

**ANALYSIS OF BIENNIAL DATA FROM
ACCREDITED CONTRACTORS FOR THE
JULY TO DECEMBER 2011
REPORTING PERIOD**

Australian Government Building and Construction OHS
Accreditation Scheme

July - December 2011

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1 Executive Summary

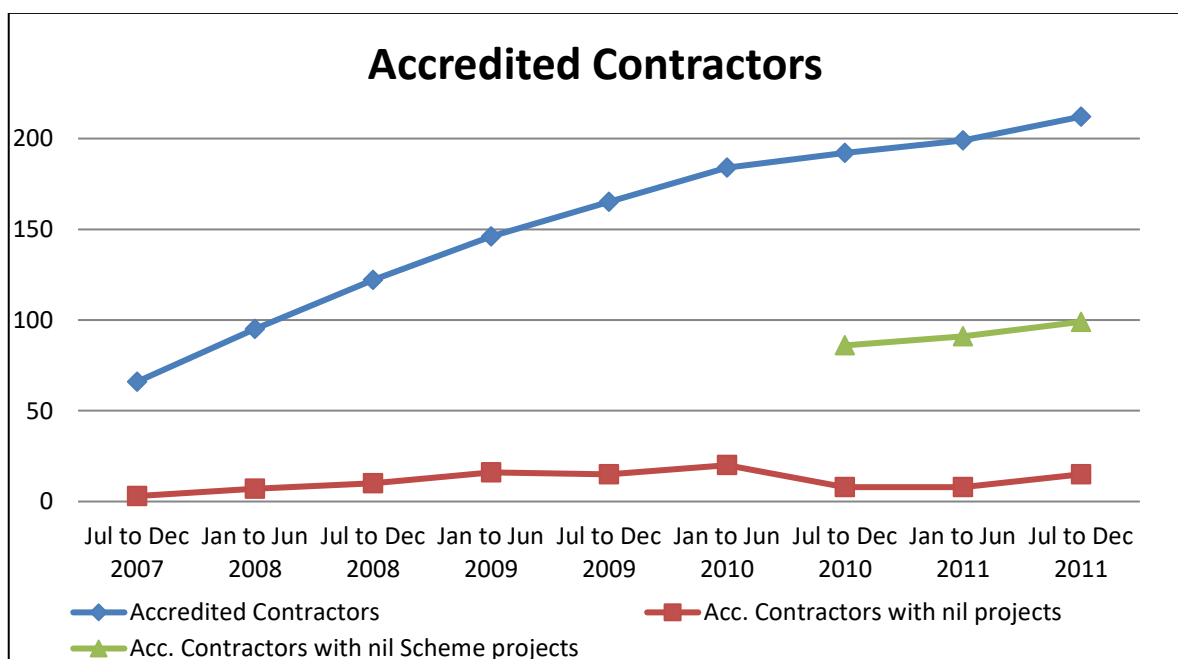
This report provides an overview and analysis of data collected from companies accredited under the Australian Government Building and Construction OHS Accreditation Scheme (the Scheme) for the period July to December 2011. Comparisons are also made with data collected from previous biannual periods where appropriate.

Under their conditions of accreditation accredited companies are required to submit biannual reports twice a year, in addition to incident reports, Scheme project reports and end of project reports. The data used in this report has been collected from a combination of biannual, incident, and Scheme project reports.

2 Overview

2.1 Number of Accredited contractors

The number of accredited contractors continues to grow, with 212 contractors submitting bi-annual reports for the July to December 2011 reporting period. This is a 6.5% increase on the previous period. Of the 212 accredited contractors, 99 did not undertake Scheme projects during the period, with 15 undertaking no projects during the period whatsoever.



2.2 Applications

The OFSC received 64 applications during the July to December 2011 reporting period, the third highest number in the history of the Scheme. Of these 64 applications, 38 were first time applications, and 26 were applications for reaccreditation.

Twenty two contractors gained accreditation for the first time during the period, while 15 contractors achieved reaccreditation.

| Period | Applications for First Accreditation | Applications for Reaccreditation | Total Applications |
|------------------|--------------------------------------|----------------------------------|--------------------|
| 2006 | 24 | 0 | 24 |
| Jan to Jun 2007 | 61 | 0 | 61 |
| Jul to Dec 2007 | 50 | 0 | 50 |
| Jan to Jun 2008 | 35 | 0 | 35 |
| Jul to Dec 2008 | 41 | 0 | 41 |
| Jan to Jun 2009 | 58 | 0 | 58 |
| Jul to Dec 2009 | 48 | 17 | 65 |
| Jan to Jun 2010 | 29 | 34 | 63 |
| July to Dec 2010 | 39 | 30 | 69 |
| Jan to Jun 2011 | 34 | 19 | 53 |
| Jul to Dec 2011 | 38 | 26 | 64 |
| Total | 457 | 126 | 583 |

2.3 Number of Projects

The OFSC had been notified of a total of 697 directly and indirectly funded contracts for building work with a combined value of \$36.33 billion that had been covered by the Scheme. Of the 697 notified contracts, 386 were active and 311 were completed as at 31 December 2011.

The data gathered for this current reporting period includes non-Scheme projects valued at less than \$3 million. The data prior to the July 2010 reporting period only includes projects with a value in excess of \$3 million.

| Period | Number of Accredited contractors reporting active Scheme projects | Number of active Scheme projects | Number of Accredited contractors Reporting non-Scheme projects | Number of non-scheme projects |
|------------------|---|----------------------------------|--|-------------------------------|
| Jul to Dec 2007 | 25 | 42 | 58 | 1,019 |
| Jan to Jun 2008 | 32 | 71 | 85 | 1,212 |
| Jul to Dec 2008 | 44 | 103 | 107 | 1,416 |
| Jan to Jun 2009 | 61 | 128 | 124 | 1,730 |
| Jul to Dec 2009 | 75 | 183 | 145 | 2,170 |
| Jan to Jun 2010 | 94 | 249 | 153 | 2,255 |
| July to Dec 2010 | 102 | 293 | 177 | 6,943 |
| Jan to Jun 2011 | 108 | 329 | 185 | 7,861 |
| Jul to Dec 2011 | 113 | 343 | 197 | 11,081 |

| Period | Scheme projects (million hours) | Non-Scheme projects any value (million hours) | All projects (million hours) |
|-----------------|---------------------------------|---|------------------------------|
| Jul to Dec 2010 | 41.97 | 147.44 | 189.40 |
| Jan to Jun 2011 | 26.29 | 135.95 | 162.24 |
| Jul to Dec 2011 | 31.92 | 135.29 | 167.20 |

