

# OIR Typology

## Workplace Health and Safety Queensland Board Report

### Typology: Construction industry

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A report on the circumstances causing injuries or diseases which were compensated for 60 days or more.

*Note: Data extracted September 2017*

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# 1. Executive summary

This document provides a Typology based on Queensland Construction industry claims with 60 or more workdays compensated. The Typology classifies the circumstances that resulted in the injury or disease using *mechanism of incident*, as outlined in the Types of Occurrence Classification System (TOOCS).

Claims with 60 or more workdays compensated account for 66 per cent of all Construction claims costs over the period. The average claim rate was 4.8 claims per 1000 workers, which is noticeably higher than the average claim rate of three claims per 1000 workers for all Queensland industries. Workers in the Construction industry are nearly twice as likely to experience a significant injury as workers in all *other* industries.

Construction workers between the ages of 25 to 54 years represent more than 70 per cent of all Construction claims with 60 or more workdays compensated. Moreover, the claim rates for the Construction industry were significantly higher than the rates for all of Queensland across all age groups.

Over 80 per cent of claims with 60 or more workdays compensated were the result of either body stressing, falls or being hit by a moving object.

*Body stressing* injuries represent 39 per cent of all relevant Construction claims. Almost all of the *Body stressing* injuries were the result of muscle strains while lifting or handling objects.

*Falls, trips and slips* injuries represent 31 per cent of all relevant Construction claims. *Falls, trips and slips* injuries were the result of either a fall from height or at level.

Injuries resulting from *being hit by moving objects* represent 11 per cent of all relevant Construction claims.

## 2. Introduction

This document provides a Typology based on *mechanism of incident* and relates to the Construction industry only. The Types of Occurrence Classification System (TOOCS), developed by Safe Work Australia, has been used to describe the relevant mechanism. The mechanism is the *action, exposure* or *event* that best describes the circumstances that resulted in the injury/disease.

### 2.1 What is a Typology?

A Typology is a scientific method of classification that helps explain what has happened previously. In this case, the classification is based on TOOCS *mechanism of incident* and the Typology is comprised of two levels. The higher level (or type) contains the largest and most general groups of mechanisms of incidents. The second type or sub-grouping is a breakdown of these larger mechanisms of incident groups. This Typology is a form of pattern analysis that allows the reader to:

- identify common injury mechanisms and target areas of concern
- assess the effectiveness of targeted initiatives over time.

Note: The Typology is restricted to two levels as it is based on TOOCS *mechanism of incident, which* is comprised of two levels. That is, an upper level (mechanism group) and a more detailed lower level (mechanism).

### 2.2 Scope

The Typology was developed using accepted workers' compensation claims<sup>1</sup> data where:

- the industry division<sup>2</sup> is Construction
- 60 or more workdays are compensated
- psychological and commuting claims are excluded
- the claim intimation date is between 1 January 2012 and 31 December 2016 (the period).

#### 2.2.1 Why focus on claims with 60 or more workdays compensated?

Table 1 below shows the number of Construction claims and overall costs for each claim category. Although claims with 60 or more workdays compensated make up only 13 per cent of all claims over the period, they account for 66 per cent of total claim costs.

Construction claims with 60 or more workdays compensated include permanent and non-permanent impairment damage claims and involve injuries of a significant nature.

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<sup>1</sup> Source: Queensland Employee Injury Database (QEIDB)

<sup>2</sup> Based on ABS: ANZSIC 2006 Classifications

**Table 1. Construction claims by category (2012 to 2016)**

Category	No. of claims	% of claims	Total claim costs <sup>^</sup>	% of costs
Less than 60 workdays compensated	36,683	87%	\$171 M	30%
60 or more workdays compensated	5,320	13%	\$370 M	66%
Fatality claims	56	<1%	\$20 M	4%
<b>Total</b>	<b>42,059</b>	<b>100%</b>	<b>\$561 M</b>	<b>100%</b>

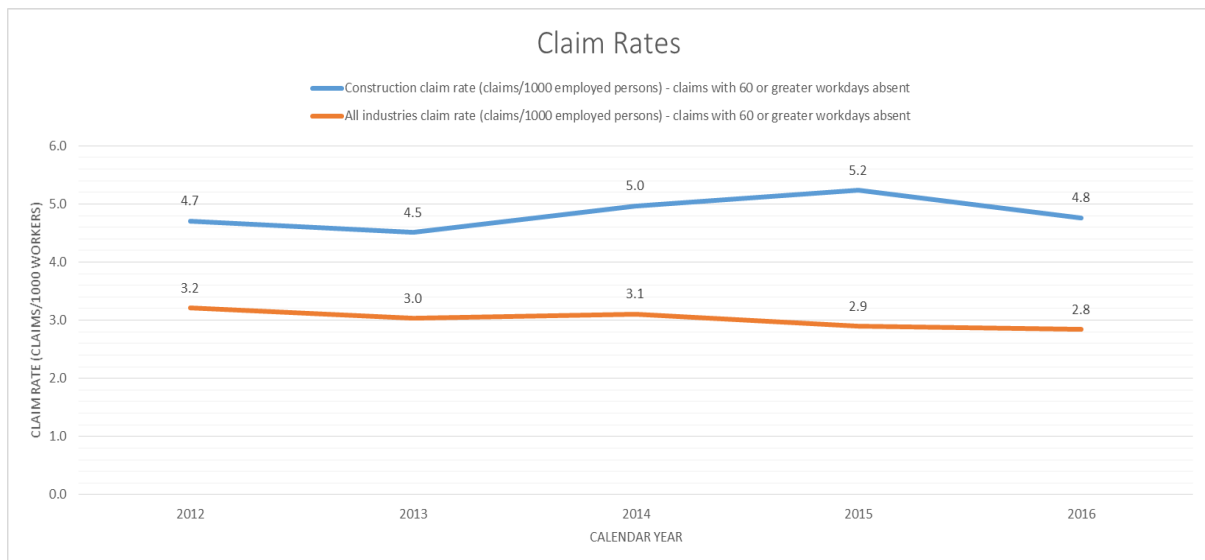
<sup>^</sup>Total statutory costs over the period - 2012 to 2016

