory	2	1	3
Australian Capital Territory	0	1	1
Total	108	61	169

Note: Jurisdictions may include a number of different regulatory authorities.

Worker fatalities involving aircraft incidents are not tabulated against jurisdictions.

The Commonwealth jurisdiction refers to that which falls within the Commonwealth *Work Health and Safety Act 2011* administered by Comcare. Commonwealth jurisdiction fatalities have been reported in previous reports by location of death only.

²⁵ See Glossary for explanation of 'Public road'

Section 2:

Bystander fatalities

2.1 Bystander fatalities by mechanism of incident

The actions of a worker contributed to the deaths of 57 members of the public (referred to as bystanders) in 2021. Almost half of these (49%) were due to a vehicle collision²⁶ (Table 26). This was lower than the 5 year average of 62%. Being hit by moving objects²⁷ accounted for a further 14% of bystander fatalities in 2021. In many of these cases, the moving object was a vehicle.

Table 26: Bystander fatalities: number by mechanism of incident, 2017 to 2021 (sorted by 5 year average)

Mechanism of incident ²⁸	2017	2018	2019	2020	2021	% of 2021	% of 5yr average
Vehicle collision ²⁶	45	49	18	22	28	49%	62%
Being hit by moving objects ²⁷	13	10	7	7	8	14%	17%
Falls from a height	4	0	4	0	12	21%	8%
Drowning	0	1	3	3	4	7%	4%
Falls on the same level	1	1	3	0	2	4%	3%
Other mechanisms	5	4	4	2	3	5%	7%
Total	68	65	39	34	57	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

There are a number of complexities in identifying bystander fatalities. Sufficiently detailed information on the circumstances of all parties to the death is often unavailable, bystanders cannot seek compensation through workers' compensation and notifications depend on the work health and safety legislation of the jurisdiction, meaning occurrences may not be detected to the same degree as worker fatalities. Estimates of bystander fatalities in this report should therefore be regarded as an undercount and changes in the data over time interpreted with caution.

2.2 Bystander fatalities by age group

Over the last 5 years, there have been 41 work-related bystander fatalities involving children 14 years of age and under (16% of bystander fatalities) and 63 fatalities involving people aged 65 years or older (24% of bystander fatalities).

Vehicle collisions²⁶ accounted for the highest number of work-related bystander fatalities (162 fatalities) across all age groups (Table 27). This was followed by Being hit by moving objects²⁷ (45 fatalities). When counted together, these two mechanisms accounted for over half of fatalities in each age group and increases with age (i.e. 57% of fatalities aged 14 and under, 79% of fatalities aged 15 to 24, 88% of fatalities aged 25 to 44, 90% aged 45 to 64 and 73% of those aged 65 and over).

Table 27: Bystander fatalities: number by age group, 2017 to 2021 (total)

Mechanism of incident ²⁸	14 & under	15–24	25–44	45–64	65 & over
Vehicle collision ²⁶	16	22	44	50	30
Being hit by moving objects ²⁷	7	4	8	10	16
Falls from a height	8	0	3	2	7
Drowning	4	4	2	0	1
Falls on the same level	1	0	0	2	4
Other mechanisms	5	3	2	3	5
5 year total	41	33	59	67	63

²⁶ See Glossary for explanation of 'Vehicle collision'

²⁷ See Glossary for explanation of 'Being hit by moving objects'

²⁸ See Glossary for explanation of 'Mechanism of incident'

Section 3:

Data sources & Glossary

3.1 Data sources

The Traumatic Injury Fatalities database uses information from three datasets:

- National Data Set for Compensation-based Statistics (NDS), constructed using accepted workers' compensation claims
- Notifiable Fatalities Collection (NFC), constructed using work-related fatalities that are notified to Australian work health and safety authorities
- National Coronial Information System (NCIS), constructed using deaths reported to Australian coroners

These datasets are also supplemented by monitoring of work-related fatalities in Australian media by Safe Work Australia. Labour Force Survey data, conducted by the Australian Bureau of Statistics (ABS category number 6202.0), is used to calculate fatality rates. For more information on Safe Work Australia datasets, refer to <https://www.safeworkaustralia.gov.au/resources-and-publications/statistical-reports/explanatory-notes-traumatic-injury-fatalities-database>.

3.2 Glossary

Being hit by falling objects

Part the TOOCS Mechanism classification used to describe the action of an object hitting a person. Being hit by falling objects includes fatalities where the worker was unloading/loading the vehicle and was hit by falling stock or was hit by the vehicle while conducting maintenance underneath it.

Being hit by moving objects

Part of the TOOCS Mechanism classification used to describe the action of an object hitting a person. This includes pedestrians hit by vehicles as well as being hit by other moving equipment or objects.

Breakdown agency

A part of the TOOCS classification which identified the object, substance or circumstance principally involved at the point at which things started to go wrong and ultimately led to a worker fatality.