3 Analysis/Findings

3.1 Fatalities

The July to December 2011 period saw a sharp rise in the number of fatalities reported by accredited contractors, with a subsequent rise in the fatalities frequency rate for both Scheme and non Scheme projects. These figures do not include deaths from heart attacks or other natural causes. The fatality frequency rate for non Scheme projects includes hours worked on projects valued at less than \$3 million, while the Scheme fatality frequency rate does not (there are no Scheme projects valued under \$3 million). The result is a relative inflation of the fatality frequency rate on Scheme projects when compared to the rate on non Scheme projects.

| Period | Number of Fatalities on Scheme projects | Scheme project Fatalities frequency rate | Number of Fatalities on non-Scheme projects | Non-Scheme projects Fatalities frequency rate | Number of Fatalities all projects | All projects Fatalities frequency rate |
|-----------------|---|--|---|---|-----------------------------------|--|
| Jul to Dec 2007 | 1 | NA | 0 | NA | 1 | NA |
| Jan to Jun 2008 | 0 | NA | 6 | NA | 6 | NA |
| Jul to Dec 2008 | 0 | NA | 4 | NA | 4 | NA |
| Jan to Jun 2009 | 1 | NA | 4 | NA | 5 | NA |
| Jul to Dec 2009 | 0 | 0.00 | 1 | 1.07 | 1 | 0.92 |
| Jan to Jun 2010 | 1 | 4.36 | 0 | 0.00 | 1 | 0.66 |
| Jul to Dec 2010 | 2 | 4.77 | 2 | 1.35 | 4 | 2.39 |
| Jan to Jun 2011 | 0 | 0.00 | 1 | 0.70 | 1 | 0.60 |
| Jul to Dec 2011 | 3 | 9.40 | 3 | 2.22 | 6 | 3.59 |

3.2 Lost Time Injury Frequency Rate (LTIFR)

For the second period in a row the mean LTIFR on Scheme projects was higher than its non Scheme equivalent. While the non Scheme mean LTIFR fell for the second period in a row, conversely the mean LTIFR for Scheme projects nearly doubled, also for the second period in a row.

| Period | Scheme project Median | Scheme project Arithmetic mean | Scheme project Winsorized mean | Non-Scheme project Median | Non-Scheme project Arithmetic mean | Non-Scheme project Winsorized mean |
|-----------------|-----------------------|--------------------------------|--------------------------------|---------------------------|------------------------------------|------------------------------------|
| Jul to Dec 2007 | 0.00 | 6.94 | 4.04 | 4.65 | 10.06 | 7.52 |
| Jan to Jun 2008 | 0.00 | 9.24 | 8.72 | 4.95 | 10.41 | 9.05 |
| Jul to Dec 2008 | 0.00 | 7.44 | 6.21 | 4.65 | 12.22 | 7.36 |
| Jan to Jun 2009 | 0.00 | 12.86 | 10.35 | 3.50 | 11.54 | 6.10 |
| Jul to Dec 2009 | 0.00 | 9.36 | 7.68 | 3.00 | 11.61 | 8.28 |
| Jan to Jun 2010 | 0.00 | 21.99 | 3.21 | 3.73 | 11.34 | 8.61 |
| Jul to Dec 2010 | 0.00 | 5.54 | 3.43 | 0.00 | 13.83 | 4.76 |
| Jan to Jun 2011 | 0.00 | 10.17 | 3.98 | 0.00 | 8.97 | 3.97 |
| Jul to Dec 2011 | 0.00 | 20.60 | 6.82 | 0.60 | 8.01 | 5.45 |

Scheme LTIFR by construction type

When separated by industry sector, Scheme work carried out by accredited contractors on Residential projects recorded the highest mean LTIFR (54.81), followed by Civil projects (20.36) and Commercial projects (10.17).

It is worth noting that the windsorised mean on residential Scheme projects is lower than the windsorised mean on commercial Scheme projects, a result of a high outlier in the residential figures that inflated the Scheme residential mean LTIFR.

| | Residential | Civil | Commercial | All |
|------------------|-------------|-------|------------|-------|
| Mean | 54.81 | 20.36 | 10.17 | 20.60 |
| Median | 0.00 | 0.00 | 0.00 | 0.00 |
| Windsorised Mean | 3.22 | 1.87 | 7.81 | 6.82 |

Non Scheme LTIFR by construction type

Non Scheme work carried out by accredited contractors on Residential projects recorded the highest mean LTIFR (15.33), followed by Commercial projects (9.67) and Civil projects (3.81).

Again, the windsorised mean on residential projects is lower than the windsorised mean on commercial projects, a result of a high outlier in the residential figures that inflated the residential mean LTIFR.

| | Residential | Civil | Commercial | All |
|------------------|-------------|-------|------------|------|
| Mean | 15.33 | 3.81 | 9.67 | 8.01 |
| Median | 0.31 | 0.00 | 3.36 | 0.60 |
| Windsorised Mean | 6.02 | 1.86 | 6.88 | 5.45 |

3.3 Medically Treated Injury Frequency Rate (MTIFR)

The mean MTIFR for both Scheme and non Scheme projects decreased in the July to December 2011 period.

