

## Research brief / specification

**Construction Sector – Cost Estimating Software Market, Understanding the Opportunity**

Health and Safety Executive

Insight & Service Design

151 Buckingham Palace Road

London

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**21st November 2019**

**1. Contract Brief**

The Health and Safety Executive (herein after referred to as the “Client”, “we” or “HSE”) is letting a contract for a research agency to carry out an analysis of the current construction cost estimating software market in the UK in order to understand the overall scale, who the main players are, and what their market share is, who the main users are and why and whether an opportunity exists for a new product.

**2. Context of HSE**

HSE is a Crown non-departmental public body with specific statutory functions in relation to occupational health and safety. It is appointed by the Secretary of State for Work and Pensions and employs around 2,600 staff including policy advisers, inspectors, technologists and scientific and medical advisers. The HSE’s job is to prevent people being killed, injured or made ill by work.

HSE works from 30 locations throughout Great Britain, and is responsible for advising ministers on policy, setting regulations and enforcing the integrity of the health and safety system through inspections and, if necessary, prosecuting those who deliberately or negligently break the rules.

Great Britain has developed one of the best workplace health and safety systems in the world. Fatalities, injuries and ill health have all substantially reduced since the HSE was formed in 1975. Benefits of good health and safety to business, the UK economy and national reputation are clear. It translates into reduced sickness absence, lower healthcare and welfare costs, and improved productivity. It supports growth and helps make the UK a more attractive place to do business for international investors.

The Helping GB Work Well strategy states that managing workplace risks shouldn’t be complicated or costly but also recognises that making support available which is quick and easy for small businesses to understand remains a challenge for all sectors. (<http://www.hse.gov.uk/strategy/index.htm>)

**3. Context of the Construction Sector**

In 2018, there were circa one million construction businesses in the UK and 96% of those had 0-13 employees[[1]](#footnote-1) and are therefore defined as micro and small businesses.

For HSE, the Construction Sector remains one of the most hazardous; performance has improved over the past decade, and the number and rate of fatal incidents, workplace injury and work-related ill health show a general, long-term downward trend. However, the levels of incidents and ill health remain high.

In 2017/18 there were 38 fatal injuries to workers with almost half of those caused by falls from height, 82,000 workers were suffering from work-related ill health (new or long standing)[[2]](#footnote-2) and the Construction Industry had statistically significantly higher injury rates than for all industries.[[3]](#footnote-3)

The majority of fatal incidents involve small businesses, and nearly half of all reported injuries occur in refurbishment activities. Risks on larger projects can be substantial but, generally, large projects are better at controlling risks than most small projects.

HSE’s Construction Sector plan[[4]](#footnote-4) determined that improvement for micro and small businesses is a key priority, and that the insights developed from previous primary research would be used to develop interventions which employed the right mix of messages, tools, information and incentives to help micro and small construction businesses comply proportionately in order to positively impact the rate of accidents, death, injury and ill-health.

**4. Background to this work**

In 2018, the insights from four pieces of primary research (qualitative and quantitative) were distilled and developed into ten potential intervention areas, three of those were prioritised for further development.

The focus of this research brief is to support the development of one of these intervention areas, entitled *Win the Cost/ Benefit argument - The Business Offer.*

Win the Cost/ Benefit argument - The Business Offer

Our **insight** showed that at the selling stage, client budgets were a key influencer on whether health and safety (H&S) was ‘costed in’ and that consequently H&S is often sacrificed to win work (e.g. shortcuts to meet timeline, limit safe levels of staffing, provision of equipment to meet budget). This was especially true for businesses who felt their ‘part’ of the market was more competitive and could be under cut on price. During the construction stage, cost and time are intertwined, constantly referred to as preventing or enabling good H&S practice.

Therefore **the challenge** at the most competitive end of the market (particularly among generalist trades), is that H&S can still be seen as optional and costly as opposed to integral and part of a quality job and is purposively costed out. ‘Getting the job done’, time and money/ profit are prioritised over other factors e.g. quality, an individual’s health, or taking safety precautions.