## 3. Background – Construction industry

### 3.1 Incidence

The claim rate for Construction claims with 60 or more workdays compensated has remained relatively steady over the past five years; however, the Construction claim rate sits above the claim rate for all Queensland industries. The average claim rate for Construction over the period was 4.8 claims per 1000 workers, which is noticeably higher than the average claim rate of 3 claims per 1000 workers for all industries. Refer to chart 1 below.

**Chart 1. Claim rates (2012 to 2016)**



### 3.2 Likelihood of ≥60 workdays compensated claims

On average, one in every 207 Queensland Construction workers each year will experience a significant injury (an injury which results in a claim requiring 60 or more workdays compensated). Notably, Construction workers are nearly twice as likely to experience a significant injury when compared to workers from all other industries. Refer to tables 2 and 3 below.

**Table 2. Likelihood - Construction claims with 60 or more workdays compensated**

Calendar year	No. of claims	Labour force <sup>3</sup>	Likelihood (1 in X workers)
2012	1,042	221,425	1 in 213
2013	1,049	232,550	1 in 222
2014	1,111	223,675	1 in 201
2015	1,070	204,425	1 in 191
2016	1,048	220,075	1 in 210
<b>Average</b>			<b>1 in 207</b>

**Table 3. Likelihood - All other industry claims (excluding Construction) with 60 or more workdays compensated**

Calendar year	No. of Claims	Labour force <sup>3</sup>	Likelihood (1 in X workers)
2012	6,284	2,060,950	1 in 328
2013	5,915	2,061,275	1 in 348
2014	6,104	2,099,275	1 in 344
2015	5,737	2,143,800	1 in 374
2016	5,670	2,142,650	1 in 378
<b>Average</b>			<b>1 in 354</b>

### 3.3 Age distribution

*The rates in this section are significantly higher than other rates calculated in this paper due to different source denominators being used for age analysis. As such, they are not comparable.*

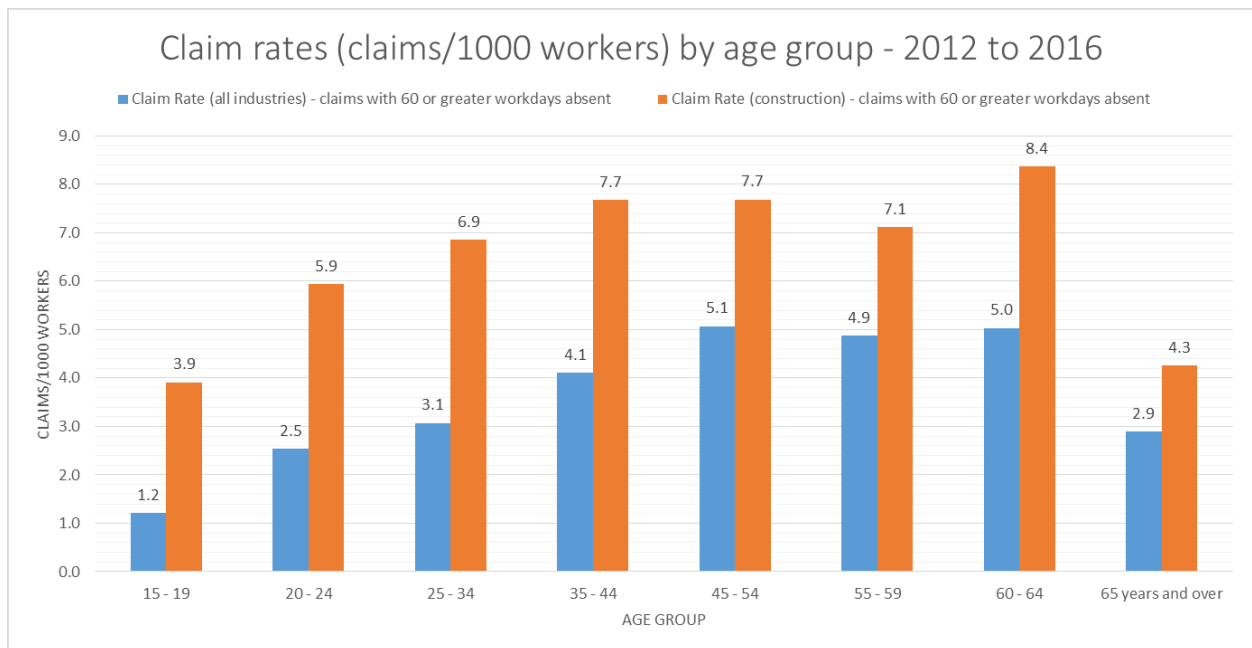
More than 70 per cent of all Construction claims with 60 or more workdays compensated were for workers between the ages of 25 and 54 years.

Chart 2 shows the claim rates for claims with 60 or more workdays compensated by age group. Notably, the claim rates for Construction are significantly higher than the rates for all of Queensland across all age groups, however the difference is particularly evident in the younger categories.