| Period | Scheme project Median | Scheme project Arithmetic mean | Scheme project Winsorized mean | Non-Scheme project Median | Non-Scheme project Arithmetic mean | Non-Scheme project Winsorized mean |
|-----------------|-----------------------|--------------------------------|--------------------------------|---------------------------|------------------------------------|------------------------------------|
| Jul to Dec 2007 | 0.00 | 12.06 | 9.53 | 19.90 | 26.23 | 23.32 |
| Jan to Jun 2008 | 0.00 | 18.06 | 16.29 | 19.00 | 29.39 | 24.36 |
| Jul to Dec 2008 | 2.78 | 21.79 | 14.50 | 13.18 | 21.10 | 16.67 |
| Jan to Jun 2009 | 8.58 | 33.93 | 22.78 | 14.32 | 26.82 | 17.21 |
| Jul to Dec 2009 | 13.04 | 21.84 | 16.62 | 18.17 | 38.51 | 28.73 |
| Jan to Jun 2010 | 0.00 | 34.67 | 16.95 | 21.03 | 40.15 | 28.45 |
| Jul to Dec 2010 | 0.00 | 11.30 | 6.44 | 12.71 | 63.91 | 21.07 |
| Jan to Jun 2011 | 0.00 | 19.93 | 8.12 | 11.02 | 36.31 | 20.00 |
| Jul to Dec 2011 | 0.00 | 16.30 | 7.23 | 10.83 | 34.12 | 18.10 |

Scheme MTIFR by construction type

Scheme Residential construction projects (5.82) recorded a lower mean MTIFR than both Civil (13.21) and Commercial (10.17) Scheme projects.

The windsorised mean MTIFR for Civil Scheme projects, conversely, was lower than the Commercial Scheme project windsorised mean MTIFR.

| | Residential | Civil | Commercial | All |
|------------------|-------------|-------|------------|-------|
| Mean | 5.82 | 13.21 | 10.17 | 16.30 |
| Median | 0.00 | 0.00 | 0.00 | 0.00 |
| Windsorised Mean | 0.32 | 2.75 | 11.57 | 7.23 |

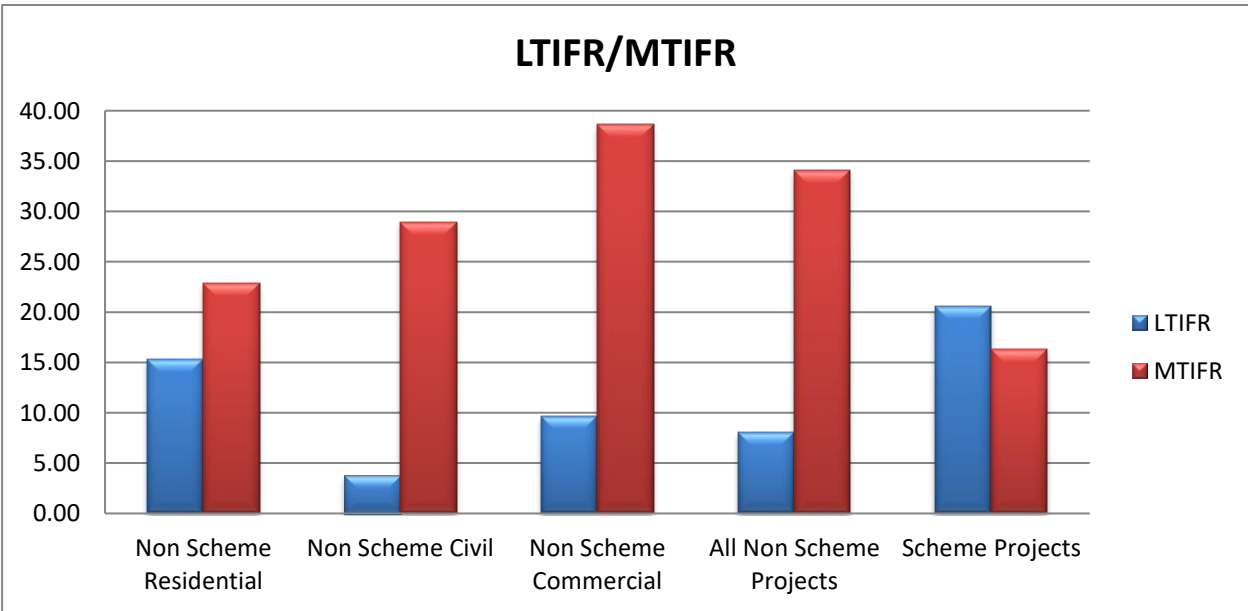
Non Scheme MTIFR by construction type

The mean MTIFR recorded by contractors working on non Scheme Commercial projects (38.62) far exceeded those recorded by accredited contractors working on Civil (28.94) and Residential (22.87) projects.

| | Residential | Civil | Commercial | All |
|------------------|-------------|-------|------------|-------|
| Mean | 22.87 | 28.94 | 38.62 | 34.12 |
| Median | 3.64 | 5.87 | 14.13 | 10.83 |
| Windsorised Mean | 15.42 | 11.09 | 20.60 | 18.10 |

3.4 LTIFR/MTIFR Summary

The graph below summarises the LTIFR and MTIFR figures across construction types and Scheme and non Scheme projects. The LTIFR exceeds the MTIFR only on Scheme projects.



3.5 Number of Notices Issued

There has been a reduction in the number of notices issued to accredited contractors across the board in the July to December 2011 reporting period.

