

# Development-led Archaeology Health and Safety Injury Survey 2020-21

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**FAME HEALTH AND SAFETY SURVEY SERIES**

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Development-led Archaeology Health and Safety Injury Survey 2020-21. Version 1, July 2022.

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Near-miss: From FAME's Near-miss guide

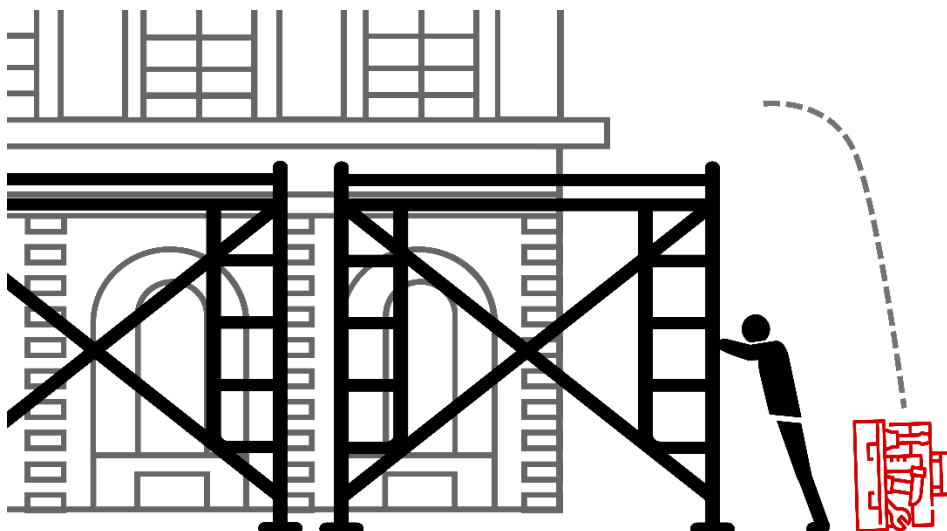
# Three Key Findings

1. Archaeology has comparable RIDDOR accident rates to the construction industry



2. Ergonomic/Manual Handling continues to be the most common cause of injuries.

3. Near misses – are under-reported in the sector.



## Background

One goal of FAME's Health & Safety strategy is to assemble industry injury and accident data to assist with the development of preventative measures and improved ways of working. This is FAME's fourth Health and Safety Injury Survey; the first was for the 2009-10 financial year, and since 2018-19 we have undertaken these surveys annual. This report covers the financial year 2020-21, and only covers archaeologists working in the UK.

## Methods

The questions used for this survey were included in the 2020-21 State of the Archaeological Market Survey. This was to avoid overloading the sector with too many surveys, resulting in fewer responses due to survey fatigue. A total of 21 responses were received<sup>1</sup> from organisations employing 1601.25 fulltime equivalent<sup>2</sup> positions. This represents 34% of the estimated 4700 FTE archaeologists working in UK Development-led Archaeology<sup>3</sup> as contractors and consultants – curators are not included. This survey samples the sector and assumes that the rates for this sample are reflective of the whole sector. Given that the responses are from the employers of one third of the professionals in the sub-sector, it is likely that this assumption is correct.

## Results

### Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)

In the UK, RIDDOR is the legal instrument that requires employers, and those in charge of work premises, to report and keep records of:

- work-related accidents which cause deaths
- work-related accidents which cause certain serious injuries (reportable injuries)
- diagnosed cases of certain industrial diseases; and
- certain 'dangerous occurrences' (incidents with the potential to cause harm)

The Regulations were last updated in 2013 and apply to many archaeological organisations and settings. The changes in 2013 means that the 2009-10 data – from the first FAME Health and Safety Injury Survey - are mostly not comparable to the data collected by FAME since 2018.

Respondents were asked about their RIDDOR reportable injuries and their responses can be found in Table 1.

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<sup>1</sup> not all respondents to the SoM survey responded to the H&S questions

<sup>2</sup> 37.5 hours per week, 52 weeks per year

<sup>3</sup> Due to low responses from Irish organisations to SoM this data only focuses on the UK

Table 1: Reported number of different RIDDOR injuries from 2018-21.