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<sup>3</sup> Source: ABS labour force data

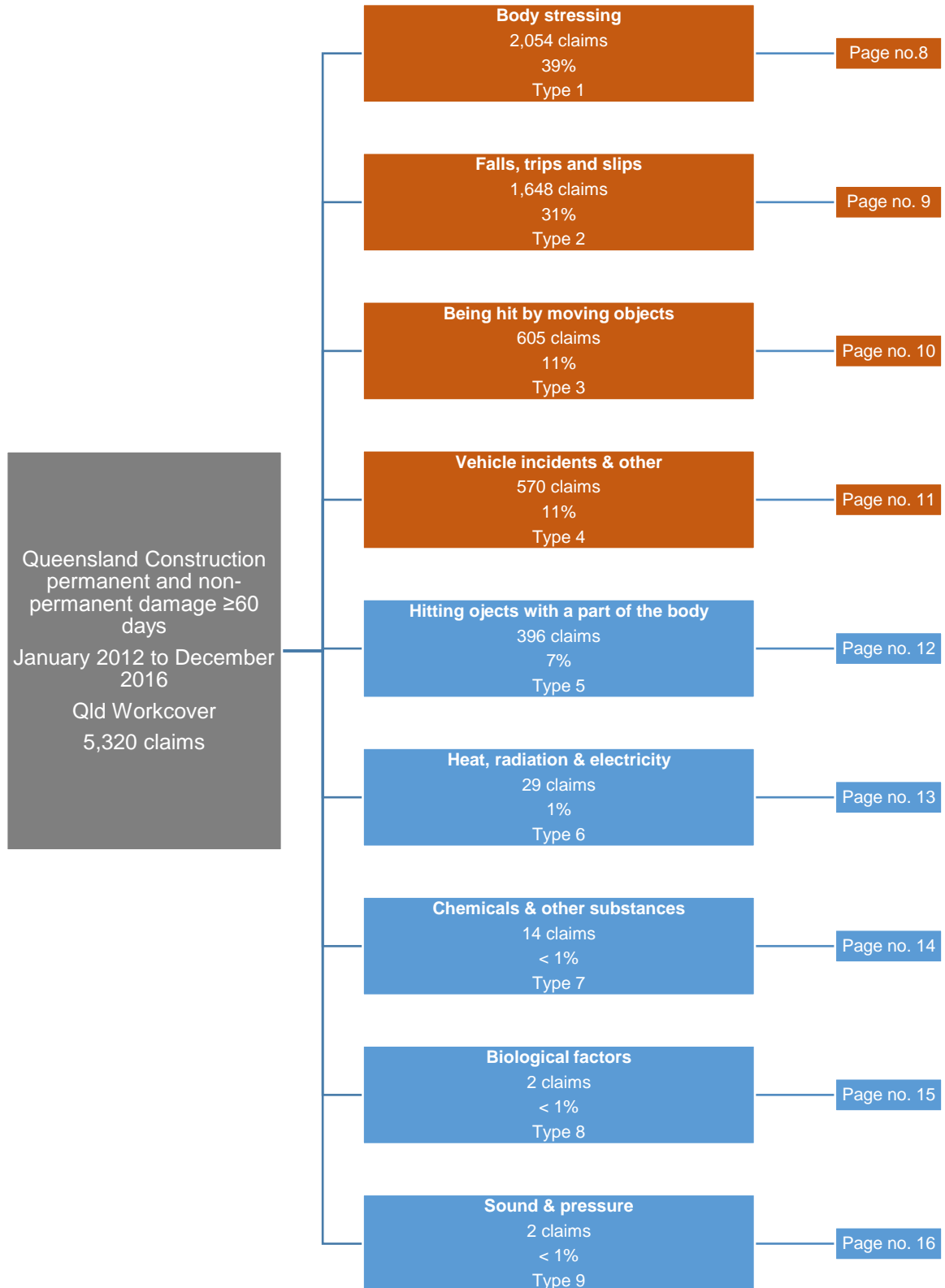
**Chart 2. Claims rates by age group (2012 to 2016)**



*Note: the age group rates were calculated using the average number of claims over the period (2012-2016) divided by the 2016 Census labour force numbers multiplied by 1000.*