Bystander fatality

The death of a person who dies from injuries sustained as a result of another person's work activity and who was not engaged in a work activity of their own at the time of the injury. A traffic incident death is only classified as a bystander fatality when attributable to someone else's work activity. Typically, this means the driver of a work vehicle is at fault. Cases where fault could not be determined with sufficient confidence are excluded.

Employed person

The denominators used in calculating fatality rates in this report are based on ABS estimates of Employed persons, as defined in Labour force, Australia (ABS cat no 6202.0). This population includes employees (who work for an employer); self-employed persons (regardless of whether they employ others or not); and those who work without pay for a family business or farm. It excludes persons whose only work is voluntary.

Employer

The term 'employer' in this publication includes a broad range of establishments that engage workers (including unpaid volunteers, family workers, self-employed persons, contractors, persons undertaking work experience and defence force personnel killed).

Fatality rate

The number killed as a result of work-related injury expressed as a per-capita rate against the relevant population at risk of work-related injury. In this report the rate is expressed as the number of fatalities per 100,000 Employed persons: for brevity this is usually expressed as 'fatalities per 100,000 workers'. The number of workers is derived from the average of all persons employed over the four quarters of the year for each sex, age group, industry, occupation, or state or territory. Labour Force Survey data, conducted by the Australian Bureau of Statistics (ABS category number 6202.0), is used to provide the number of workers to calculate fatality rates. See the [Explanatory notes](#) for further details.

Gender vs sex

Sex refers to the biological differences between men and women, while gender refers to the social identification of sex. Safe Work Australia's fatality data is based on multiple data sources, some of which are reported by gender and some which are reported by sex. There are no work-related fatalities in the Traumatic Injury Fatalities dataset which have been identified as non-binary.

Industry / Industry of employer

A grouping of businesses that carry out similar economic activities. Fatalities data in this publication have been coded to the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006 (ABS cat. no. 1292.0) by **industry of employer**. This describes the economic activities of the establishment where the deceased worked, not necessarily the activities undertaken at the workplace where the fatality occurred. The term 'employer' in this publication includes a broad range of establishments that engage workers (including unpaid volunteers, family workers, self-employed persons, contractors, persons undertaking work experience and defence force personnel killed).

ANZSIC utilises four levels of industry classification—division, subdivision, group and class—and unless specified in this report, industries are presented at the division level. More information about these classifications are available on the [Australian Bureau of Statistics website](#).

Injury

A condition coded to 'External causes of morbidity and mortality' and 'Injury, poisoning and certain other consequences of external causes' in the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM).

Mechanism of incident

The action, exposure or event that best describes the circumstances that resulted in the most serious injury, coded to the TOOCS classification.

Non-public road incident

An incident involving a vehicle or self-propelled plant that occurred at a worksite, on a private road or a public area that is not a public road. These incidents include plane crashes and incidents involving watercraft as well as vehicle crashes on farming properties.

Occupation

A set of jobs with similar sets of tasks. Fatalities data in this publication have been coded to the Australian and New Zealand Standard Classification of Occupations (ANZSCO) (ABS cat. no. 1220.0) First edition. ANZSCO utilises four levels of occupational classification—major, sub-major, minor and unit groups—and unless specified in this report, occupations are presented at the major group level. More information about these classifications are available on the [Australian Bureau of Statistics website](#).

Public road incident

An incident on a public road involving any vehicle or self-propelled plant. Incidents involving vehicles at worksites, farming properties or on private roads are excluded.

Rollover of non-road vehicle

Part of the Mechanism classification used to identify when a vehicle that is not normally a road vehicle overturns. This includes tractors being used on farm properties and other self-propelled plant.

Traumatic injury

A condition coded to 'External causes of morbidity and mortality' and 'Injury, poisoning and certain other consequences of external causes' in the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM). This includes injuries arising from poisonous plants and animals, environmental conditions (e.g. frostbite), allergic reactions, and embolisms. However, it excludes deaths attributed to disease and other natural causes.

Type of occurrence classification system (TOOCS)

A suite of four classifications to code the way an injury occurred, comprising the Nature of injury/disease classification, the Bodily location of injury/disease classification, Mechanism of incident classification, and the Agency of injury/disease classification. Version 3.1 is used for coding the data presented in this report. Fatalities are only coded by Mechanism and Agency.

Vehicle collision

Part of the TOOCS Mechanism of incident classification that identifies fatalities that occurred as a direct result of a vehicle collision. In the TOOCS classification, this category is called Vehicle Incident but has been renamed in this report to vehicle collision to assist with reader understanding. Vehicle collisions include all fatalities involving a moving vehicle (rail, road, water, or air) crashing, colliding, or running out of control; with the exception of people who are struck by (or struck against) a vehicle when not travelling in one, which are included as 'Being hit by moving objects'. Vehicle collisions that occur on public roads are further classified as a public road incidents. Rollovers of road vehicles and quad bikes are also included in this category.

Worker fatality

The death of a person who dies from injuries sustained while at work, including those workers whose injury was caused by another's work activity. Workers include employees, self-employed persons, volunteers and contributing family workers.