

Response to the All Party Parliamentary Group for Working at Height inquiry

March 2018

About Balfour Beatty

The UK's largest construction contractor, Balfour Beatty, was founded in 1909 and is listed on the London Stock Exchange. With 15,000 employees and over 40 offices in the UK, Balfour Beatty finances, develops, builds and maintains the increasingly complex infrastructure that underpins the UK's daily life. With a legacy of projects across transportation, power and utility systems, social and commercial buildings: from Crossrail and Heathrow T2b to the M25 and M4/M5; and Sellafield; to the Olympics Aquatic Centre, we are proud to be a British company delivering iconic structures, bold engineering feats, behind-the-scenes innovation and joined-up thinking, financing and partnerships.

At Balfour Beatty, we take very seriously our duty of care and our responsibility to keep our workforce and members of the public safe. The health and safety of our employees and everyone else affected by our activities is fundamental to the success of our business. Nothing that we do is so important that it cannot be done safely. Our approach to managing health and safety is set out in our Health and Safety Policy¹.

Specifically in relation to working at height, we are very aware of the risks involved and that it is a major cause of both fatalities and major injuries in the construction industry. Where possible, we avoid any working at height. We are increasing the use of new technology, for example using drones to assist with inspections. However, avoiding working at height or using technology is not always possible or practical in construction. We therefore aim to manage the risks associated with working at height, making sure the work is properly assessed and planned using a hierarchy of controls, adequately supervised and carried out by competent people using the right type of equipment.

Responses to the APPG's questions

1. In your opinion, what are the primary reasons for falls, or falling objects, which cause serious injuries or fatalities when working at height?

Balfour Beatty works hard to create a safe workplace for all our employees. We aim to ingrain a health and safety culture across our workforce. We believe that the step change in industry

¹ https://www.balfourbeatty.com/media/317037/health_and_safety_policy_january_2018.pdf

performance will only come when safe work at height becomes ingrained within each individual's behavioural responses.

Unfortunately, in spite of our controls and constant reiteration of the importance of safety, there are occasions when those who carry out a particular task on a regular basis become complacent. This can result in them treating essential precautionary measures and procedures as onerous or time-consuming, not following health and safety requirements and taking unnecessary risks. It only takes one mistake to turn what may be considered to be a routine task into an accident or fatality: in our experience it is this "it won't happen to me" attitude which most often results in injury or worse. We do not tolerate this attitude and take quick and decisive action to tackle it wherever we discover it.

In order to prevent this complacency in our staff, we have implemented a behavioural safety training programme called Making Safety Personal, which dovetails into our golden rules which are 4 key rules which govern all our works. We also actively implement lessons learned from observations and incidents through Safety Health Environment Leadership Team (SHELT) meetings and Fatal Risk Groups as well as encouraging innovation and design solutions.

2. Do you have any comments about the existing regulations for work at height, as set out in the Work at Height Regulations, 2005?

Balfour Beatty believes the current regulations are open to interpretation in some places, and that as such, an Approved Code of Practice (ACOP) would be useful. This could then be the central tool for development of training/competency standards for site operatives. We believe that this would be useful across the industry, as a number of the issues centre around imbedding the learning and control measures into the underlying behaviours of operatives. In essence work at height should be treated in a similar manor to confined spaces, with the inclusion of training on skill cards.

In our view, there is also a level of ambiguity within the existing regulations which could helpfully be removed, for example in relation to falls below ground level for instance, into an excavation. Whilst falls into and opening into a floor or a hole in the ground are covered current HSE guidance focuses on above ground examples.

3. Are there specific measures you believe are necessary to prevent falls, or falling objects, from height which are not currently required by law?

Tool tethering prevents tools and other objects from falling while work at height is undertaken by providing an anchorage point. It is essential for avoiding the hazard to human life and other damage posed by dropped equipment. While it is used across Balfour Beatty's sites and widely used across the industry, it could be better referenced in guidance.

Catch nets or safety netting are also now extensively used. Fitted directly below the working platform, they catch a falling person, debris or equipment and create a controlled soft landing close to the fall, minimising the impact on the faller or object, and of course on those below. In some circumstances these should, we believe, be mandatory.

Within the industry good practice is often considered as adopting a mandatory fall arrest davit system for use when entering an excavation of more than 2 metres (with anything under 2 metres reviewed on a case-by-case basis). Davits can be used for raising and lowering the worker to an area below the unit and are particularly useful in confined spaces. They can be either portable or permanently fixed and are commonly used by Emergency Response Units for rescue in confined spaces. These should also be considered for use more widely across the industry.