So **the opportunity** is to collectively do more to win the cost/ benefit argument so that H&S is ‘part of the package’ and becomes the norm when clients buy, and small construction businesses sell, new build, refurbishment, repair or maintenance work.

As part of the early development this intervention area, HSE agreed to work collaboratively with key stakeholders from Construction Industry Advisory Committee (CONIAC) who represent the views of businesses operating in the UK Construction Industry.

During working sessions with CONIAC, it was agreed that the objective of this intervention area is to develop a suite of tools which helps tradespeople to budget and cost H&S practices into their quotes at the selling and tendering stage.

One idea for a tool is a new cost estimating software product for construction businesses, with H&S integral to the whole product (as opposed to being an additional product that is an ‘add on’).

**So what is construction cost estimating software**

Usually construction contractors prepare bids or tenders to compete for a contract award for a project.

To prepare the bid, first a cost estimate is made to determine the costs and then establish the price(s).

This involves reviewing the project's plans and specifications to produce a take-off or quantity survey which is a listing of all the materials and items of work required for a construction project by the construction documents.

For some contractors/ tradespeople, this involves employing a quantity surveyor that can add a time delay into the bidding/ tendering process and is an additional cost.

Together with prices for these components, the measured quantities are the basis for calculation of the direct cost. Indirect costs and profit are added to arrive at a total amount.

For many, preparing the bid is completed by hand using pen and paper and for the more advanced using Microsoft Excel – both methods are time consuming and not always accurate.

Cost estimating software is computer software designed for contractors to estimate construction costs for specific construction projects which saves time and is more accurate than traditional methods.

At the more larger commercial end, project delivery software is also integrated as part of the overall package.

We are aware that these tools already exist across multiple providers in the UK but we aren’t sure if they are used by our target market and whether they integrate good safety/ health practice as standard.

Hence we have spotted a potential opportunity which we would like to explore further.

**5. Where we are now**

We have completed some initial desk research to better understand the current construction cost estimating software market in the UK.

This has been small- scale and was used to populate a perceptual map of the UK construction cost estimating software market (*attached in Appendix 1, page 11).*

In order to know if there is an opportunity for a new product we require further work to appreciate the overall scale of the construction cost estimating software market, who the main players are, what their market share is and whether H&S is integral to their cost estimating products or whether H&S must be bought as an additional product.

The target audience for any future product would be sole-traders (0 employees) and micro-businesses (1-9 employees), operating in a contractor capacity for domestic clients or for small scale commercial clients only. As such, we need to understand the following:

* Which tradespeople are using/ not using cost estimating software i.e. mainly the specialist trades, mainly the generalist trades, both, contractors, sub-contractors?
* What proportion of tradespeople are using/ not using cost estimating software?
* How do they use these tools? Do they use them all the time?
  + Is there a threshold cost/ size of project which dictates this?
* Which type of projects/ clients do they usually use it for?
* If using cost estimating software, why do they use it? And what drove them to try the software in the first place?
* If using estimating software, which brands and why?
  + - Preferred features?
* How do they pay i.e. subscription, lifetime licence? How much? What are the price thresholds in this marketplace?
* If not using cost estimating software, would they consider using it?
  + If not, why not?
* How many tradespeople also have a role as a lead/ principal contractor?
* Which specific trades are more likely to also act as lead/ principal contractors?
* Are they more likely to use cost estimating software?

