



Government of **Western Australia**  
Department of **Mines, Industry Regulation and Safety**  
**WorkSafe**

# Construction Industry Profile (ANZSIC 2006)

Work-related lost time injuries and diseases in Western  
Australia

2012–13 to 2016–17p

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A number of issues affect the data quality of statistical information based on claims data, as provided by the Department of Mines, Industry Regulation and Safety (DMIRS). It is important to be aware of these issues when interpreting claims statistics, to ensure that the conclusions drawn from the information take into account known inconsistencies and omissions.

More information about the data can be found in the Explanatory notes section at the end of this report.

## 2018 Data Note

Due to re-benchmarking of Labour Force estimates based on revisions to the Estimated Resident Population following the 2016 census; denominator data (total number of employees covered by workers' compensation and total number of hours worked) provided by the Australian Bureau of Statistics (ABS) in 2018 include data revisions for 2014–15 and 2015–16.

Workers' compensation claims data has been revised back to 2000–01.

The revisions have affected rate calculations and caution is advised for all reported rates. As such, incidence and frequency rates may differ from previous publications in respect to these years and should not be used. Revised data is denoted by 'r'.

## Disclaimer

There is no objection to information provided being copied in whole or part, provided there is due acknowledgement of any material quoted from the report. It should be made clear that DMIRS does not endorse any products or services for financial and/or promotional gain or otherwise.

## Overview

**Table 1: Industry division breakdown: Claims, LTI/Ds and fatalities**

Year	Total injury/disease claims (a)	LTI/Ds 1+ days/shifts lost	LTI/Ds 5+ days/shifts lost (b)	LTI/Ds 60+ days/shifts lost	Work-related traumatic injury fatalities (c)
2012-13r	5,268	2,836	2,206	837	3
2013-14r	5,224	2,730	2,165	820	2
2014-15r	4,988	2,709	2,176	837	3
2015-16r	4,760	2,723	2,258	900	4
2016-17p	3,672	2,111	1,794	835	5
<b>Average</b>	<b>4,782</b>	<b>2,622</b>	<b>2,120</b>	<b>846</b>	<b>3</b>

a) Includes all time lost and no time lost claims. Excludes journey, asbestos related and deleted/disallowed claims

b) Consistent with national injury and disease statistics.

c) Fatalities also include self-employed workers, students, unpaid volunteers and bystanders.

In 2012–13, one LTI/D was recorded per 36 employees in the Construction division; this has improved to one LTI/D per 47 employees during 2016–17p. The total estimated cost per LTI/D during 2012–13 was \$47,772 increasing to \$63,494 in 2015–16. Preliminary data for 2016–17p indicate estimated costs per LTI/D are currently below the 2015–16 figure.

The total number of employees and total hours worked (those who are covered by workers' compensation) has reduced by three and 10 per cent respectively during 2016–17 compared to 2012–13. There were 99,091 employees recorded in 2016–17. Data for this industry division is known to be under represented due to the amount of self-employed workers, for example, who are not covered by worker's compensation and whose injuries/diseases are therefore unaccounted for.

**Table 2: Industry division breakdown: Estimated days lost and cost**

Year	Total injury/disease claims (a)		LTI/Ds			
	Total estimated cost	Total est. cost per claim	Total estimated days lost	Average duration	Total estimated cost	Total est. cost per LTI/D
2012-13r	\$144,322,263	\$27,396	230,341	81.2	\$135,482,310	\$47,772
2013-14r	\$144,832,179	\$27,724	223,865	82.0	\$135,024,731	\$49,460
2014-15r	\$179,178,309	\$35,922	227,235	83.9	\$166,305,021	\$61,390
2015-16r	\$183,005,415	\$38,447	256,180	94.1	\$172,895,150	\$63,494
2016-17p	\$136,794,045	\$37,253	231,557	109.7	\$129,344,689	\$61,272
<b>Average</b>	<b>\$157,626,442</b>	<b>\$32,960</b>	<b>233,836</b>	<b>89.2</b>	<b>\$147,810,380</b>	<b>\$56,377</b>

a) Includes all time lost and no time lost claims. Excludes journey, asbestos related and deleted/disallowed claims

Preliminary data for 2016–17p indicate the Construction industry recorded the fifth highest frequency rate and the third highest incidence rate of all industry divisions in Western Australia. During 2016–17p, frequency and incidence rates of LTI/Ds, overall, decreased by 17 and 23.2 per cent (respectively) compared to 2012–13. Rates for severe LTI/Ds (where 60 or more days/shifts are lost from work respectively) however, have increased by 11.3 per cent in frequency and by 2.9 per cent in incidence.

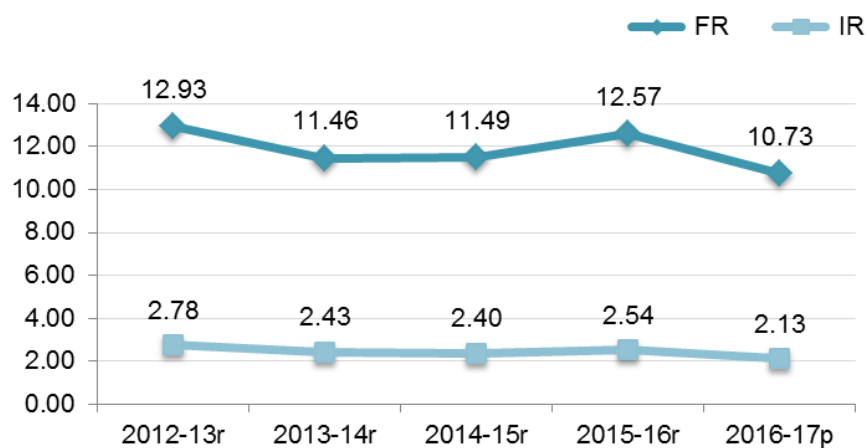
Construction is one of seven industries identified as a national priority for prevention activities for the duration of the Australian Work Health and Safety Strategy 2012-2022.