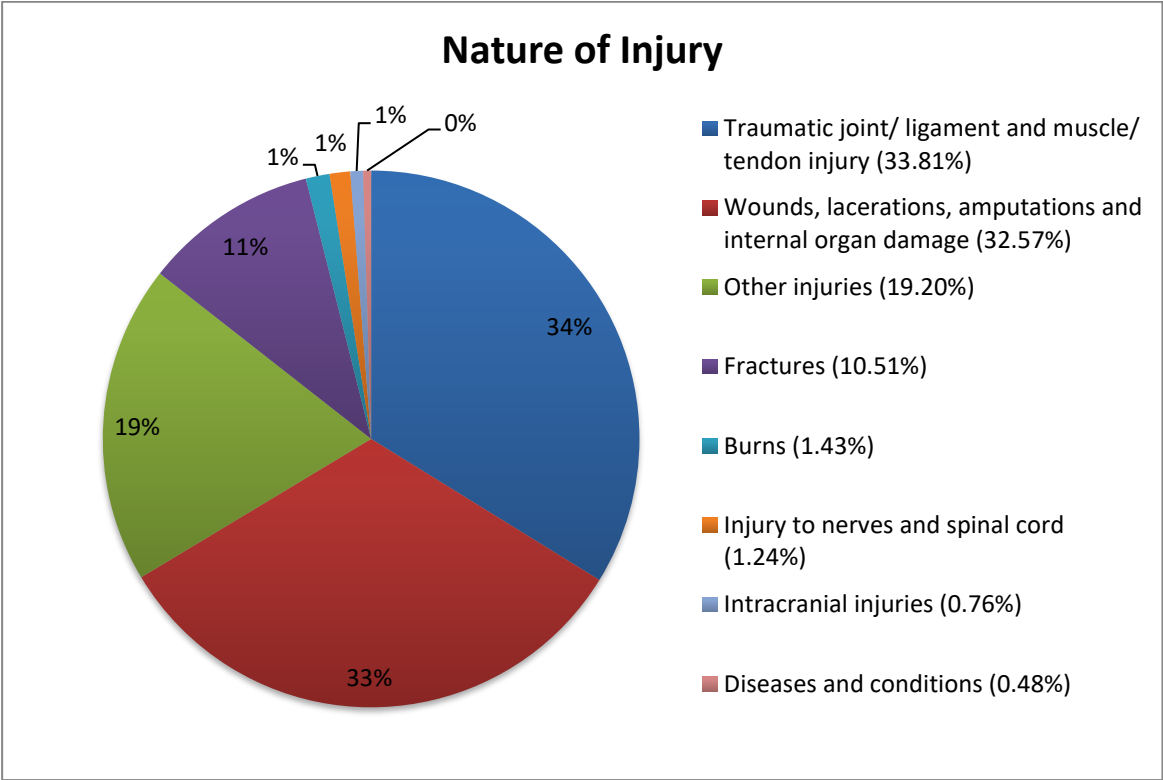
| Period | Infringement Notices | Prohibition Notices | Improvement Notices | Other Notices (eg enforceable undertakings) |
|--------------|----------------------|---------------------|---------------------|---|
| Jan–Jun 2011 | 10 | 63 | 140 | 7 |
| Jul–Dec 2011 | 2 | 51 | 137 | 1 |

4 Incidents

Accredited contractors are required to provide incident reports for lost time injuries, medically treated injuries and notifiable dangerous occurrences that happen on Scheme projects, as well as lost time injuries that occur on non Scheme projects valued at greater than \$3 million. Incident reports for all fatalities regardless of project value are also submitted.

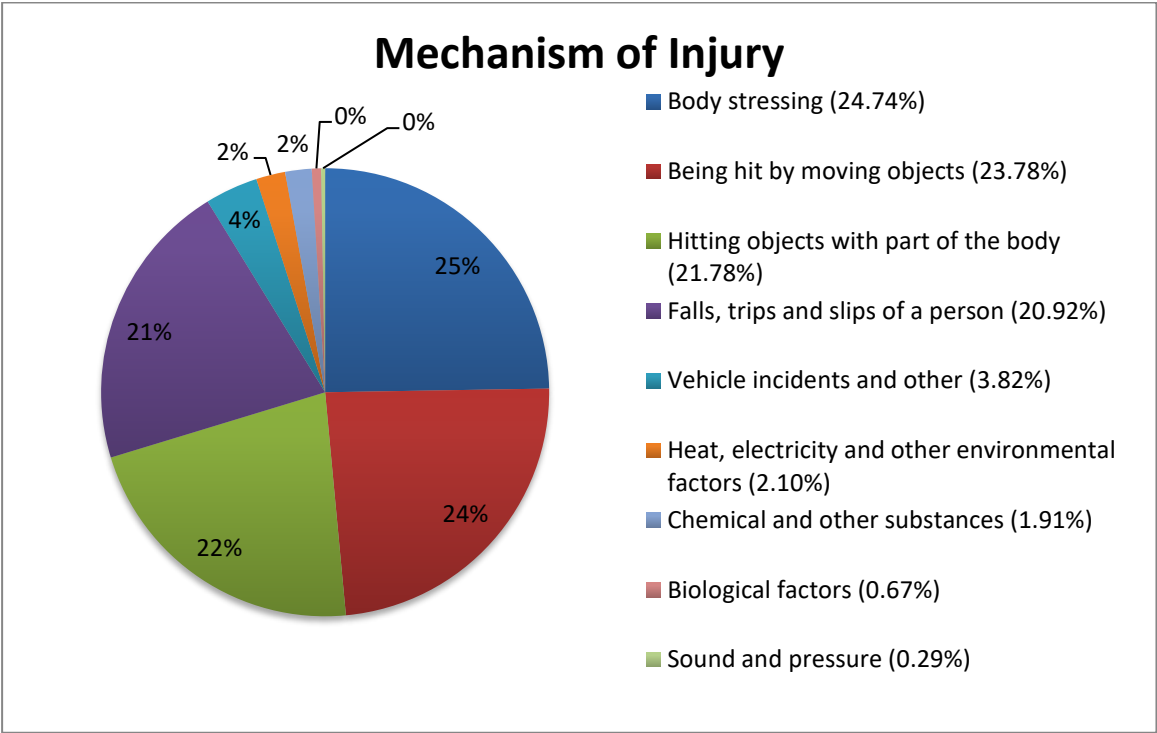
4.1 Nature of injury

Two thirds of injuries reported to the OFSC relate to Traumatic joint/ligament and muscle/tendons (33.81%) and Wounds, lacerations, amputations and internal organ damage (32.57%).