**6. Research Objectives**

For HSE to understand whether there is an opportunity for a new product to enter the construction cost estimating software market we would like to understand the following:

* The scale/ size of the construction cost estimating software market in the UK, who the main players are and what their market share is
* Who currently uses construction cost estimating software market in the UK and what proportion of, the circa one million construction businesses in the UK, that is
* Is H&S integral to the product or offered as an additional product i.e. HBXL provides EstimatorXpress and Health & Safety Xpert, why is that
* For users:
  + How did they find out about it and what led them to try it
  + Why do they use it (motivations)
  + How do they use it (frequency, situations, other patterns)
  + What are their referred features of the product
  + How do they pay for the product, and any price thresholds
* For non- users:
  + why don’t they use it (lack of awareness, lack of perceived benefits, price, format/ functionality)
  + would they consider using a construction estimating software product, why (motivations)

**7. Methodology and Target Audience**

Method

Currently we see this as potentially a piece of in-depth desk research, a market analysis and quantitative research but we would like the agencies to suggest the most successful approaches to answer the research objectives within the given budget.

Target Audience

**Desk research & Market analysis**

* Construction cost estimating software market in the UK (England, Scotland, Wales)

**Quantitative research**

* Sole-traders (0 employees) and micro-businesses (1-9 employees) in the UK (England, Scotland, Wales)
* Specialist trades (i.e. electricians, plumbers, glaziers, heating ventilation/ air conditioning engineers – *there are more, please see Appendix 2, pages 12-14*))
* Generalist trades (i.e. plasterers, joiners/ carpenters, bricklayers, painters, decorators, floor layers, roofers, scaffolders – *there are more,* *please see Appendix 2, pages 12-14*)
* Contractors and sub-contractors
* Broad mix of age
* Broad mix of gender
* \*Domestic clients only, \*\*small commercial clients only or a mix of both defined by HSE as follows:

A \***domestic client** is any individual who has construction work carried out on their home, or the home of a family member, that is **not** done as part of any business. <http://www.hse.gov.uk/construction/areyou/domestic-client.htm>

A **commercial client** is any individual or organisation that carries out a construction project as part of a business.

[http://www.hse.gov.uk/construction/areyou/commercial- client.htm](http://www.hse.gov.uk/construction/areyou/commercial-%20client.htm)

A \*\***small** **commercial client** is defined by HSE **as less than 15 workers on site at any given time.**

**8. Deliverables, timetable, costs and tendering**

**Deliverables**

* A face-to-face kick-off briefing meeting with the agency and main internal stakeholders.
* Regular checkpoint meetings/telekits to discuss updates as research work begins and progresses.
* A full report in PowerPoint or Word format *(to be agreed)*
* We do not anticipate requiring a formal presentation but expect an informal talk through of the findings with our internal clients from HSE’s Construction Division) and the Insight and Service Design team *(optional, budget permitting, please cost separately)*

**Timetable**

|  |  |
| --- | --- |
| **Process Milestone** | **Date** |
| **Call for Competition Tender published** | **Thursday 21st November 2019** |
| Deadline for receipt of clarification questions from Bidders | Tuesday 26th November 2019 |
| Responses to clarification questions provided to all Bidders | Thursday 28th November 2019 |
| **Deadline for CFC Stage 1 responses** | **13.00 on Thursday 12th December 2019** |
| Evaluation of CFC Stage 1 responses | Thursday 12th to Monday 16th December 2019 |
| Pitch presentation/s (only if required) | Tuesday 17th or Wednesday 18th December 2019 |
| Notification of contract award decision and feedback on bids to Bidders | Thursday 19th December 2019 |
| **Christmas & New Year Period – Assume Closure** | **Monday 23rd December – Friday 3rd January** |
| Commencement date for the provision of services | WC 6th January 2020 |
| Project set-up meeting | WC 6th January 2020 |

**Budget**

We expect to receive a range of proposals and options to fit the brief, with recommendations of approach based upon the outcomes required. Our total budget expectation (excluding VAT) falls within the range below:

|  |  |  |  |
| --- | --- | --- | --- |
| **£0 - £20,000** |  | £80,001 - £100,000 |  |
| £20,001 - £40,000 |  | £100,001+ |  |
| £40,001 - £60,000 |  |  | |
| £60,001 - £80,000 |  |  | |

* Please break down the budget clearly and provide clear costs and (where appropriate) costed options.
* All expenses and costs must be clearly broken down, including day rates of research personnel.