**Table 3: Industry division breakdown: Frequency and incidence rates**

Year	Total injury/disease claims (a)		LTI/Ds 1+ days/shifts lost		LTI/Ds 5+ days/shifts lost		LTI/Ds 60+ days/shifts lost	
	FR	IR	FR	IR	FR	IR	FR	IR
2012-13r	24.01	5.16	12.93	2.78	10.06	2.16	3.82	0.82
2013-14r	21.92	4.65	11.46	2.43	9.09	1.93	3.44	0.73
2014-15r	21.16	4.42	11.49	2.40	9.23	1.93	3.55	0.74
2015-16r	21.97	4.45	12.57	2.54	10.42	2.11	4.15	0.84
2016-17p	18.67	3.71	10.73	2.13	9.12	1.81	4.25	0.84
<b>Average</b>	<b>21.61</b>	<b>4.48</b>	<b>11.85</b>	<b>2.46</b>	<b>9.58</b>	<b>1.99</b>	<b>3.82</b>	<b>0.79</b>

a) Includes all time lost and no time lost claims. Excludes journey, asbestos related and deleted/disallowed claims

**Chart 1: Incidence and frequency rates (LTI/Ds of one or more days/shifts lost)**



**Table 4: Subdivisions within industry division**

Subdivision	Year	Total injury/disease claims (a)			LTI/Ds 1+ days/shifts lost						
		Claims	Frequency rate	Incidence rate	LTI/Ds	Frequency rate	Incidence rate	Total est. days lost	Average duration	Total estimated cost LTI/Ds	LTI/Ds 60+ days/shifts lost
Building Construction	2012-13r	569	8.92	1.91	340	5.33	1.14	26,931	79.2	\$15,963,54	92
	2013-14r	620	9.31	2.02	360	5.40	1.17	28,870	80.2	\$18,483,39	111
	2014-15r	620	9.10	1.90	326	4.78	1.00	25,021	76.8	\$15,228,79	99
	2015-16r	640	11.36	2.17	343	6.09	1.16	34,167	99.6	\$21,384,20	118
	2016-17p	515	9.58	1.85	287	5.34	1.03	28,030	97.7	\$16,773,40	105
	<b>Average</b>	<b>593</b>	<b>9.60</b>	<b>1.97</b>	<b>331</b>	<b>5.37</b>	<b>1.10</b>	<b>28,604</b>	<b>86.4</b>	<b>\$17,566,67</b>	<b>105</b>
Heavy and Civil Engineering Construction	2012-13r	1,681	58.78	14.64	785	27.45	6.84	64,552	82.2	\$42,782,43	252
	2013-14r	1,600	52.05	12.59	731	23.78	5.75	67,604	92.5	\$42,950,63	252
	2014-15r	1,413	55.36	11.97	698	27.35	5.92	69,015	98.9	\$60,101,13	255
	2015-16r	1,300	52.68	11.63	705	28.57	6.31	68,123	96.6	\$55,127,29	254
	2016-17p	935	42.83	9.18	477	21.85	4.68	42,601	89.3	\$30,738,55	177
	<b>Average</b>	<b>1,386</b>	<b>52.74</b>	<b>12.08</b>	<b>679</b>	<b>25.85</b>	<b>5.92</b>	<b>62,379</b>	<b>91.8</b>	<b>\$46,340,01</b>	<b>238</b>
Construction Services	2012-13r	3,018	23.77	4.96	1,711	13.48	2.81	138,858	81.2	\$76,736,32	493
	2013-14r	3,004	21.32	4.36	1,639	11.63	2.38	127,391	77.7	\$73,590,69	457
	2014-15r	2,955	20.80	4.32	1,685	11.86	2.46	133,199	79.0	\$90,975,08	483
	2015-16r	2,820	20.79	4.25	1,675	12.35	2.53	153,890	91.9	\$96,383,65	528
	2016-17p	2,222	18.35	3.64	1,347	11.12	2.20	160,926	119.5	\$81,832,73	553
	<b>Average</b>	<b>2,804</b>	<b>21.03</b>	<b>4.31</b>	<b>1,611</b>	<b>12.09</b>	<b>2.47</b>	<b>142,853</b>	<b>88.7</b>	<b>\$83,903,69</b>	<b>503</b>

a) Includes all time lost and no time lost claims. Excludes journey, asbestos related and deleted/disallowed claims

All subdivisions recorded reductions in the frequency and incidence rate of LTI/Ds during 2016–17p compared to 2011-12, except for the frequency rate in Building Construction. The Building Construction industry subdivision recorded a slight increase in frequency rate of 0.2 per cent during the reporting period and recorded a 9.4 per cent reduction in incidence rate. The Heavy and Civil Engineering Construction subdivision recorded frequency and incidence rate reductions of -20.4 and -31.5 per cent (respectively); and the Construction Services subdivision recorded respective reductions of -17.4 and -21.6 per cent.

Preliminary data for 2016–17 indicate the Construction Services subdivision recorded their highest levels of severe LTI/Ds in the five year reporting period. The remaining subdivisions recorded under or on a par with their respective subdivision average.

Over the five year reporting period the total number of employees (those covered by workers' compensation) decreased by 11 per cent to 10,182 employees in the Heavy and Civil Engineering Construction subdivision and by seven per cent to 27,793 employees in Building Construction (total hours worked also decreased by 25 and 16 per cent respectively). The Construction Services subdivision recorded no change in the total number of employees over the five year period (61,116 employees in 2016–17), however, recorded a five per cent reduction in total hours worked. Such movements may have had an effect on the positive decline in rates.