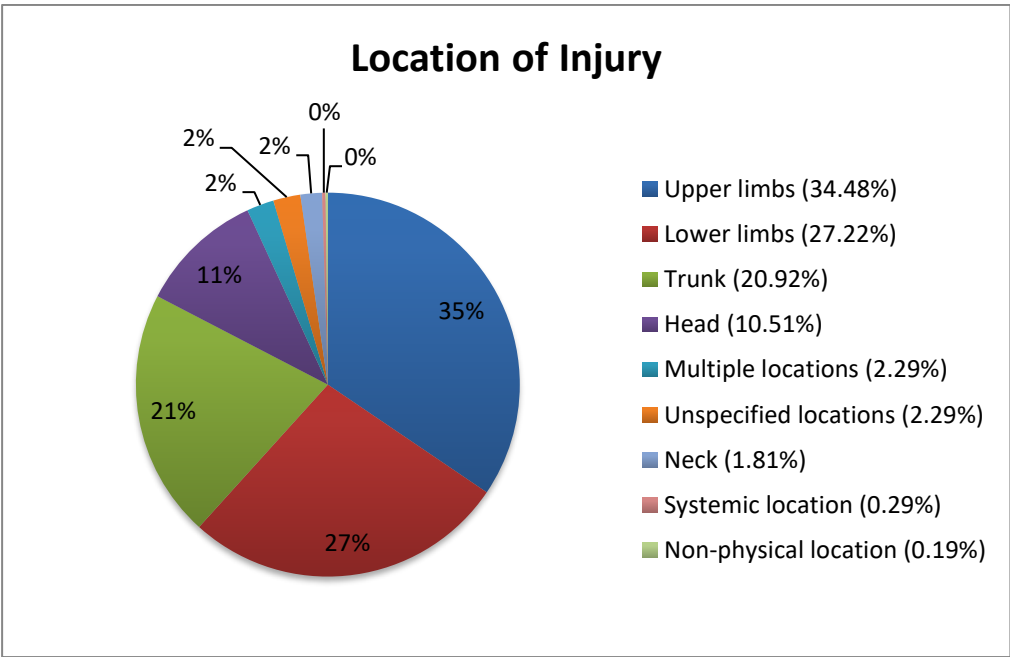
4.2 Mechanism of Injury

The top four mechanisms of injury reported to the OFSC; Body Stressing (24.74%), Being hit by moving object (23.78%), Hitting objects with part of the body (21.78%), and Falls trips and slips of a person (20.92%) account for over 90% of all injuries reported during the period.



4.3 Location of Injury

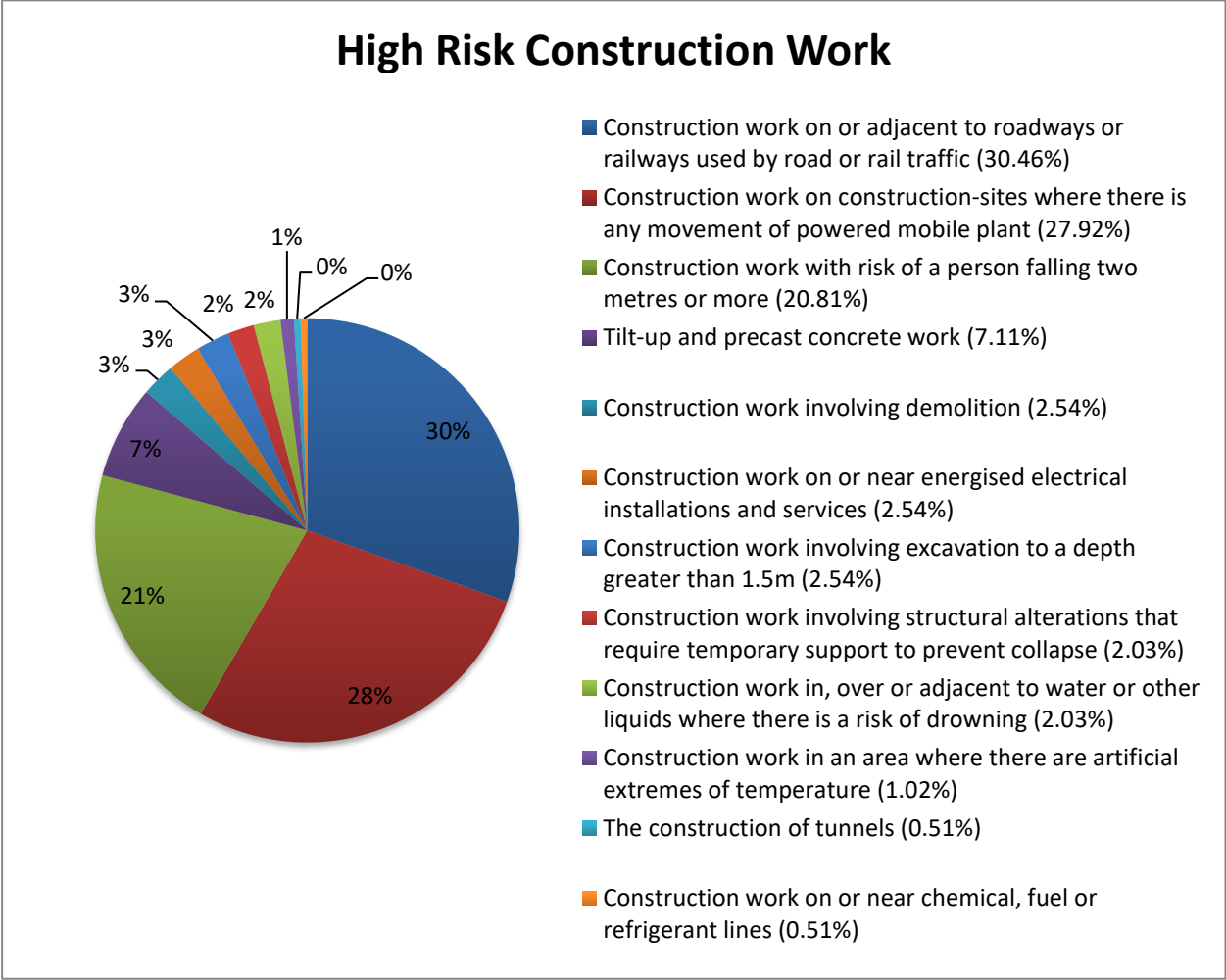
Over 60% of injuries sustained occurred on the upper (34.48%) and lower (27.22%) limbs.