## 4. Typology by mechanism (group)

**Note:** *orange* indicates an area of concern whereas *blue* indicates an area of interest but of less importance.

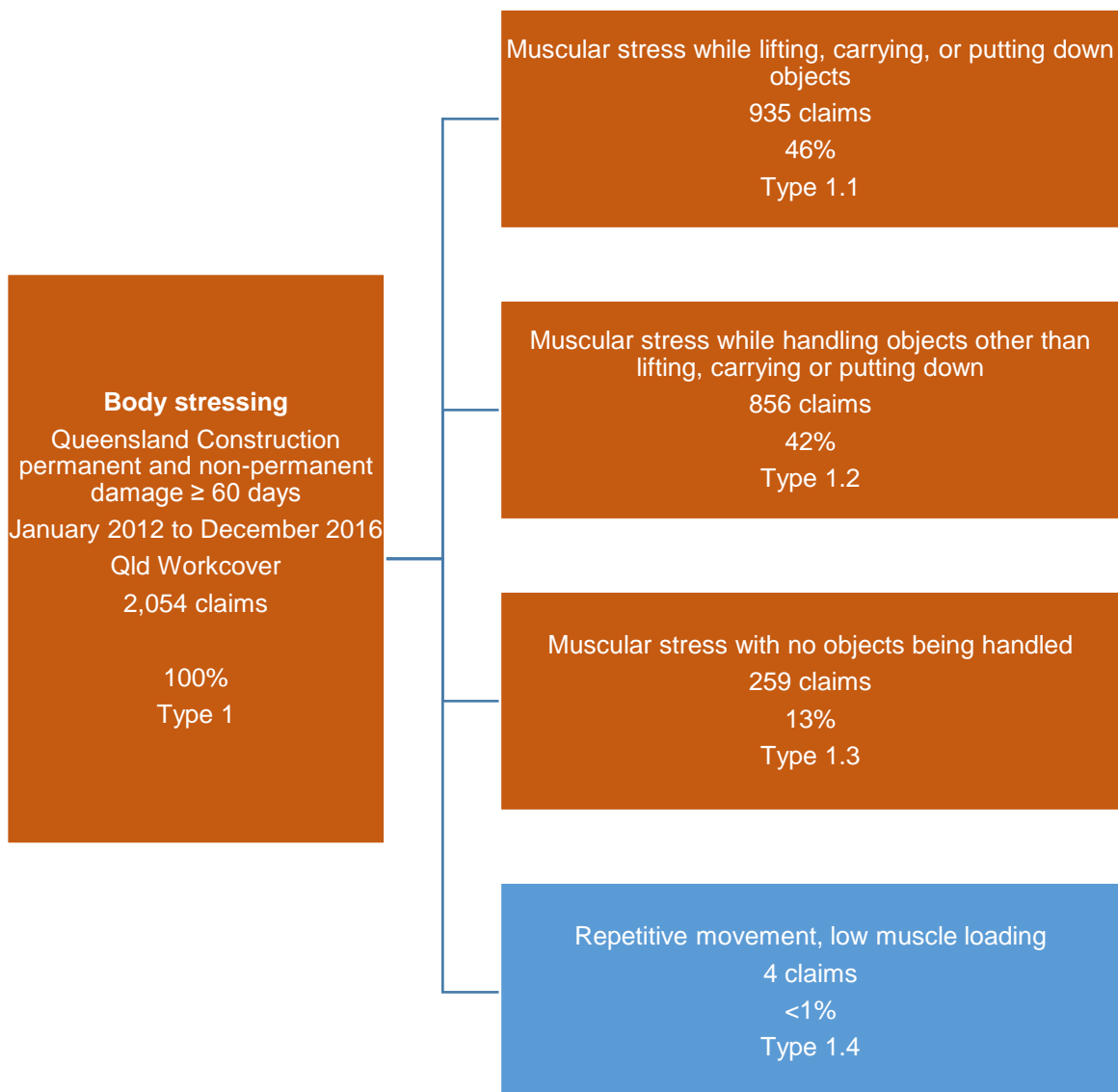




## 4.1 Type 1 – body stressing

Body stressing represents 39 per cent of all Queensland Construction claims  $\geq$  60 workdays compensated.

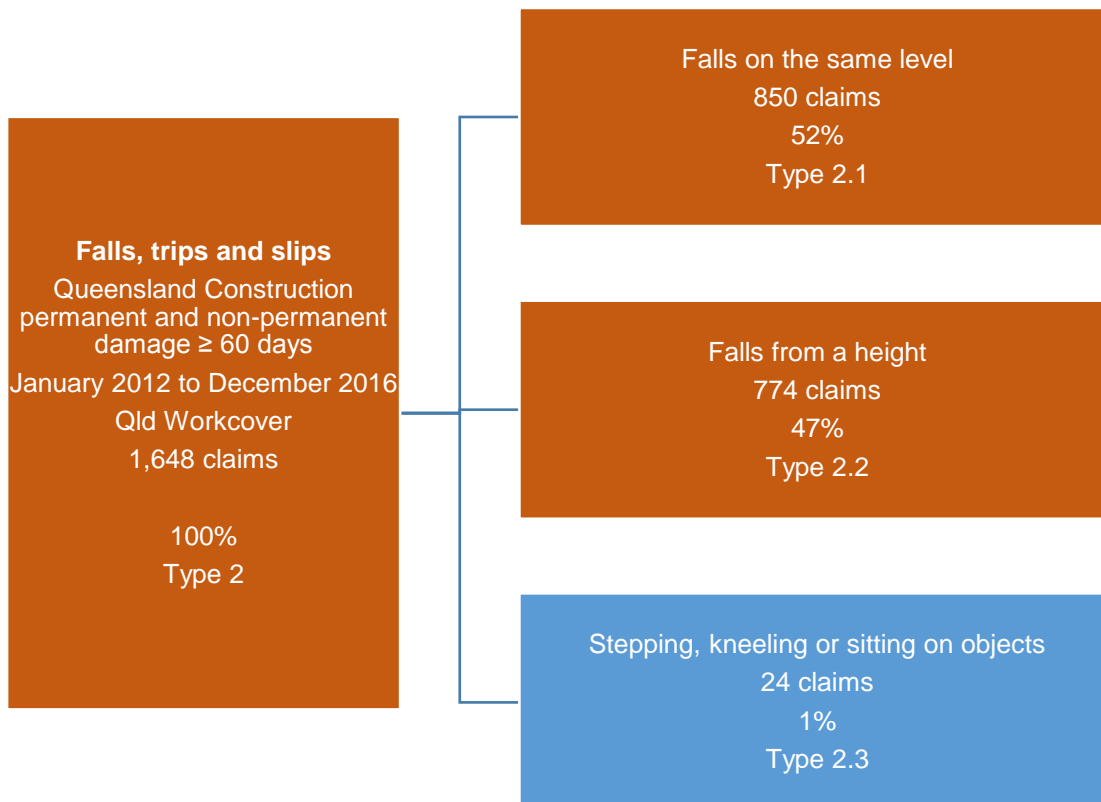
Unsurprisingly, most claims for body stressing were for labourers (44%) and 34% of those claims related to the lower back.



## 4.2 Type 2 – falls, trips and slips

*Falls, trips and slips* represents 31 per cent of all Queensland Construction claims  $\geq 60$  workdays compensated.