Type	2018-19	2019-20	2020-21	2018-21 average
Specified injuries (including fatality)	4	1	0	1.7
Injuries resulting in over 7 days absence	3	2	3	2.7
Occupational diseases (including carpal tunnel syndrome, tendonitis and occupational dermatitis)	0	0	5	1.7
Occupational disease caused by exposure to carcinogens, mutagens & biological agents (including occupational cancers)	0	0	0	0.0
Specified dangerous occurrences	0	1	1	0.7
Total (n=)	7	4	9	6.7

### Non-Reportable Accidents and Near Misses

In order to gather data on incidence of commonly occurring accidents/incidents across the sector, respondents were asked to report the number of accident book entries, that were not RIDDOR reportable (Table 2).

Table 2: Non-RIDDOR accidents and near misses from 2018-20.

Type	2018-19	2019-20	2020-21	2018-21 average
Total number of non-reportable accidents	147	159	287	197.7
Total number of near misses reported	140	133	83	118.7
Total (n=)	287	292	370	316.3

Respondents were also asked about the types of accidents these were (Table3)<sup>4</sup>.

### Injury Frequency Rate and Incident Rate

There are two primary injury figures: Incident Rate and Frequency Rate<sup>5</sup>. The Injury Frequency Rate indicates the number of Reportable Injuries employees are likely to have for every 1,000,000 hours worked. It is calculated in the following manner:

$$(\text{Number of Reportable Injuries in the period} / \text{Total hours worked (by all employees) during the period}) \times 1,000,000$$

While the Incident Rate is the number of injuries per 100,000 employees and is calculated in this manner:

$$(\text{Injuries per year} / \text{employed}) \times 100,000$$

<sup>4</sup> In 2018-19, it was optional to respond to this question and did not separate out incidents from near-misses, why only 60 of the 287 reported accidents and near misses are thus categories.

<sup>5</sup> for more information see <http://www.hse.gov.uk/statistics/adhoc-analysis/injury-frequency-rates.pdf>

With the sample representing 1601.25 FTE archaeologists the estimated Injury frequency and Incident rates for the sector were calculated (37.5 hrs per week x 52 weeks) and can be found in Table 4.

Table 3: Types of Non-RIDDOR accidents and near misses from 2018-2020.

Type	2018-19	2019-20		2020-21	
	All	Non-reportable	Near misses	Non-reportable	Near misses
Ergonomic / manual handling	23	78	8	84	5
Slip, trip or fall	9	6	13	56	25
Contact with or knocking into object	7	34	14	20	4
Vehicle accident (travelling on work business, including to or from site)	3	10	49	55	17
Other	18	31	49	72	32

Table 4: Estimated injury frequency and incident rate of respondents to the survey.

RIDDOR	2018-19		2019-20		2020-21		average 2018-21	
	Injury frequency rate	Incident rate	Injury frequency rate	Incident rate	Injury frequency rate	Incident rate	Injury frequency rate	Incident rate
Specified injuries (including fatality)	2.01	342	0.16	31.83	0	0	0.72	124.61
Injuries resulting in over 7 days absence	1.51	256	0.33	63.65	0.96	187.5	0.93	169.05
Occupational diseases	0	0	0	0	1.60	312.5	0.53	104.17
Occupational disease caused by exposure to carcinogens, mutagens & biological agents	-	-	-	-	-	-	-	-
Specified dangerous occurrences	-	-	0.16	31.83	0.32	62.5	0.24	47.17



## Compared to other sectors

Given how rates are calculated - as figures per every 100,000 workers - and the size of the archaeological industry, ~4-5k people working in it, one reported accident can greatly alter the results. As such, individual surveys have shown archaeology having both apparently very high and low accident rates. However, now that we have several years of data we can start to average out the results and see how we compare to other sectors.