4.4 High Risk Construction Work

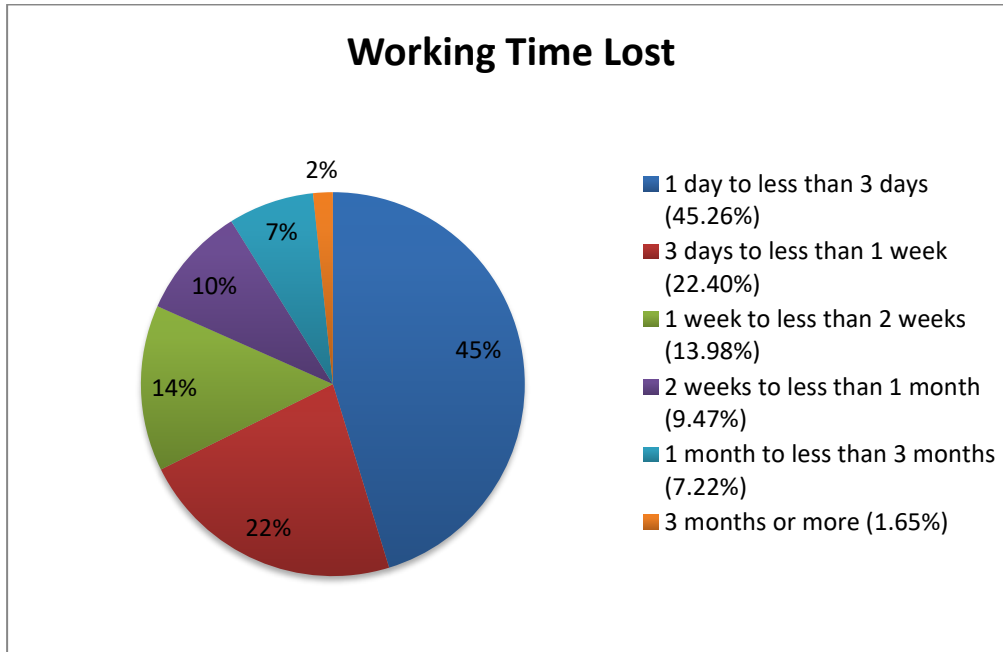
When submitting incident reports, accredited contractors are asked to disclose – where applicable – if any high risk construction work was taking place at the time of the incident. Just 18% of incident reports submitted nominated high risk construction work as having been undertaken at the time of the incident. The three most common categories of high risk work taking place at the time of an incident were:

- construction work on or adjacent to roadways or railways used by road or rail traffic (30.46%)
- construction work on construction-sites where there is any movement of powered mobile plant (27.92%), and
- construction work with risk of a person falling two metres or more (20.81%).



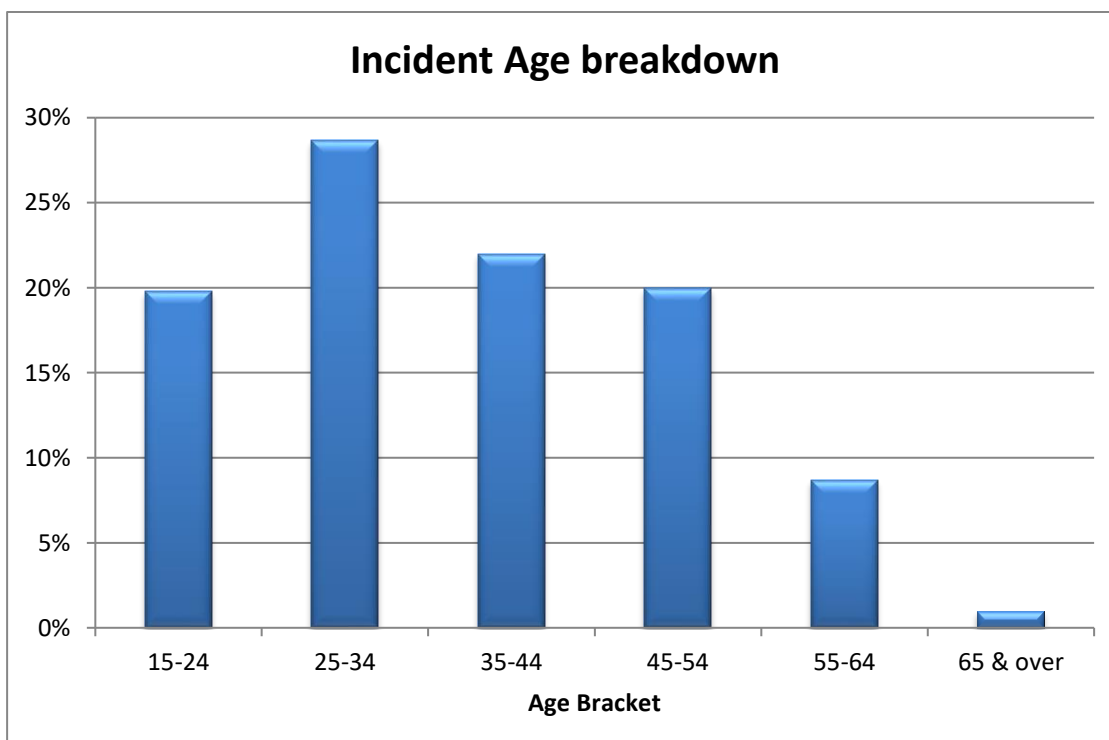
4.5 Working Time Lost

The most common length of time an injured worker was absent from work was between one and three days (45.26%), with over 80% of workers that suffered a lost time injury returning to work in less than two weeks.