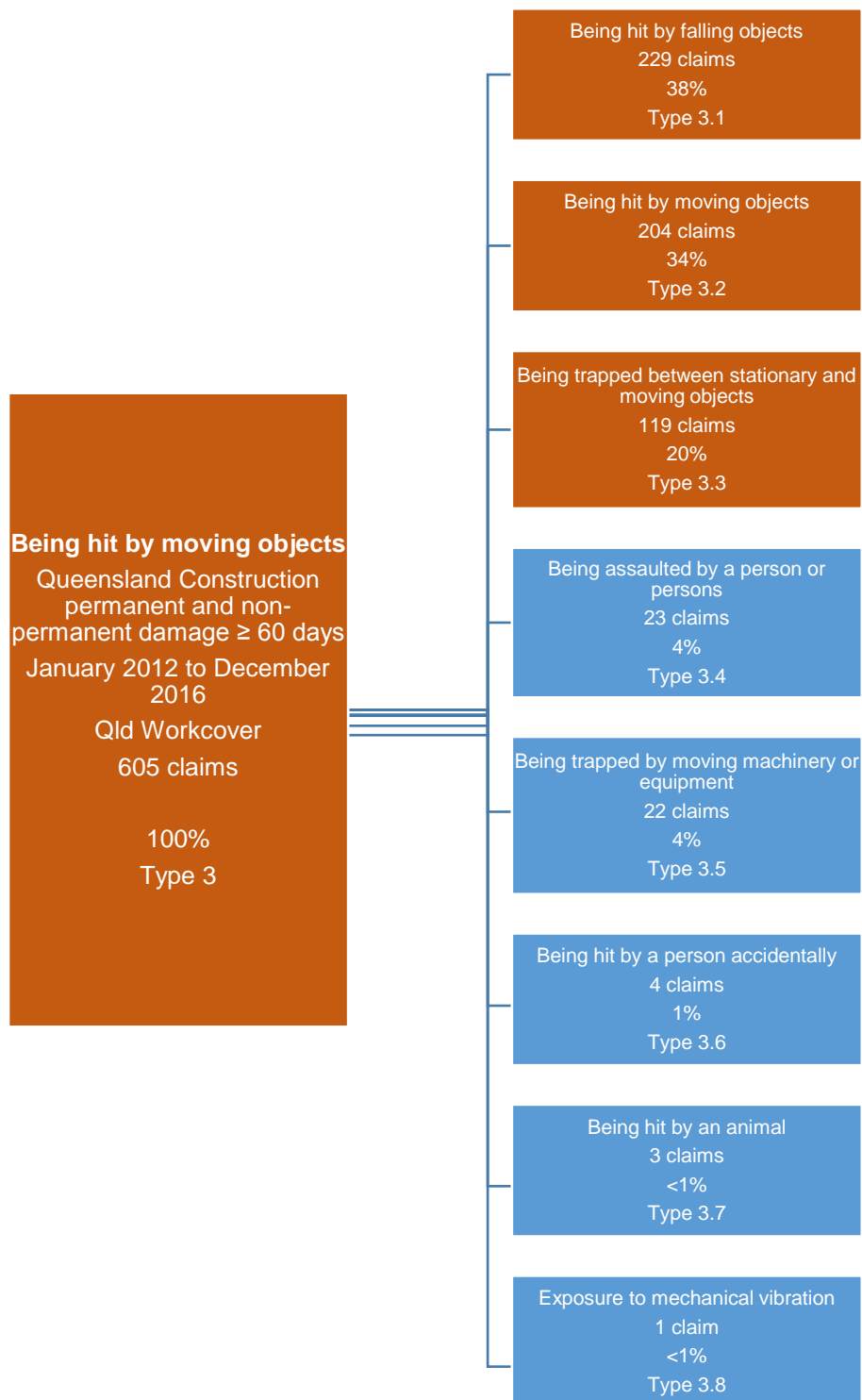
Construction and mining labourers made up a fifth of *falls, trips and slips* claims (21%) and a quarter of those claims were associated with the knee (25%).



## 4.3 Type 3 – being hit by moving objects

*Being hit by moving objects represents 11 per cent of all Queensland Construction claims ≥ 60 workdays compensated.*