**Supplier Response**

Within your response please outline your understanding of the requirements of this particular project and your approach to satisfying them, bringing to bear your previous knowledge, experience and skills in the field .i.e. proposed approach to the work

Your proposal needs to cover the following:

1. Demonstrate a clear understanding of the research requirements, and propose a viable methodology to provide well-evidenced recommendations to support business direction
2. Track record/technical capability to carry out the work
3. Named resource and commitment to collaborative working. Please specify who will be responsible for delivering this project and provide detail of the input into the project that will be provided by each named person
4. Clear resource plan and confidence of on-time delivery
5. Clear cost, with options related to the weighting and numbers recruited at each stage *(if applicable)*
6. Whether any part of the project will be subcontracted and if so to whom

**Please include short biographies of all team members that will work on the account.**

**Please ensure your response is no more than 10 sides of A4 excluding biographies (which can be annexed).**

Please let us know on receipt of this brief whether you think there will be any conflict of interest in your submitting a proposal.

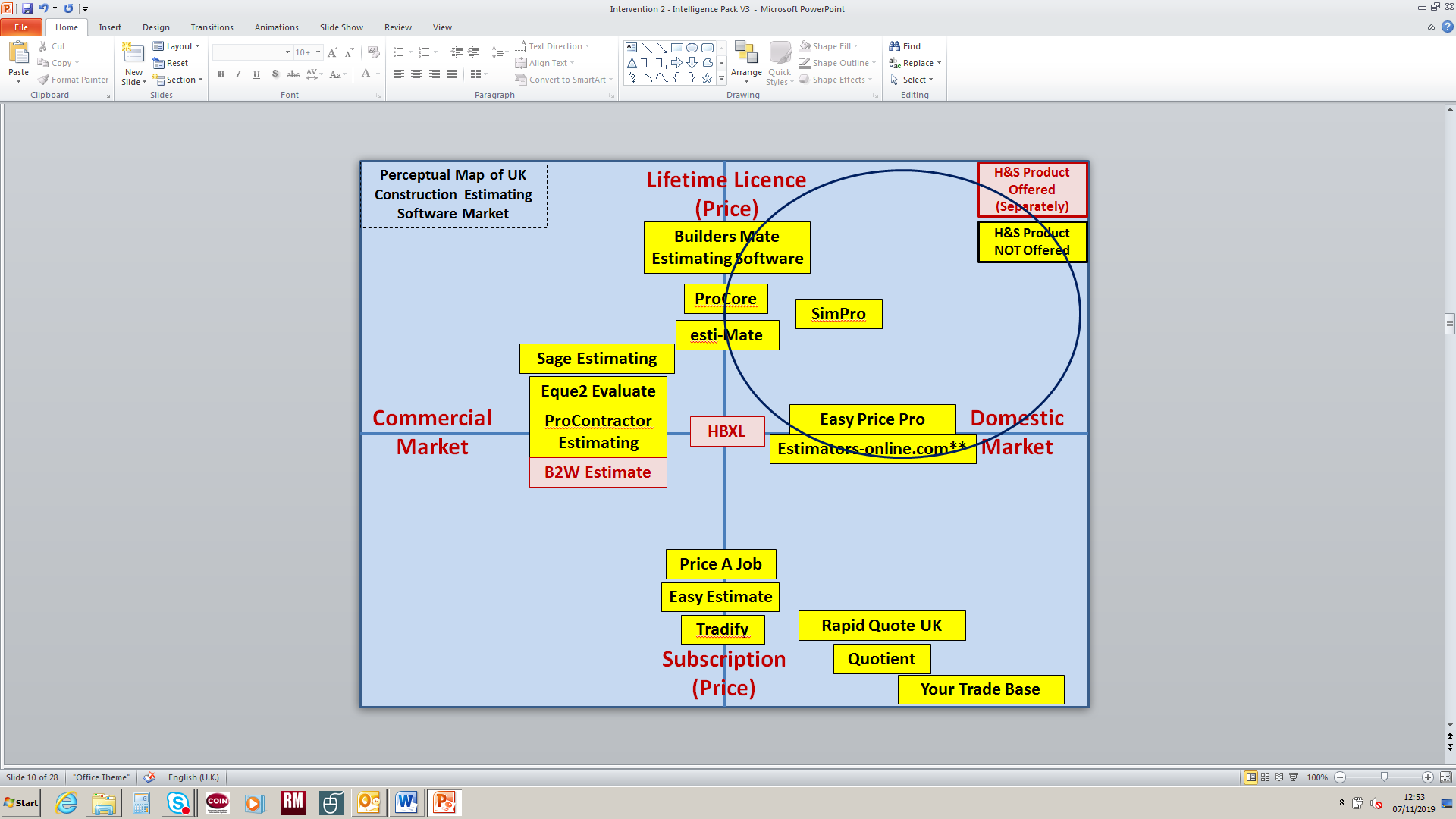
**Evaluation Criteria for Stage 1 of the Call For Competition (CFC)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Evaluation criteria** | **Criteria weighting %** | **Sub-criteria** | **Sub-criteria weighting** | **CFC Stage** |
| **Technical** | 30% | Demonstrate a clear understanding of the research requirements, and propose a viable methodology to provide well-evidenced recommendations to support business direction | 30% | Stage 2 |
| 25% | Track record/technical capability to carry out the work. | 25% | Stage 2 |
| **Quality** | 20% | Named, experienced resource and commitment to collaborative working | 20% | Stage 2 |
| 15% | Clear resource plan and confidence of on-time delivery | 15% | Stage 2 |
| **Price** | 10% | Cost and value for money | 10% | Stage 2 |
| **Total** | **100%** |  | **100%** |  |