The Health and Safety Executive (HSE) provide Incident Rate data for different sectors by Standard Industrial Classification codes (SIC 2007). The Health and Safety Executive only reports data using the Incident Rate and does not report on Frequency Rates. However, they do provide a methodology for generating the Frequency Rates for sectors<sup>6</sup>. In past reports we have made these calculations; they have consistently shown the Frequency Rate for archaeology places the sector in a similar position as the Incident rate, compared to other sectors, so we have not calculated them this year.

The averaged Incident Rates for archaeology over the last three years are in-line with those in the construction sector, which we work in and alongside. This average Rate is significantly lower than some manufacturing sectors, though much higher than the lowest sectors – computer programming and financial services.

Table 5: Calculated average RIDDOR Incident Rates, non-fatal for different sectors 2018-21 (note some of the non-archaeological figures may be revised later by HES)

Industry	Total	Specified	Over-7-day
Other manufacturing	1637.33	383.67	1253.33
Manufacture of food products	1014.67	207.67	807.33
 Highest two sectors			
Construction	325	116	209
Archaeology	294	125	169
 Lowest two sectors			
Computer programming, consultancy and related activities	3	1	2
Activities auxiliary to financial services and insurance activities	1.5	0.5	1

## Discussion

Currently, the archaeology Rates are similar to those for the Construction sector, which seems intuitive as that is where most development-led archaeology takes place, but caution should be taken with accepting these results because they seem ‘right’. While the averages are reducing the wild swings seen over the last few surveys these results are based on only

<sup>6</sup> see <http://www.hse.gov.uk/statistics/adhoc-analysis/injury-frequency-rates.pdf>

This is done by using the average hours worked to provided estimates. HSE does not produce these ‘hours worked’ data, but the Office for National Statistics does. There are two main sources of data on hours of work: the Annual Survey of Hours and Earnings survey or the Labour Force Survey.



three years of data. Ideally, we would like to see data for at least another year, or maybe two, before being confident in the results.

Ergonomic/Manual Handling has been the most significant cause of problems reported since the surveys started tracking them. Muscle injuries can be cumulative and repetitive stress injuries are not captured by RIDDOR reporting, as they are not caused by a single identifiable event, which is required for RIDDOR purposes. While there will be multiple causes of Ergonomic/Manual Handling injuries, not all of which can be prevented, employers would be advised to consider investigating routes to reduce the risk of such injuries for their staff. Addressing the causes of those injuries would have a significant impact on the wellbeing of the workforce.

There is concern about the tracking of near misses. FAME has recently issued a guide on tracking near misses as they are an excellent way to identify and stop problems before someone gets hurt. However, there should be significantly more near-misses reported than accidents; estimates vary, but the Health and Safety Executive (HSE) considers that on average there are ninety near-misses for every one injury. However, for our survey, in every category of injury there were more accidents reported than near-misses. Comments left show that not all organisations are currently recording them – for example, one organisation identified that ‘...near misses are not recorded’. Moreover, those that do track them, appear to only track a small fraction and so there is room for sectoral improvement in the quality of reporting.

An individual working 37.5 hours per week for 48 weeks per year (assumed four weeks of holiday) for 40 years would work 72,000 hours over their career. With a 0.93 frequency rate for ‘injuries resulting in over 7 days absence’, which is the rate per 1 million hours worked, a person with a long career in development-led archaeology would have a 7% chance of experiencing such an event. However, for an injury to be RIDDOR reportable it has to be the result of a separate, identifiable, unintended incident which causes physical injury. An injury or illness resulting in time off work is not reportable unless there is an identifiable event to link to it. The calculated non-RIDDOR reportable injury incident rate (per million hours worked), for development-led archaeology in 2020-21, was 100. That represents roughly seven injuries over a 40-year career ( $72,000/1,000,000 \times 100$ ). These are averages but the odds are that an archaeologist is likely to face multiple injuries over their career. The severity of these is not known and this is an area that needs more research – are these minor bumps and scrapes or is this a serious welfare issue for the workforce? Potentially, future surveys could try to ascertain the nature of these non-reportable injuries.