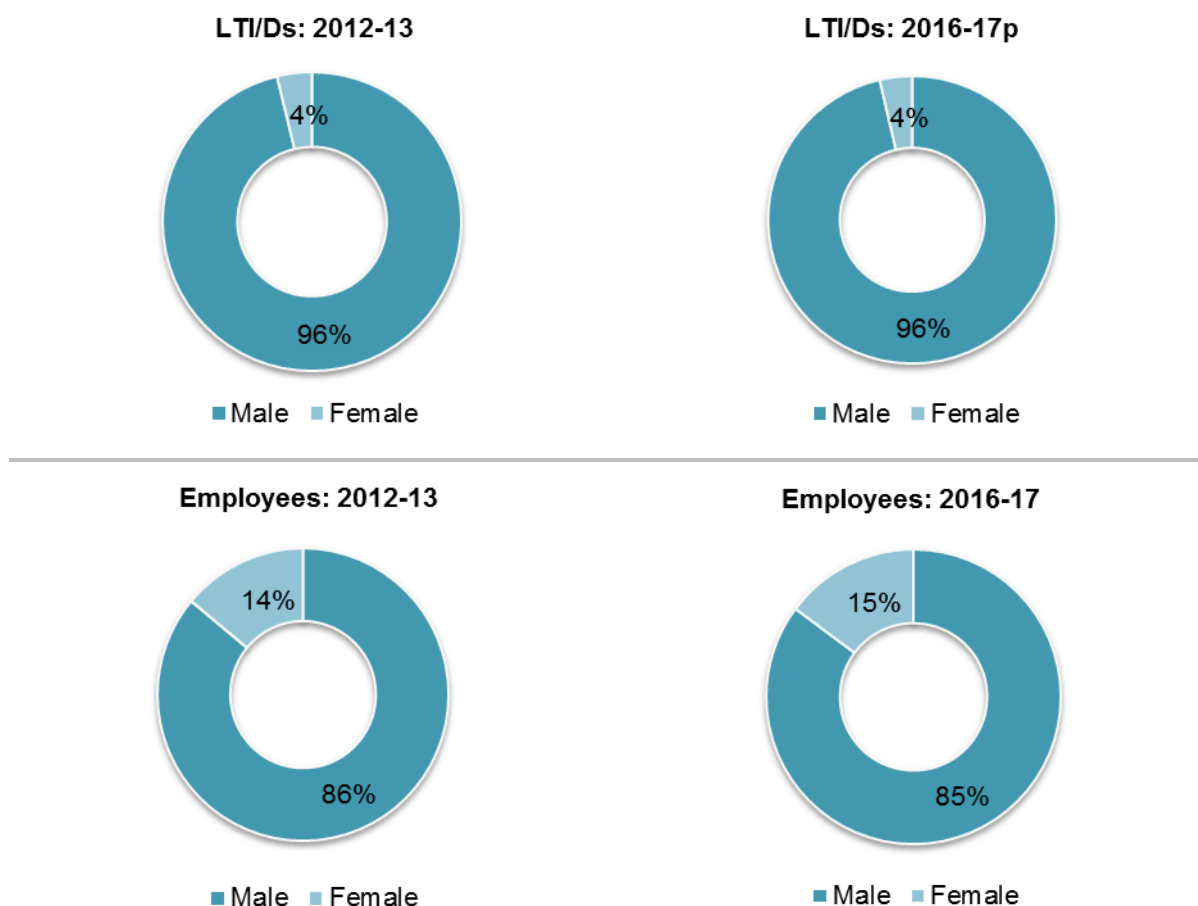
## Sex

The distribution of LTI/Ds (1+days lost) between males and females in this industry division has not changed in 2016–17p when compared to 2011-12, and continues to be largely male dominated.

The distribution of employees between male and female employees shows a one percentage point difference, increasing female employees, over the same comparative periods.

The male distribution between employees and LTI/Ds is similar between the two time periods with a higher proportion of male LTI/Ds sustained compared to the proportion of male employees. This may suggest multiple LTI/Ds incurred by the same individual(s). The opposite is true for female employees.

**Chart 2: Comparison of LTI/D and employee distribution by sex between 2012–13 and 2016–17p**



## Occupation

The three most common sub-major occupation groups (in order of magnitude) in WA that experienced a workplace injury or disease of one or more days/shifts lost during the five year period from 2012–13 to 2016–17p are the *Construction Trades Workers* group with 3,535 LTI/Ds, largely the occupations of *Carpenter* with 1,297 LTI/Ds (-26.5 per cent from 257 in 2012–13 to 189 in 2016–17p), *Plumber (General)* with 671 LTI/Ds (-5.6 per cent from 142 to 134), and *Roof Plumber* with 253 LTI/Ds (up 47.4 per cent from 38 to 56); the *Construction and Mining Labourers* group with 2,355 LTI/Ds, particularly *Builder's Labourer* with 431 LTI/Ds (-37.4 per cent from 123 to 77), *Scaffolder* with 396 LTI/Ds (-36.8 per cent from 95 to 60), *Concreter* with 373 LTI/Ds (-36 per cent from 89 to 57), and *Construction Rigger* with 314 LTI/Ds (up 20 per cent from 50 to 60); and the *Electrotechnology and Telecommunications Trades Workers* group with 1,512 LTI/Ds, mainly *Electrician (General)* with 1,111 LTI/Ds (-26.6 per cent from 229 to 168), and *Airconditioning and Refrigeration Mechanic* with 247 LTI/Ds (up 16 per cent from 50 to 58).

The chart below represents the number of work-related incidents recorded in the five years to 2016–17p by major occupation group in relation to the Construction industry division. Some groups recorded comparatively low data and therefore may not show clearly in the chart.

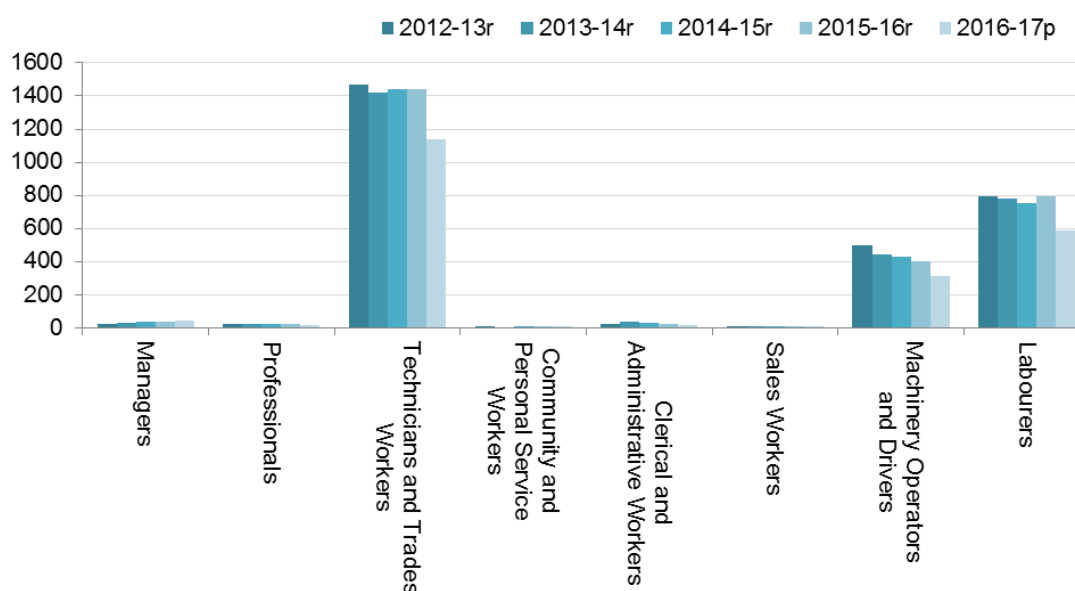
Five major occupation groups recorded a reduction in LTI/Ds over the five year period. The largest reduction was recorded in the *Professionals* group at -42.9 per cent (from 21 LTI/Ds in 2012–13 to 12 in 2016–17p) followed by the *Clerical and Administrative Workers* group at -40 per cent (from 25 to 15). The third largest reduction was recorded by the *Machinery Operators and Drivers* group at -37 per cent (from 497 LTI/Ds to 313).