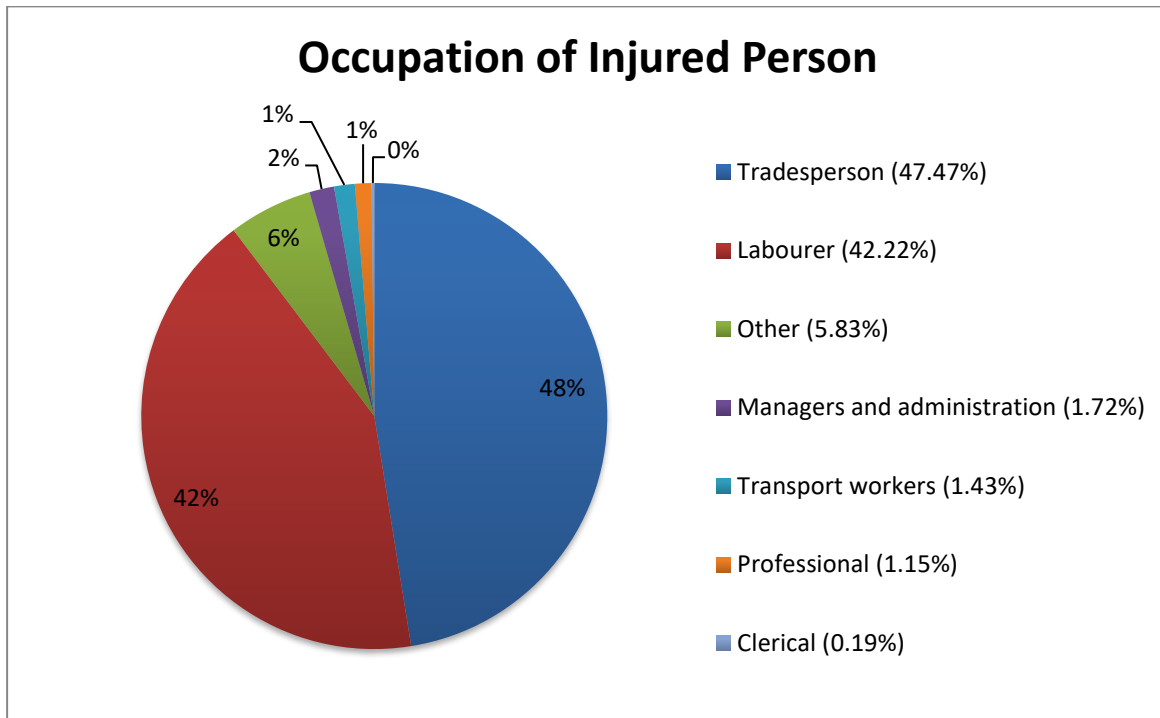
4.6 Age Breakdown

Over 70% of injured workers were below the age of 45. The 25-34 age bracket accounted for the highest number of reported incidents (28.65%).



4.7 Injured Person's Occupation

Over 90% of people injured in reports submitted to the OFSC were Tradespeople (47.47%) or Labourers (42.22%).



4.8 Dangerous Occurrences

The OFSC encourages companies to accurately report Dangerous Occurrences both internally and to external bodies such as the OFSC. A Dangerous Occurrence (or 'near miss') can be as revealing of WHS system inadequacies as an incident that *does* result in an injury or worse.

Seventy-nine Scheme Dangerous Occurrences were reported to the OFSC in the July to December 2011 reporting period; a slight increase on the previous period.

Tellingly there was some correlation between the circumstances of the Dangerous Occurrences reported to the OFSC, and those of the incidents resulting in injury. For example the most common high risk work nominated in Dangerous Occurrence incident reports was also the second most common nominated in LTI/MTI/Fatality reports (work on construction-sites where there is any movement of powered mobile plant).

4.9 Workers' Compensation

Accredited Companies

| Period | Mean premium rate ACT % | Mean premium rate NSW % | Mean premium rate NT % | Mean premium rate QLD % | Mean premium rate SA % | Mean premium rate TAS % | Mean premium rate VIC % | Mean premium rate WA % |
|-----------------|-------------------------|-------------------------|------------------------|-------------------------|------------------------|-------------------------|-------------------------|------------------------|
| Jul to Dec 2007 | 5.589 | 3.069 | 2.675 | 1.346 | 2.940 | . | 3.098 | 2.496 |
| Jan to Jun 2008 | 4.962 | 3.508 | 2.355 | 1.438 | 3.037 | . | 2.054 | 3.348 |
| Jul to Dec 2008 | 4.274 | 3.106 | 2.261 | 1.568 | 3.750 | 1.087 | 2.297 | 2.066 |
| Jan to Jun 2009 | 3.742 | 2.811 | 1.973 | 1.117 | 3.832 | 1.155 | 2.289 | 2.342 |
| Jul to Dec 2009 | 3.849 | 3.351 | 2.376 | 1.424 | 3.695 | 1.302 | 2.202 | 1.948 |
| Jan to Jun 2010 | 3.521 | 2.975 | 2.372 | 1.316 | 3.560 | 1.475 | 2.270 | 1.731 |
| Jul to Dec 2010 | 3.025 | 3.051 | 2.389 | 1.548 | 3.845 | 1.015 | 1.980 | 1.896 |
| Jan to Jun 2011 | 3.699 | 3.014 | 2.310 | 1.449 | 3.668 | 1.701 | 1.905 | 1.767 |
| Jul to Dec 2011 | 3.534 | 3.019 | 2.028 | 1.735 | 2.913 | 2.277 | 1.746 | 1.518 |

Industry

| Period | Mean premium rate ACT % | Mean premium rate NSW % | Mean premium rate NT % | Mean premium rate QLD % | Mean premium rate SA % | Mean premium rate TAS % | Mean premium rate VIC % | Mean premium rate WA % |
|--|-------------------------|-------------------------|------------------------|-------------------------|------------------------|-------------------------|-------------------------|------------------------|
| House construction September 2011 ¹ | NA | 5.040 | NA | 2.793 | 2.80 | 4.00 | 1.908 | 1.13 |
| Non-residential construction September 2011 ¹ | NA | 3.928 | NA | 2.905 | 2.90 | 3.39 | 2.185 | 2.13 |

¹ Source: Safe Work Australia publication Comparison of Workers' Compensation Arrangements in Australia and New Zealand April 2012, Table 7.6 Selected Industry Premium Rates as at 30 September 2011, page 213.