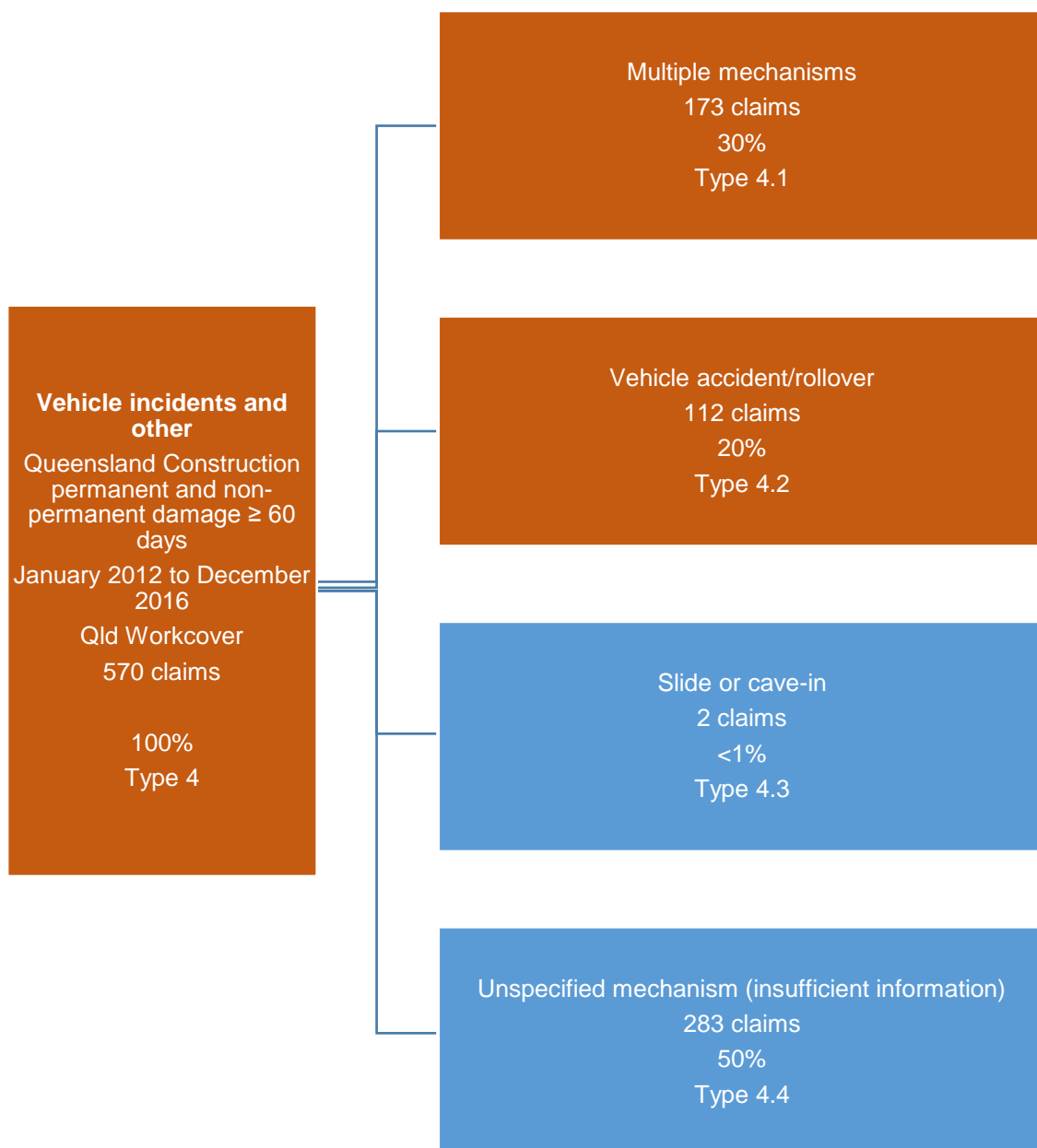
Construction and mining labourers accounted for nearly a third of claims (29%) where workers were hit by moving objects, and nearly half of those claims (49%) were associated with the upper limbs.



## 4.4 Type 4 – vehicle incidents and other

Vehicle incidents and other represents 11 per cent of all Queensland Construction claims  $\geq$  60 workdays compensated.

More than a quarter of vehicle incidents and other claims were for Construction and mining labourers (26%).



## 4.5 Type 5 – hitting objects with a part of the body

*Hitting objects with a part of the body represents seven (7) per cent of all Queensland Construction claims ≥ 60 workdays compensated.*

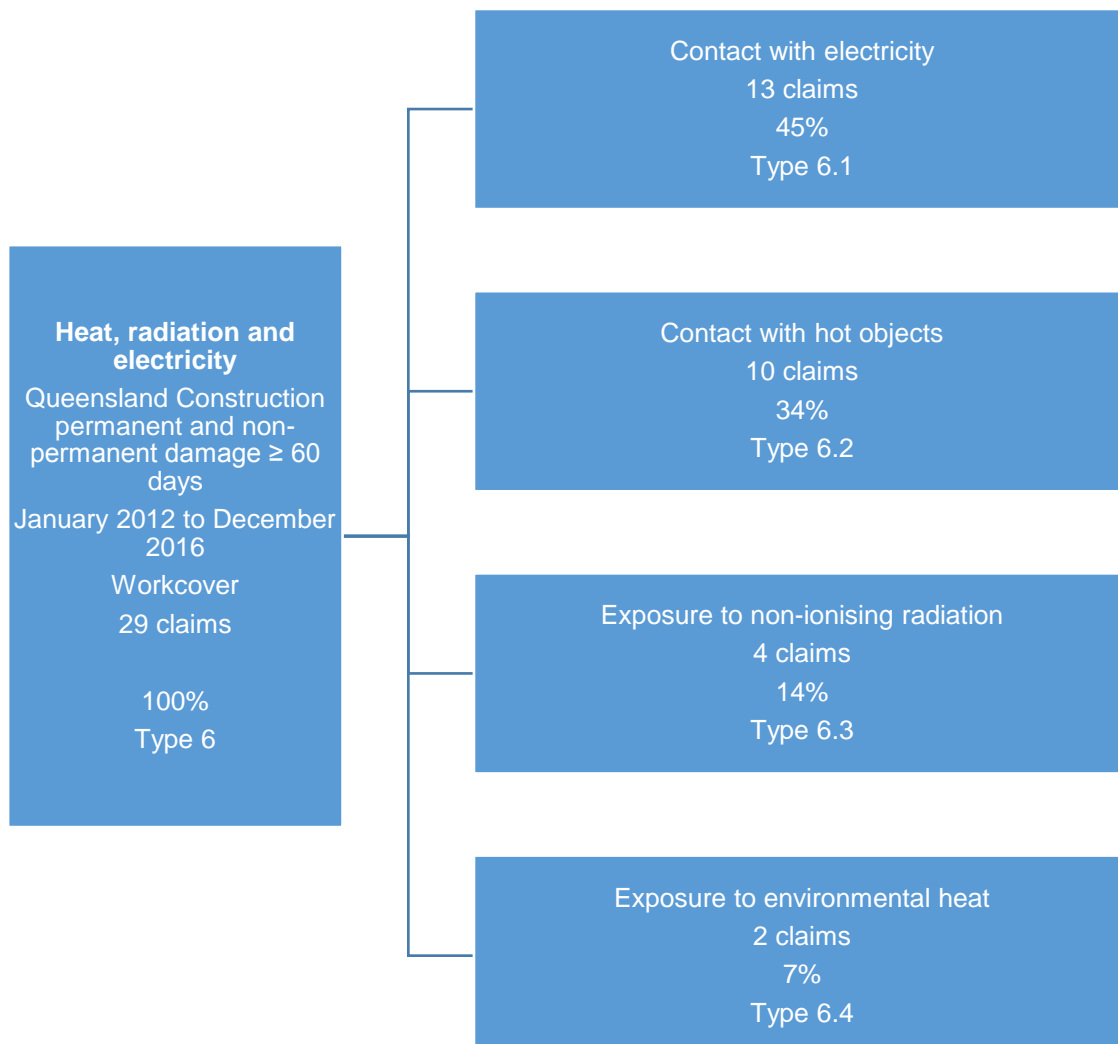
Construction and mining labourers accounted for nearly a quarter (23%) of claims for this mechanism group and almost a half of those claims (48%) were associated with the upper limbs.