*Technicians and Trades Workers* continue to be the group responsible for the majority of LTI/Ds in this division recording a 22.7 per cent reduction during the reporting period (from 1,468 LTI/Ds in 2012–13 to 1,135 in 2016–17p). Second highest is the *Labourers* group where LTI/Ds decreased 26.3 per cent (from 794 to 585 LTI/Ds).

Three major occupation groups record an increase in LTI/Ds during 2016–17p compared to 2012–13. The *Community and Personal Service Workers* group recorded a 150 per cent increase, followed by the *Managers* group at 64 per cent (from 25 LTI/Ds to 41) and the *Sales Workers* group at 25 per cent.



**Chart 3: LTI/Ds by major occupation group**



In terms of severe LTI/Ds (LTI/Ds 60+ days/shifts lost from work), table 5 shows the highest recording occupations during the combined five year period from 2012–13 to 2016–17p. These occupations collectively account for 29 per cent of total severe cases in this industry division.

**Table 5: Severe LTI/Ds: Highest recording occupations**

Occupations	5yr total	% of 5yr industry total
Carpenter	320	8%
Electrician (General)	288	7%
Labourers nec <sup>1</sup>	265	6%
Truck Driver (General)	194	5%
Scaffolder	162	4%
<b>Total</b>	<b>1,229</b>	<b>29%</b>

## Nature of injury

The nature of injury/disease is intended to identify the most serious injury or disease sustained by the worker.

The three most common natures of injury and disease (in order of magnitude) in relation to workplace injuries or diseases of one or more days/shifts lost during the five year period from 2012–13 to 2016–17p continue to be *Soft tissue injuries due to trauma or unknown mechanisms* with 3,894 LTI/Ds (-41.5 per cent from 901 LTI/Ds in 2012–13 to 527 in 2016–17p), accounting for 30 per cent of all Construction LTI/Ds; *Laceration or open wound not involving traumatic amputation* with 2,159 (-18.7 per cent from 422 to 343); and *Trauma to muscles and tendons, unspecified* with 1,691 (-16.4 per cent from 366 to 306).

Other notable increases include *Meniscus degenerate/detached/retained/chronic tear* (from zero LTI/Ds in 2012–13 to 10 in 2016-17p), *Traumatic amputation* at 46.2 per cent (from 13 to 19

<sup>1</sup> Nec not elsewhere classified

LTI/Ds), *Chemical burn* at 35.7 per cent (from 14 to 19), *Hot burn* at 21.1 per cent (from 19 to 23), and *Disc displacement, prolapse, degeneration or hernia* at 12.8 per cent (from 47 to 53 LTI/Ds).

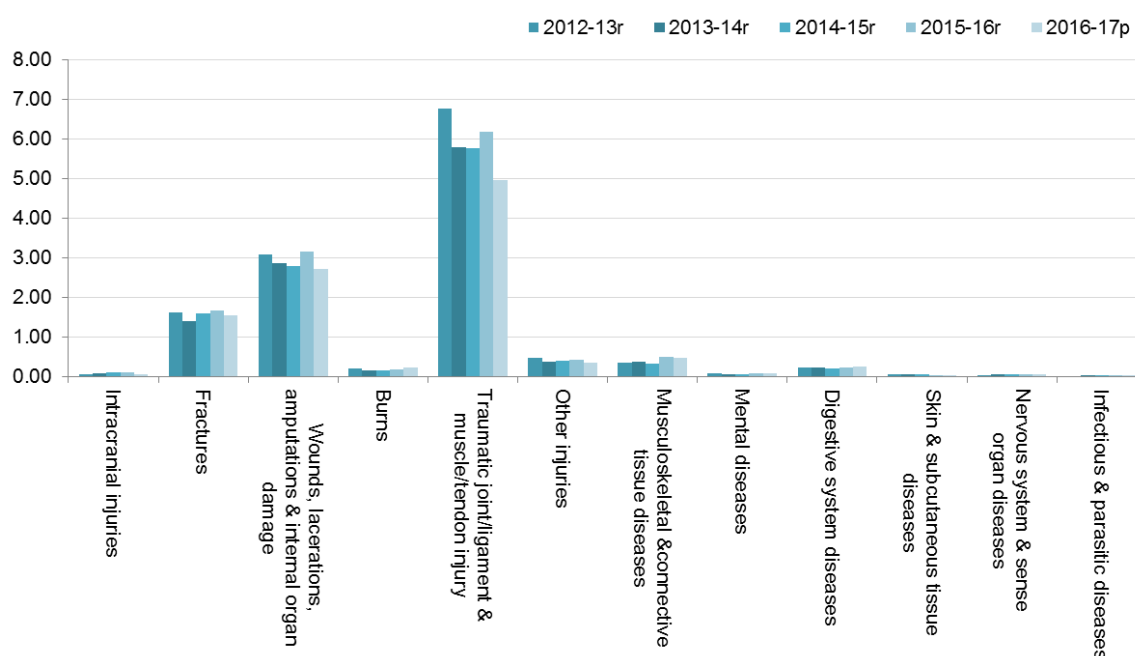
The chart below represents frequency rates by nature of injury groups in relation to the Construction industry division. Groups that recorded very low or zero data have been excluded from the chart below. Some groups in the chart recorded comparatively low data and therefore do not show clearly in the chart.