5 Awards and Recognition

During this reporting period accredited contractors have been the recipients of many prestigious safety awards, including the following:

- John Holland Pty Ltd - VicRoads Major Projects Safety Excellence Award 2011 –Anthony's Cutting Realignment Projects
- John Holland Pty Ltd - VicRoads Major Projects Safety Excellence Award 2011 – Westgate Bridge Strengthening Alliance Project
- Brookfield Multiplex Constructions Pty Ltd - MBA Safety Awards - Federal Safety Commissioner's Award for an Outstanding Safety Solution for self-jacking hydraulic jump form
- Abigroup Contractors Pty Ltd - QMCA Safety Award - Ipswich Motorway Upgrade - Dinmore to Goodna project
- Construction Control Australia Pty Ltd - Master Builders & Boral Awards – 2011 Winner – Excellence in Occupational, Health and Safety Systems
- Construction Control Australia Pty Ltd - Office of the ACT Work Safety Commissioner – Highly Commended – Most Successful Promotion of OHS in the Workplace
- Construction Safety Education Forum (which includes many accredited companies) - WorkCover NSW Safety leadership award - Highly Commended
- Walton Construction Pty Ltd - 2011 Master Builders Association of Victoria "Excellence in Health and Safety" - Saint Mary of the Cross Mausoleum
- RMS Road & Fleet Services - RFS Employee - NSW premier's public sector award - safety innovation
- Seymour Whyte Constructions Pty Ltd - QMCA Awards Safety Excellence Award (Origin Alliance)
- Built Environs WA Pty Ltd - MBA - Individual commitment to Safety Award (Accreditor Employee)
- Wellington Dam Alliance (including accredited contractors Structural Systems (Western) Pty Ltd and Leighton Contractors Pty Ltd) - Worksafe Safety Awards - Best Solution to an identified workplace health and safety issue - post tensioning strand cutting module.

6 Initiatives

Accredited contractors submit details of interesting safety initiatives developed by their company during the reporting period. Many of these initiatives will form the basis of case studies and fact sheets to be published on fsc.gov.au over the coming months.

Glossary

Arithmetic mean (average) - The mean is the sum of all the scores divided by the number of scores.

Dangerous occurrence - An incident where no person is injured, but could have been injured, resulting in Serious Personal Injury, Incapacity or Death. Also commonly called a “near miss”.

Fatality Frequency Rate – Fatality Frequency rates are calculated as follows:

$$\frac{\text{Number of incidences}}{\text{Number of hours worked}} \times 100,000,000 \text{ (hours)}$$

Frequency rate - Frequency rates are calculated as follows:

$$\frac{\text{Number of incidences}}{\text{Number of hours worked}} \times 1,000,000 \text{ (hours)}$$

High risk construction work hazards

1. Construction work where there is a risk of a person falling two metres or more
2. Construction work on telecommunications towers
3. Construction work involving demolition
4. Construction work involving the disturbance or removal of asbestos
5. Construction work involving structural alterations that require temporary support to prevent collapse
6. Construction work involving a confined space
7. Construction work involving excavation to a depth greater than 1.5 metres
8. The construction of tunnels
9. Construction work involving the use of explosives
10. Construction work on or near pressurised gas distribution mains and consumer piping
11. Construction work on or near chemical, fuel or refrigerant lines
12. Construction work on or near energised electrical installations and services
13. Construction work in an area that may have a contaminated or flammable atmosphere
14. Tilt-up and precast concrete construction work
15. Construction work on or adjacent to roadways or railways used by road or rail traffic
16. Work on construction sites where there is any movement of powered mobile plant
17. Construction work in an area where there are artificial extremes of temperature
18. Construction work in, over or adjacent to water or other liquids where there is a risk of drowning
19. Construction work involving diving

Incident - An incident resulting in an injury that is required to be notified by the OHS legislative requirement for notifiable incidents in the jurisdiction in which the project is being undertaken.

LTIFR (Lost Time Injury Frequency Rate) - The number of occurrences of lost time injury that result in a fatality, a permanent disability or time lost from work of one day shift or more in the period. The number of hours worked refers to the total number of hours worked by all workers in the period, including overtime and extra shifts.

Mechanism of incident classification –

Major Groups

0. Falls, trips and slips of a person
1. Hitting objects with a part of the body
2. Being hit by moving objects
3. Sound and pressure
4. Body stressing
5. Heat, electricity and other environmental factors
6. Chemicals and other substances
7. Biological factors
8. Mental stress
9. Vehicle incidents and other

Median - The median is the middle of a distribution; half the scores are above the median and half are below the median. If the number of values in the data set is even, then the median is the average of the two middle values. The median is less sensitive to extreme scores than the average.

MTIFR (Medically Treated Injury Frequency Rate) - The number of occurrences of treatment by, or under the order of, a qualified medical practitioner, or any injury that could be considered as being one that would normally be treated by a medical practitioner. The number of hours worked refers to the total number of hours worked by all workers in the period, including overtime and extra shifts.

Non-Scheme projects – Projects where the accredited contractor is the head contractor, the value of building work is \$3 million or more, and the project is not a Scheme project.

Scheme projects - Projects that are directly funded by the Australian Government with a value of \$3 million or more, plus, projects that are indirectly funded by the Australian Government where:

- the value of the Australian Government contribution to the project is at least \$5 million and represents at least 50 per cent of the total construction project value; or
- the Australian Government contribution to a project is \$10 million or more, irrespective of the proportion of Australian Government funding.

Winsorized mean - involves the calculation of the mean after replacing given parts of a distribution at the high and low end with the most extreme remaining values, typically replacing an equal amount of both ends. Often 10 per cent of the ends are replaced. The winsorized mean is a useful estimator because it is less sensitive to outliers than the mean but will still give a reasonable estimate of central tendency.