## 4.6 Type 6 – heat, radiation and electricity

*Heat, radiation and electricity represents one (1) per cent of all Queensland Construction claims ≥ 60 workdays compensated.*

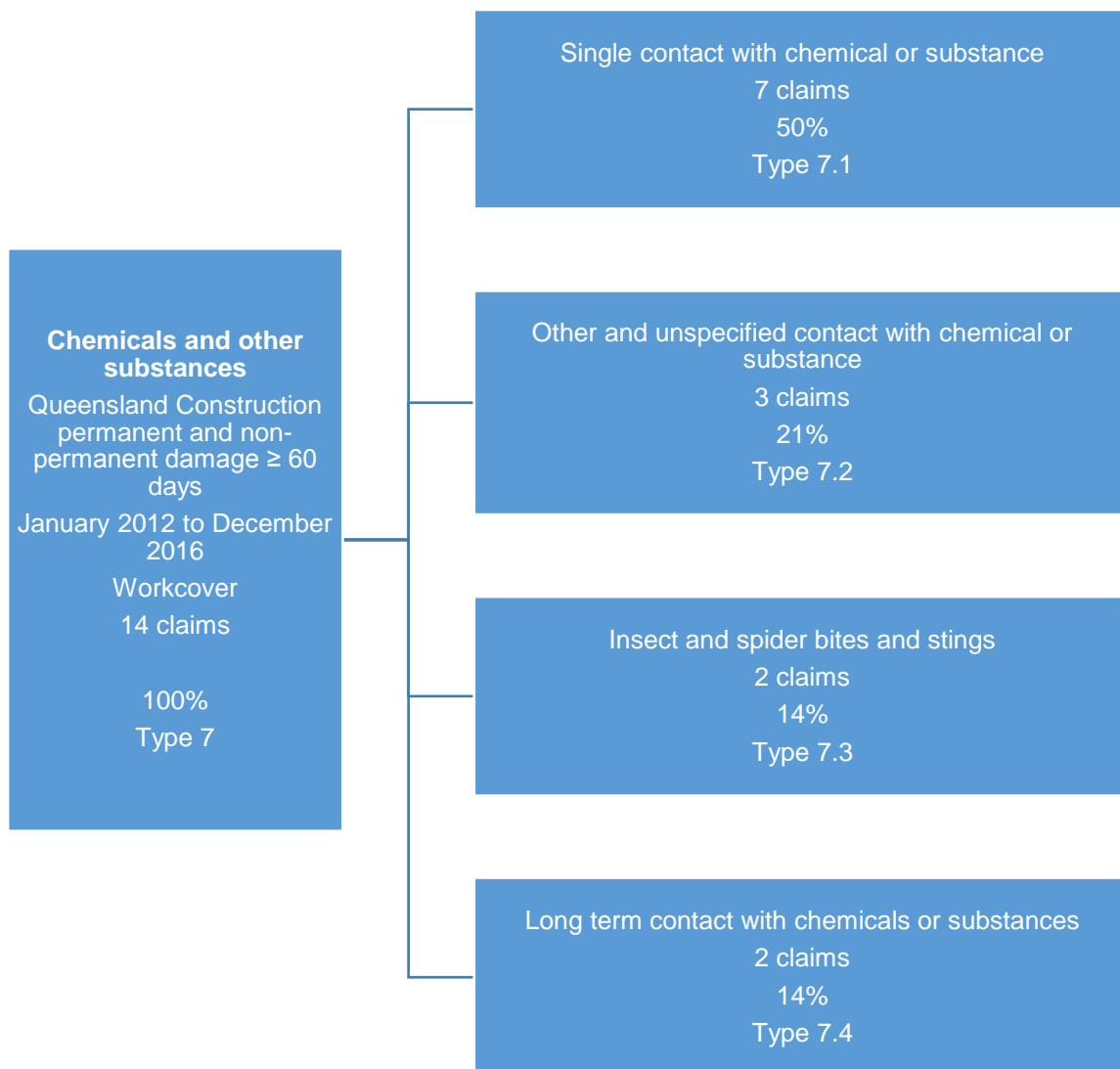
Contact with electricity was the cause of most claims in this mechanism group making up 45% of the total. The occupations most affected by electricity were electricians (4 claims or 31%), Construction and mining labourers (3 claims or 23%), and plumbers (3 claims or 23%).