During the five year period, eight major groups recorded increases and seven groups recorded reductions. The greatest increase in frequency rate was recorded in the *Musculoskeletal and connective tissue diseases* group at 34.4 per cent (from 0.36 LTI/Ds per million hours worked in 2012–13 to 0.48 in 2016–17p). This was followed by *Nervous system and sense organ diseases* at 25.5 per cent (from 0.04 to 0.05) and *Intracranial injuries* at 21.7 per cent (from 0.05 LTI/Ds per million hours worked to 0.06).

The *Traumatic joint/ligament and muscle/tendon injury* group accounts for the greatest volume of LTI/Ds in the Construction industry. The frequency rate decreased by 26.9 per cent from 6.77 LTI/Ds per million hours worked in 2012–13 to 4.95 in 2016–17p in this group.

Other noteworthy reductions in frequency rate was recorded in the *Skin and subcutaneous tissue diseases* group (-59.4 per cent from 0.05 to 0.02) and *Wounds, lacerations, amputations and internal organ damage* (-11.6 per cent from a frequency rate of 3.07 to 2.71).

**Chart 4: Frequency rates by nature of injury**



In terms of severe LTI/Ds (LTI/Ds 60+ days/shifts lost from work), table 6 shows the highest recording nature of injury subgroups during the combined five year period from 2012–13 to 2016–17p. These subgroups collectively account for 79 per cent of total severe cases in this industry division.

Severe cases of *Soft tissue injuries due to trauma or unknown mechanisms* alone account for more than a third of the total severe cases recorded during 2012–13 to 2016–17p.

**Table 6: Severe LTI/Ds: Highest recording subgroups**

Subgroup	5yr total	% of 5yr industry total
Soft tissue injuries due to trauma or unknown mechanisms	1,440	34%
Trauma to muscles and tendons, unspecified	674	16%
Other fractures, not elsewhere classified	672	16%
Trauma to joints and ligaments, unspecified	278	7%
Laceration or open wound not involving traumatic amputation	262	6%
<b>Total</b>	<b>3,326</b>	<b>79%</b>

## Mechanism of incident

The mechanism of incident is intended to identify the overall action, exposure or event that best describes the circumstances that resulted in the most serious injury/disease.

The three most common mechanisms of incident (in order of magnitude) in relation to workplace injuries or diseases of one or more days/shifts lost during the five year period from 2012–13 to 2016–17p continue to be *Muscular stress while handling objects other than lifting, carrying or putting down* with 2,171 LTI/Ds (-36.4 per cent from 506 LTI/Ds in 2012–13 to 322 in 2016–17p), *Falls on the same level* with 1,972 (-17.8 per cent from 404 to 332), and *Being hit by moving objects* with 1,793 LTI/Ds (-27.2 per cent from 383 to 279).

Increases in LTI/Ds were also evident for *Work related harassment and/or workplace bullying* (from <5 LTI/Ds in 2012-13 to seven in 2016–17p), *Contact with hot objects* (up 22.2 per cent from 18 to 22), and *Single contact with chemical or substance* (up 13.6 per cent from 22 to 25 LTI/Ds).

The chart below represents frequency rates of work-related lost time injuries and diseases recorded by mechanism of incident group in relation to the Construction industry division. Some groups recorded comparatively low data, for example the *Sound and pressure* group, and have been excluded from the chart.

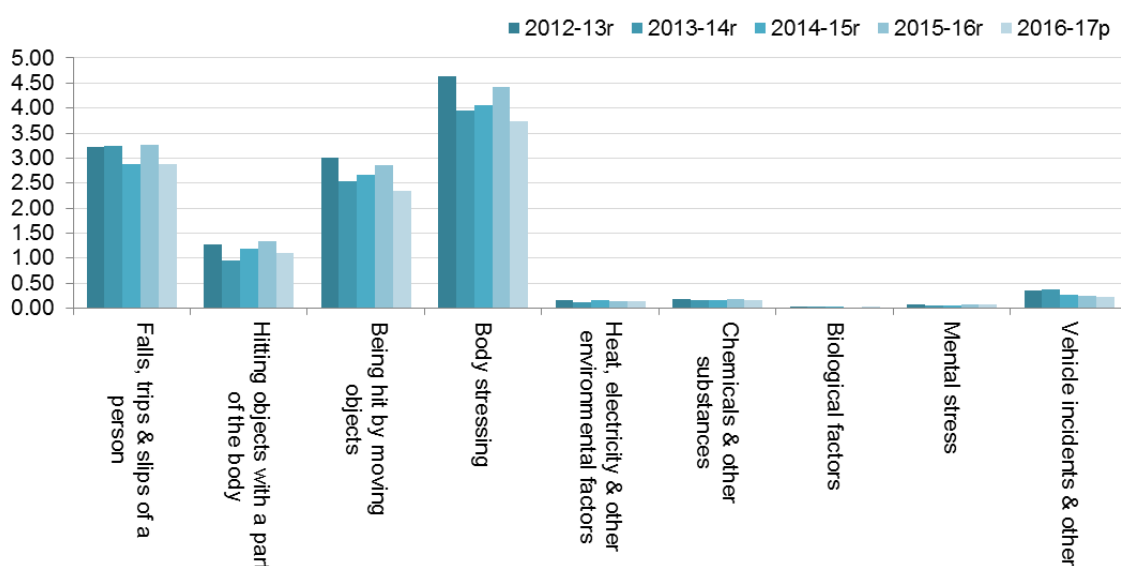
Three groups recorded increases in frequency rate during the five year reporting period. The *Mental stress* group increased 18.5 per cent (from 0.07 LTI/Ds per million hours worked in 2012–13 to 0.09 in 2016–17p), the *Biological factors* group increased 48.7 per cent (from 0.03 to 0.04), and the *Sound and pressure* group recorded an increase of 11.5 per cent.

The *Vehicle incidents and other* group recorded the largest reductions in frequency rate over the five year period (-34 per cent from 0.35 LTI/Ds per million hours worked in 2012–13 to 0.23 in 2016–17p).

*Body stressing*, the largest group in terms of the frequency rate of LTI/Ds, recorded a 19.3 per cent reduction in rate (from 4.63 in 2012–13 to 3.73 in 2016–17p).

Other notable reductions were recorded in the groups of *Being hit by moving objects* (-22.3 per cent from 3.01 to 2.34), *Hitting objects with a part of the body* (-13.6 per cent from 1.27 to 1.10), and *Falls, trips and slips of a person* (-11 per cent from a frequency rate of 3.23 per million hours worked to 2.88).