The scoring key below will be used when assessing your proposal.

|  |  |
| --- | --- |
| **Score** | **‘Open’ Question Criteria** |
| 5 | The response is excellent and completely relevant. The response is comprehensive, unambiguous and demonstrates an excellent understanding of, and meets, the requirements in all aspects, with no clarification required. The response is well thought out and/or provides   * highly credible examples; * benefits; or * innovation. |
| 4 | The response is good and highly relevant. The response indicates a good understanding of the requirements and provides sufficient detail across all areas. The response demonstrates how the requirements will be met in the main, which may require minor clarification only. |
| 3 | The response is satisfactory and relevant. The response indicates a satisfactory understanding of the requirements in most aspects, although may lack detail in certain areas. The response suggests that the requirements would be met satisfactorily, but may require some clarification. |
| 2 | The response is limited and partially relevant. The response indicates partial understanding of the requirement. The response contains ambiguities which suggest that the requirements would not be met unless significant revisions were made to the proposal. |
| 1 | The response is poor and only partially relevant. The response addresses some aspects of the requirements but contains insufficient/limited detail or explanation. The response demonstrates only limited understanding of the requirement. The response contains deficiencies which suggest the requirements would not be met. |
| 0 | The response is not considered relevant. The response is unconvincing, flawed or otherwise unacceptable. Response fails to demonstrate an understanding of the requirement. |

