

# An introduction to BS 7883: 2019

Guidance for fall protection anchor devices and systems

An MSA Whitepaper



# BS 7883

First introduced in 2005 and amended in 2007, the latest revision of BS 7883 creates an updated, coherent and comprehensive best practice framework for those designing, installing, maintaining, inspecting and certifying anchor devices and systems used in personal fall protection regimes. Stuart Pierpoint, HCL Safety's UK Sales Manager, unpacks the guidance – including the wider recommendations – designed to elevate safety standards.

Injury or death resulting from falls is, sadly, still impacting too many UK workers. According to the Health and Safety Executive (HSE) figures for fatal injuries in Great Britain for 2018-19:

**40 workers suffered fatal injuries**

as a result of falling from height – that's **27%** of all UK fatalities in the workplace, and five more deaths than in 2017-18.

Over the last five years, falls from height have accounted for **26% of all fatal accident injuries** (an average of 37 fatal injuries per year).

**Over 60% of deaths** when working at height involve falls from ladders, scaffolds, working platforms and roof edges and through fragile roofs.



## Latest anchor technologies

Superseding BS 7883:2005, BS 7883:2019 recognises the advances in fall protection technology. Whilst most professional installers will already be routinely applying almost all the guidance, the revision provides a useful wake-up call to those who may be tempted to operate without fully understanding the complexities of correctly specifying, designing, installing, inspecting and maintaining fall protection systems.

Back in 2005, the main anchor devices were principally safety eyebolts. Today, the revised guidance extends across all five types of anchor devices now commonly in use:

- TYPE A:** A permanently fixed anchor, such as an eyebolt
- TYPE B:** A removable and transportable anchor that is not permanently affixed to a structure
- TYPE C:** An anchor system featuring a flexible anchor line such as wire rope, fibre rope and webbing
- TYPE D:** A rigid tube or rail anchor line
- TYPE E:** Anchors relying solely on mass and friction between itself and the surface

Developed by BSI committee members drawn from several professional bodies, the revision is now applicable to new fall protection installations and systems. One of the most significant changes is the document's expansion of best practice recommendations for fall protection professionals. There is also guidance for system specifiers and those responsible for maintenance.

## The importance of technical records

Following feedback from the working group, the BSI committee has reiterated the importance for fall protection documentation, including the system technical file, to be available at every inspection. This recommended documentation should clearly set out the system design and layout, design calculations, structural attachment and fixings, allowing safety and operational suitability to be comprehensively assessed. Understanding the original design intent of the fall protection system is even more important if a party other than the original installer is conducting the subsequent periodic safety inspections, and the code recommendations further serve to remove areas of doubt.

## New system design guidance

BS 7883:2019 now features detailed guidance for system designers. This includes best practice to help them accurately identify the correct fall protection application (restraint and/or arrest); to understand the implications of different structural materials; evaluate the optimum positioning to allow work; correctly configure rope access; choose the correct anchor type; and accurately calculate imposed structural loads and proof test loads when specifying anchor points.

This system design guidance will likely be particularly helpful when planning safe access solutions on the fabric of heritage and listed buildings where, unlike modern structures, detailed technical drawings and design and materials data are often simply not available. System installers will also often work in conjunction with architects, structural engineers and the specialist contractor, in accordance with The Work at Height Regulations 2005, to develop an appropriate design and confirm the suitability of any fixings.



## Inspection best practice

The guidance for inspecting fall protection equipment has also expanded. Covering inspection prior to first use, periodic, interim and supplementary inspections, BS 7883 also provides four categories of results:



### PASS:

Satisfies all relevant recommendations – equipment can remain in service and be labelled as such.

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### CONDITIONAL PASS:

Allows equipment to be labelled as remaining in service, but an inspection report should be issued to the duty holder detailing recommendations for remedial works to be carried out within a timeframe.

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### CONDITIONAL FAIL:

Represents an immediate safety concern which is capable of improvement. The guidance suggests the anchor system and/or PFPE should be labelled as taken out of service or decommissioned, with a report to the duty holder detailing the remedial works to be carried prior to re-inspection.

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### FAIL:

Constitutes an immediate safety concern that is beyond repair or improvement. The guidance recommends equipment should be taken out of service immediately and labelled with a 'do not use' warning or decommissioned with the consent of the duty holder.

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Hidden elements within a system clearly have the potential to be overlooked in an inspection – with potentially dangerous results. The latest guidance recommends that a record of all hidden elements and the materials obscuring them is kept in the system technical file, including photographs taken during installation. This allows an inspector to be aware of their presence and, where necessary, uncover and assess them.



## Voluntary but significant

As an organisation, HCL Safety strives to operate in accordance with all standards, and BS 7883 is no different. We welcome the clarity and further safety improvements the revision will drive. We, as an industry, should do our utmost to ensure that this code of practice is enforced and followed across the board. Lives may depend on it.

## MSA - The Safety Company

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## Our mission

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MSA's mission is to see to it that men and women may work in safety and that they, their families and their communities may live in health throughout the world.