**Chart 5: Frequency rates by mechanism of incident**



In terms of severe LTI/Ds (LTI/Ds 60+ days/shifts lost from work), table 7 shows the highest recording mechanism of incident subgroups during the combined five year period from 2012–13 to 2016–17p. These subgroups collectively account for over three-quarters of total severe cases in this industry division.

Severe cases of *Muscular stress while handling objects other than lifting, carrying or putting down* alone account for 22 per cent of the total severe cases recorded during 2012–13 to 2016–17p.

**Table 7: Severe LTI/Ds: Highest recording subgroups**

Subgroup	5yr total	% of 5yr industry total
Muscular stress while handling objects other than lifting, carrying or putting down	897	21%
Falls on the same level	788	19%
Muscular stress while lifting carrying putting down objects	635	15%
Falls from a height	554	13%
Being hit by moving objects	306	7%
<b>Total</b>	<b>3,180</b>	<b>75%</b>

## Breakdown agency of injury

The breakdown agency is intended to identify the object, substance or circumstance that was principally involved in, or most closely associated with, the point at which things started to go wrong and which ultimately led to the most serious injury/disease.

The three most common breakdown agency of injury groups (in order of magnitude) in relation to workplace injuries or diseases of one or more days/shifts lost during the five year period from 2012–13 to 2016–17p are *Non powered handtools, appliances and equipment* group with 3,450 LTI/Ds, particularly the subgroups of *Ladders* with 580 LTI/Ds (-18.8 per cent from 112 in 2012–13 to 91 in 2016–17p), *Scaffolding* with 438 LTI/Ds (-47.1 per cent from 121 to 64), and *Shovels, spades, lawn edgers* with 243 LTI/Ds (-13.7 per cent from 51 to 44); *Materials and*

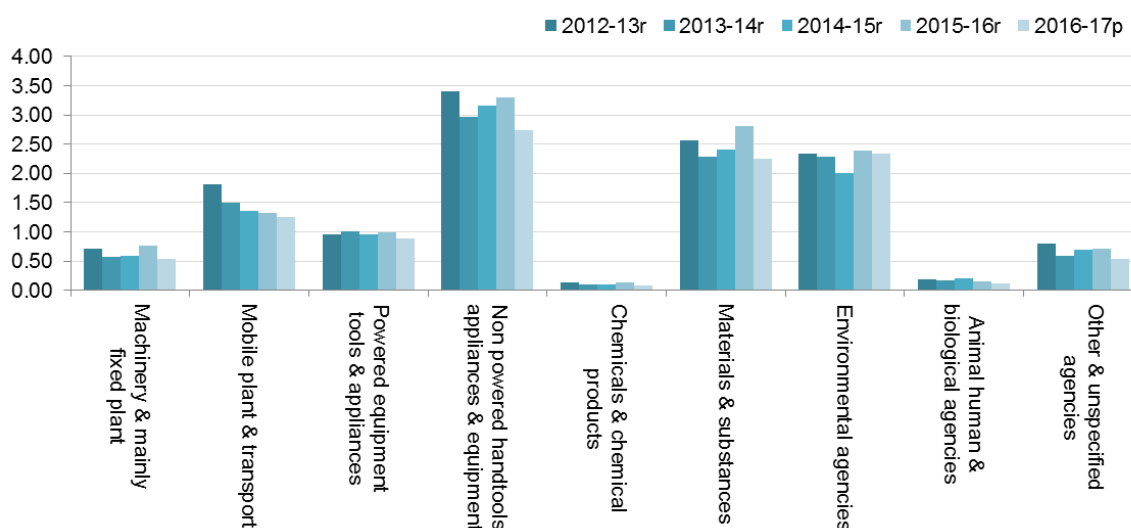
substances group with 2,728 LTI/Ds, primarily *Ferrous and non-ferrous metal* with 1,193 LTI/Ds (-20.6 per cent from 243 to 193), *Bricks and tiles and concrete, cement and clay products, nec* with 358 LTI/Ds (-20.5 per cent from 78 to 62), and *Sawn or dressed timber* with 334 LTI/Ds (-35.1 per cent from 74 to 48); and the *Environmental agencies* group with 2,509 LTI/Ds, mainly the subgroups of *Traffic and ground surfaces other* with 813 LTI/Ds (-20 per cent from 175 to 140), *Buildings and other structures* with 396 LTI/Ds (up 21.1 per cent from 71 to 86), and *Traffic and ground surfaces with hazardous objects* with 279 LTI/Ds (up 34.9 per cent from 43 to 58).

The chart below represents frequency rates of work-related lost time injuries and diseases by breakdown agency of injury groups in relation to the Construction industry division.

One of the nine major groups recorded an increase in frequency rates during the five year period. This was recorded by the *Environmental agencies* group at 0.4 per cent (from 2.33 LTI/Ds per million hours worked in 2012–13 to 2.34 in 2016–17p).

*Non-powered handtools, appliances and equipment* is the main breakdown agency of injury group associated with LTI/Ds in the Construction industry in terms of volume and recorded a 19.7 per cent reduction in frequency rate during 2016–17p compared to 2012–13 (from 3.41 to 2.74). The largest rate reductions were recorded by the *Animal human and biological agencies* group (-37.4 per cent from a frequency rate of 0.19 to 0.12) followed by *Chemicals and chemical products* (-36.8 per cent from 0.14 to 0.09). The *Other and unspecified agencies* group recorded a 33.8 per cent reduction in frequency rate and the *Mobile plant and transport* group recorded a 30.9 per cent reduction (from 1.81 to 1.25).

**Chart 6: Frequency rates by breakdown agency of injury**



In terms of severe LTI/Ds (LTI/Ds 60+ days/shifts lost from work), table 8 shows the highest recording breakdown agency subgroups during the combined five year period from 2012–13 to 2016–17p. These subgroups collectively account for 30 per cent of total severe cases in this industry division.

**Table 8: Severe LTI/Ds: Highest recording subgroups**

Subgroup	5yr total	% of 5yr industry total
Traffic and ground surfaces other	324	8%
Ferrous and non-ferrous metal	296	7%
Agency not apparent	235	6%
Ladders	228	5%
Trucks, semi-trailers, lorries	188	4%
<b>Total</b>	<b>1,271</b>	<b>30%</b>

## Bodily location

The bodily location is intended to identify the part of the body affected by the most serious injury/disease sustained by the worker.