## 4.7 Type 7 – chemicals and other substances

*Chemicals and other substances represents less than one (1) per cent of all Queensland Construction claims ≥ 60 workdays compensated.*

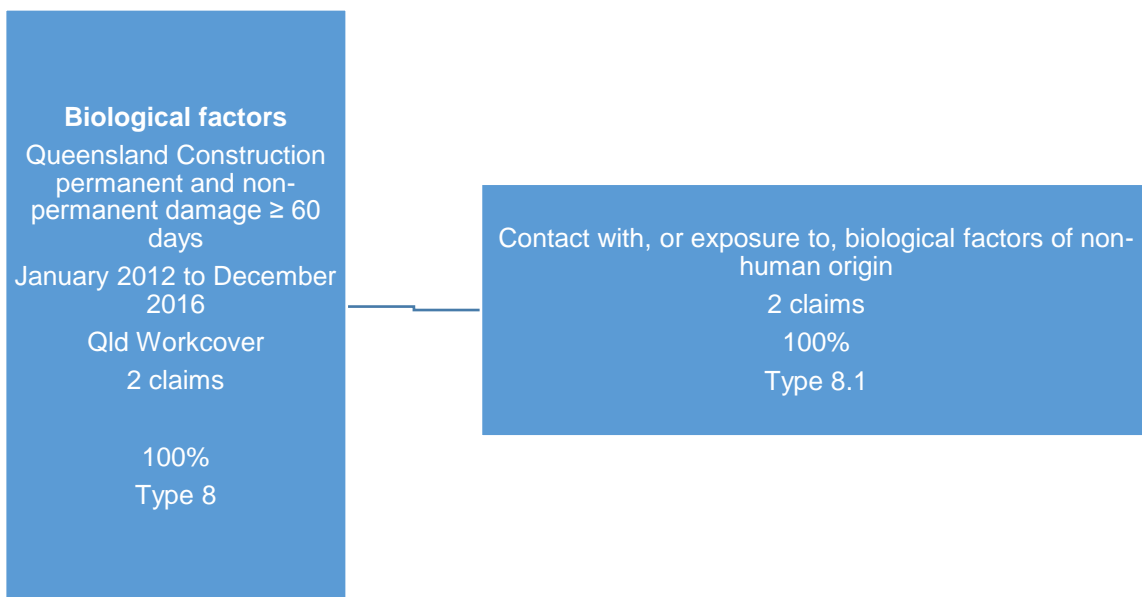
Technicians and trades workers accounted for half of these claims (50%).



## 4.8 Type 8 – biological factors

*Biological Factors represents less than one (1) per cent of all Queensland Construction claims ≥ 60 workdays compensated.*

These claims were due to salmonella and melioidosis.

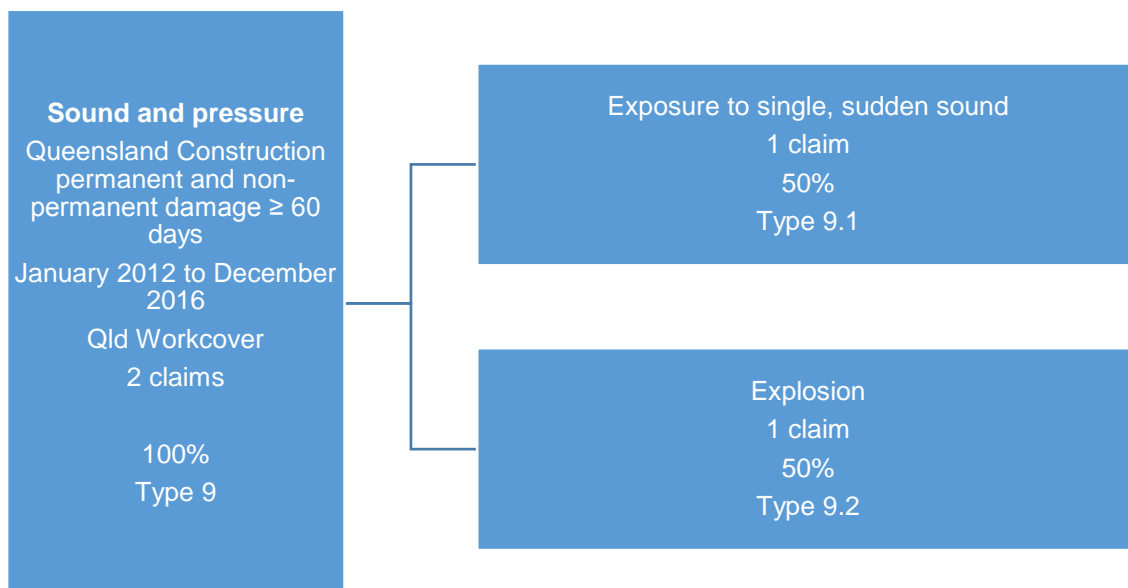




## 4.9 Type 9 – sound and pressure

*Sound and pressure represents less than one (1) per cent of all Queensland Construction claims ≥ 60 workdays compensated.*

A miscellaneous factory process worker and a truck driver suffered from body and hearing injuries respectively due to pressure explosions.



## 5. Typology – summary of key findings

Over 80 per cent of claims with 60 or more workdays compensated were the result of either body stressing, falls or being hit by a moving object.

*Body stressing* injuries represent 39 per cent of all relevant Construction claims. Almost all of the *Body stressing* injuries were the result of muscle strains while lifting or handling objects. This is not surprising given the physically demanding nature of the Construction industry.

*Falls, trips and slips* injuries represent 31 per cent of all relevant Construction claims. *Falls, trips and slips injuries* were the result of either a fall from height or at level. This is an area of concern as, on average, one Construction worker a year over the period was fatally injured as result of a fall from height.

Injuries resulting from *being hit by moving objects* represent 11 per cent of all relevant Construction claims. Notably, on average, two Construction workers a year over the period were fatally injured as a result of being hit by a moving object.

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