4. What more can industry do to avoid falls from height, and share good practice?

Balfour Beatty believes more can be done to eliminate work at height at the design stage. There is a requirement for contractors to feedback to designers regarding lessons learned through construction to help eliminate repeated issues but more collaboration is needed at the design stage. More visible challenge of designers by the Regulator via the Construction Design and Management Regulations (2015) (CDM) with publicised case studies would also be helpful.

Balfour Beatty also uses a Working At Height Permit-to-Work, which ensures better controls during the planning and delivery stages of projects. A permit-to-work system is a formal written system used to control certain types of work that are potentially hazardous. It puts in place a formal process whereby all of the hazards connected with the work to be undertaken are considered in advance, and the necessary precautions are worked out, agreed and put in place. This approach, we believe, significantly reduces the potential for accidents and should be considered for use more widely.

There could also usefully be better sharing of lessons learned around the industry and between different industries to ensure best practice is being adopted, although it is difficult to recommend the best forum for this to have maximum effect, however the input from the Regulator through open forums would be useful.

5. What role should end users/customers have in ensuring safe work at height?

As above, we believe that eliminating as much of the risk as possible during the design phase, by fully implementing CDM would be a significant step – customers have a key role in this. Time pressures can result in there being insufficient time during the design and planning phase to design out work at height. Customers and end users should work with the designers and contractors to ensure sufficient time is available for the designing out of full life cycle work at height.

It would also benefit the industry if clients and contractors, where requested, to undertake due diligence around work at height.

6. Would you support enhanced reporting of falls from height as a way of better understanding the causes and helping to reduce falls from height?

Yes. For example, Balfour Beatty believes that arrested falls from height should be reported. However, it will be important if enhanced reporting is brought in, that the information and learning is shared widely with the industry and the emphasis is in lesson learning not

enforcement action.

7. Do you believe the current definition of competence for working at height is appropriate?

No, it is too vague for industry as a whole; it would be useful to have an industry training standard in a similar vein to confined spaces to give better guidance to the industry and the individuals.

8. Can you propose any innovative suggestions, particularly using digital technology, which could have a positive effect on reducing falls / falling objects from height?

Balfour Beatty believes that there is huge potential for technology to make construction safer, especially in relation to working at height, from the ability to track and monitor those undertaking dangerous activity using wearables, to increasing the use of virtual and augmented reality to identify and resolve potential issues before they become real. While there are many exciting new technologies reaching maturity, there are three good examples of some of the technology Balfour Beatty is already deploying to reduce falls from height:

I. Drones

Balfour Beatty uses its six Civil Aviation Authority licensed drone pilots to undertake inspection and maintenance work at height using drones, thus removing the risk of falls from height. For example, Balfour Beatty Living Places, in partnership with West Sussex County Council, is trialling the use of drones to inspect bridges across the county. Using drones in this way allows us to safely assess the work required while dramatically reducing any potential hazards faced by our workforce who would traditionally carry out work such as bridge inspections at height. It also reduces disruption to the public and road users by removing the need for the traffic management or road closures which would usually be put in place during bridge inspections.

II. Virtual Reality (VR)

Balfour Beatty has been using VR simulation for Health and Safety Training. The fully immersive simulation means that we can prevent on-site accidents through better training. Featuring different real world scenarios the virtual experience gives workers the opportunity to experience live and potentially dangerous site environments, understand the space of the build, work out where heavy equipment should be placed and game plan how complex elements of the scheme can be best undertaken, from the safety of an office or training room and without the need for lengthy manuals, training sessions or specialist personnel.

III. Offsite and modularisation

While many companies are beginning to consider offsite and modularisation on a case-by-case basis for new schemes, Balfour Beatty has made it a core part of our strategy. We have committed to reducing onsite activity by 25% by 2025. Supporting the

Government's 2025 strategy for lower cost, lower emissions and faster delivery, we aim to remove those activities we can from sites in order make construction safer and to free up our workforce's time to focus on delivery. Increasing the use of offsite gives us the scope to create complex structures safely and efficiently offsite, assembling them quickly onsite. Modularisation typically provides up to 40% reduction in on-site labour.

However, achieving the efficiencies offsite manufacturing offers requires standardised designs and components. This has so far been missing in most schemes across the UK. Balfour Beatty is working with customers to support them in thinking about these benefits from the concept phase.

Taking this two-pronged approach will enable us to tackle head on the safety, skills and productivity challenges the construction industry is facing, while delivering high-quality schemes for our customers as safely and efficiently as possible.

9. Case studies

Please see the attachments.

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