The three parts of the body most affected (in order of magnitude) in relation to workplace lost time injuries or diseases of one or more days/shifts lost during the five year period from 2012–13 to 2016–17p continue to be the *Lower back* with 1,670 LTI/Ds (-32.2 per cent from 394 in 2012–13 to 267 in 2016–17p), *Knee* with 1,386 (-34.8 per cent from 319 to 208) and *Fingers* with 1,302 (-14.3 per cent from 266 to 228).

During the five year period, notable increases in LTI/Ds also included the following bodily location subgroups: *Lower limb unspecified locations* (up 35.7 per cent from 14 LTI/Ds to 19), *Upper leg* (up 33.3 per cent from 11 to 28), and *Trunk and limbs* (up 12.8 per cent from 47 to 53).

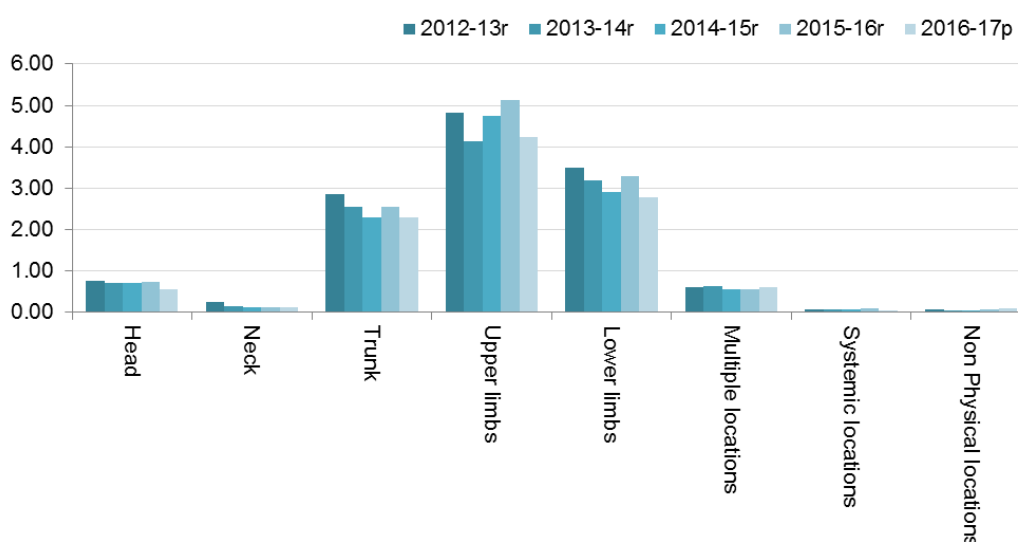
The chart below represents frequency rates by bodily location in relation to the Construction industry division. Data is too low in some groups to show effectively in the chart in comparison to others; as such the *Unspecified locations* group has been excluded.

Over the five year period six groups recorded a reduction in frequency rate. The largest reductions were recorded in the *Systemic locations* group (-51.2 per cent from 0.07 LTI/Ds per million hours worked in 2012–13 to 0.04 in 2016–17), followed by the *Neck* group (-47.3 per cent from 0.25 to 0.13), and the *Head* group (-27.4 per cent from 0.76 to 0.55).

The *Upper limbs* group is associated with the majority of LTI/Ds in this industry division. Frequency rates reduced by 11.9 per cent from 4.82 LTI/Ds per million hours worked to 4.25.

The two groups to record an increase in frequency rate over the reporting period was the *Non Physical locations* group at 18.5 per cent (from 0.07 LTI/Ds per million hours worked in 2012–13 to 0.09 in 2016–17p) and the *Multiple locations* group at 1.5 per cent (from a rate of 0.61 to 0.62).

**Chart 7: Frequency rates by bodily location**



In terms of severe LTI/Ds (LTI/Ds 60+ days/shifts lost from work), table 9 shows the highest recording bodily location subgroups during the combined five year period from 2012–13 to 2016–17p. These subgroups collectively account for more than half of total severe cases in this industry division.

**Table 9: Severe LTI/Ds: Highest recording subgroups**

Subgroup	5yr total	% of 5yr industry total
Shoulder	608	14%
Knee	599	14%
Lower back	553	13%
Ankle	295	7%
Wrist	193	5%
<b>Total</b>	<b>2,248</b>	<b>53%</b>

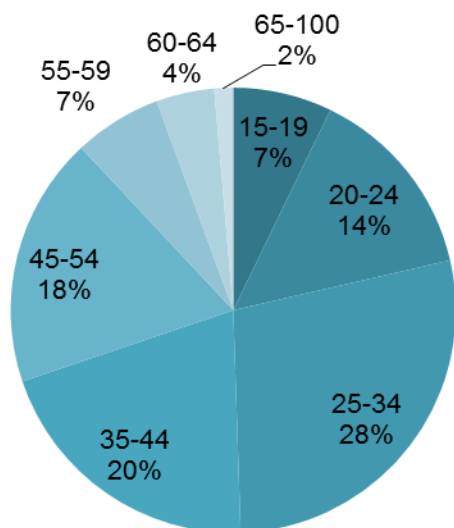
## Age group

The chart below represents the proportion of work-related LTI/Ds recorded by age group in relation to the Construction industry division for the total five year period.

All of the eight age groups experienced reductions in LTI/Ds during the reporting period. Accounting for the majority of LTI/Ds in the Construction industry during the reporting period, the 25-34 year old age group recorded a 29.3 per cent reduction in LTI/Ds during 2016–17p compared to 2012–13 (from 799 to 565). This was also the second largest reduction of all the age groups.

The largest reduction in LTI/Ds was recorded by the 15-19 age group at -37.9 per cent (from 206 LTI/Ds in 2012–13 to 128 in 2016–17p). The 20-24, 35-44, 55-59 and 65-100 age groups all recorded reductions in excess of 20 per cent over the same period.

**Chart 8: Proportion of LTI/Ds by age group: 2012–13 to 2016–17p**





## Explanatory notes

A number of issues affect the data quality of statistical information based on claims data, as provided by the Department of Mines, Industry Regulation and Safety (DMIRS). It is important to be aware of these issues when interpreting claims statistics, to ensure that the conclusions drawn from the information take into account known inconsistencies and omissions.