**9. Appendix 1**

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**10. Appendix 2**

**Trade Professions in the Construction Industry**

* Wood occupations e.g. Site Joiner, Shop fitter, Wood Machinist
* Exterior occupations e.g. Bricklayer, General Construction Operative
* Interior occupations e.g. Painter and Decorator, Ceiling Fixer
* Specialist occupations e.g. Thatcher, Roofer, Scaffolder
* Plant occupations e.g. Plant Mechanic, Plant Operator
* Carpenter
* Electrician
* Heavy equipment operator
* Labourer
* Bricklayer
* Mason
* Plasterer
* Plumber
* Steel Fixer (also known as a "rodbuster")
* Welder
* Glazier
* House Painter / Decorator
* Insulation Installer
* Waterproofer
* Scaffolder
* Roofer

|  |  |
| --- | --- |
| **SIC Codes** | **Professions** |
| 41201 Construction of commercial buildings | Construction of commercial buildings, Builder and contractor for commercial buildings, Building maintenance and restoration commercial buildings |
| 41202 Construction of domestic buildings | Remodelling or renovating existing residential structures, Building maintenance and restoration domestic buildings, Builder and contractor for domestic buildings |
| 43210 Electrical installation | Electrical contractor (construction) |
| 43220 Plumbing, heat and air-conditioning installation | Plumber, Plumbing contractor |
| 43290 Other construction installation | Cavity wall insulation, repair and maintenance, fittings and fixtures not elsewhere classified installation in building , Installation of blinds and awnings , Installation of outdoor pumping or filtration equipment , Installation of sound insulation , Installation of thermal insulation , Insulating contractor (buildings) , Insulating work activities , Lightning conductors installation, roof insulation contractor |
| 43310 Plastering | Plasterer (interior and exterior), Plastering contractor |
| 43320 Joinery installation | Carpenter, Joiner, Builder and Joiner |
| 43341 Painting | Builder and Decorator, Painter (interior and exterior), Painting contractor, Decorator, |
| 43342 Glazing | Glazer |
| 43390 Other building completion and finishing | Building completion , Building maintenance and restoration , Cleaning shot blasting , New building cleaning , Ornamentation fitting work , Sandblasting , Shot blasting of buildings , Slabbing , Steam cleaning , Suspended ceiling installation , Wall chasing , Building repairs , Stonework cleaning and renovation |
| 43910 Roofing activities | Building and roofing contractor |
| 43991 Scaffold erection | Scaffolder (erecting and dismantling) |
| 43999 Other specialised construction activities n.e.c. | Bricklaying , Chimney construction , Chimney erection , Claddings (external) Concrete work (building) , Crane (with operator) renting , Damp proofing of buildings , Dehumidification of buildings , Demolition equipment rental with operator , Diamond drilling of concrete and asphalt , Dry Lining , Drying out of buildings (incl. water damage) , Floor screeding , Formwork (civil engineering) , Foundations construction , Grouting contractor (building) , Gutters and down pipes erection , Hiring and erection of scaffolding , Hydraulic construction , Hydrophobic wall treatment , Industrial ovens erection , Lifting work , Mason (building) , Pile driving , Piling (building) , Plant hire for construction (with operator) , PVC fascia and soffit erection , Scaffolding hiring and erecting , Scaffolds and work platform erecting and dismantling , Screed laying Steel bending , Steel elements not self-manufactured erection , Stone carving , Stone walling , Stonemasonry (building) , Stonework cleaning exterior , Swimming pools construction of (outdoor) , Tall structure work at height , Waterproofing buildings , Work platform erecting and dismantling , Work with specialist access requirements necessitating climbing skills and related equipment , Aerial mast (self supporting) erection , Construction machinery and equipment with operator renting , Grouting contractor (civil engineering) , Piling contractor (civil engineering) , Reinforced concrete engineer (civil engineering) , Stone setting , Swimming pools private installation , Plastic covers for windows installation , Taping and Jointing , |
|  |  |

1. Source: ONS Statistical Release , UK business; activity, size and location: 2018 [↑](#footnote-ref-1)
2. http://www.hse.gov.uk/statistics/industry/construction.pdf [↑](#footnote-ref-2)
3. http://www.hse.gov.uk/statistics/overall/hssh1718.pdf [↑](#footnote-ref-3)
4. https://www.hse.gov.uk/aboutus/strategiesandplans/sector-plans/construction.pdf [↑](#footnote-ref-4)