### Injury and disease claim data

The data used in this report is derived from workers' compensation claims lodged in accordance with the *Workers' Compensation and Injury Management Act 1981* (the Act). Claims may be lodged by any person who is a 'worker', as defined by section 5 of the Act. This includes working directors who are deemed 'workers' under the Act and have some ownership of the company, as well as employed family members and private household workers (for whom workers' compensation cover is optional). Self-employed persons, Commonwealth Government workers (including defence service personnel), workers covered by Comcare, police officers (except for work-related fatalities), unpaid volunteers and students on work experience are excluded from workers' compensation data.

In addition, the following claim types are excluded from lost time claim data:

- journey claims between home and work;
- asbestos-related diseases, including mesothelioma and pneumoconiosis;
- duplicated or disallowed claims;
- claims with less than one working day absence from work;
- claims with less than one whole shift absence from work; and
- injuries and diseases that are treated in the health system (i.e. invalid pensions and sickness and unemployed benefits).

Claim data represents information on claims by the financial year in which the claim was lodged with the insurer. This is in contrast to claim payments, which reflect actual payments during a financial year regardless of when the claim was lodged. A claim may typically take a number of months to be finalised (particularly in the case of occupational disease). As claims information is dynamic in nature, reports should be considered as a snapshot in time of the workers' compensation system in Western Australia. Data are subject to revision as claims information matures. A one year time lag exists in relation to workers' compensation claim data.

Due to the high percentage of un-finalised claims concerning payments and days lost, data is subject to revision and likely under reported. This is especially true in relation to the latest snapshot of preliminary data (denoted by "p") as it is extracted at a far earlier stage resulting in a higher proportion of immature claims. Consequently, when looking at changes over time particularly in respect to LTI/Ds 60+ days/shifts lost (severe cases), time lost from work and claim costs, the reader is advised to focus on the older more stable years and treat the preliminary data year as an indication.

Unless otherwise stated in this report, data refers to lost time injuries and diseases (LTI/Ds) in Western Australia where one or more days/shifts are lost from work. The latest snapshot of preliminary data is denoted by "p". To ensure confidentiality of workers' compensation claims information, incidences that total less than five are denoted by the data symbol '<5'.

Caution needs to be exercised when using workers' compensation payments data as a measure of the cost of workplace injury and disease. The costs data collected are only those paid by the workers' compensation authority and will not include payments made by the injured worker which are not reimbursed by the workers' compensation authority.

'Total estimated cost' takes into account estimated and actual claim payments made for un-finalised claims and actual claim payments made for finalised claims in relation to compensation (such as weekly payments, lump sum payments, treatments etc.) and non-compensation payments (such as legal costs, transport etc.).

Claim payment information represents aggregated expenses attributed to the financial year in which a payment is made, regardless of the year in which the relevant claim is lodged.

The total number of days lost takes into account estimated and actual days lost for un-finalised claims and actual days lost for finalised. Estimates of days lost for un-finalised claims are revised as claims progress, therefore, as claims mature, the estimates are more reflective of the finalised days lost.

Legislative amendments may also impact on statistical information. WorkCover WA provide information regarding relevant legislative amendments on their website, at [www.workcover.wa.gov.au](http://www.workcover.wa.gov.au)

Frequency and incidence rates require knowledge of the number of employees and the number of hours worked for the time frame being considered. The employment data used to calculate frequency and incidence rates in department statistical publications is derived from unpublished data estimates produced by the Australian Bureau of Statistics (ABS).

#### Classification systems

The industry classification codes used are in accordance with the *Australian and New Zealand Standard Industrial Classification (ANZSIC)* published by the Australian Bureau of Statistics. The classification codes are based on a hierarchical structure consisting of one digit codes (broadest level) down to four digit codes (finest level). For more information visit [www.abs.gov.au](http://www.abs.gov.au)

The occupation classifications used are in accordance with the *Australian Standard Classification of Occupations 2nd Edition (ASCO)*, for data reported up to and including the year 2008–09, and the *Australian and New Zealand Standard Classification of Occupations First Edition (ANZSCO)*, for data reported from the year 2009–10 onward. Both are published by the ABS. For more information visit [www.abs.gov.au](http://www.abs.gov.au)

The injury and disease classification groupings and descriptions are the standard terms taken from the National Occupational Health & Safety Commission publication: *Type of Occurrence Classification System (TOOCS)*. For more information visit [www.safeworkaustralia.gov.au](http://www.safeworkaustralia.gov.au)

Due to the differences in structure and definitions between each version/edition of the three coding classifications a break in time series has occurred. To ensure data integrity direct comparisons should not be made between classification versions.

### Work-related traumatic injury fatalities

Work-related traumatic injury fatality information used in this report is derived from information recorded and published by DMIRS and relates to fatalities that result from a physical trauma or poisoning in Western Australia in accordance with the *Occupational Safety and Health Act 1984*, *Energy Safety Act 2006*, *Electricity Act 1945*, *Gas Standards Act 1972*, *Mines Safety and Inspection Act 1994*, *Petroleum (Submerged Lands) Act 1982*, *Petroleum and Geothermal Energy Resources Act 1967* and the *Petroleum Pipelines Act 1969*. In scope are employees, self-employed workers, volunteers and bystanders. Diseases and most disorders that would be seen as 'diseases', such as cancers and heart attacks, are out of scope. Other exclusions include: road traffic accidents, unless there is a clear nexus with work; self-inflicted injuries, Commonwealth Government workers, workers covered by Comcare and defence personnel.

For completeness, DMIRS includes in its statistics those work-related fatalities covered by the *Civil Aviation Act 1988* and *Transport Safety Investigation Act 2003* under the respective jurisdictions of the Civil Aviation Safety Authority (CASA) and the Australian Transport Safety Bureau (ATSB); and where possible, those covered under the *Australian Maritime Safety Authority Act 1990* under the jurisdiction of the Australian Maritime Safety Authority (AMSA). The former named agencies are common examples of valid jurisdictional boundaries however, the list is not exhaustive. For more information see [Recording of traumatic work-related fatalities by WorkSafe](#).

Information on data definitions, rate calculations and terms used can be found on the [WA Data Definitions and Calculations](#) and [FAQs](#) pages on our website.