



Dropped Object Incidents Caused by Material Mishandling – a Simple Solution

The story of the development of Skafray began unexpectedly, and quite literally with a bang when its inventor Phil Moore, on a visit to a construction site in London in his role as a contractor's safety representative was startled by the sound of a loud crash. Twenty metres away an alarmed labourer, still covering, was looking skywards trying to identify the source of the 40mm steel bolt which had fallen from the scaffold tower above and which had missed him by inches before hitting the floor.

"Needless to say, the language exchanged between the co-workers would not be repeatable here. However the operative exhibited great prudence by choosing to remain on the scaffolding until his colleague below had calmed down." recalls Phil. "In his defence though, he was only carrying out what was, and regrettably still is, the common practice of storing tools and working materials on a plank of wood balanced across the top of the scaffold poles."



"Like many in the world of construction, up until then I had only paid limited attention to the threat of accidents caused by dropped objects, but witnessing the incident at Canary Wharf was a huge wakeup call" he says. "The kinetic energy with which that bolt hit the floor from a drop of probably less than 10 meters, and the thought of what damage it would have done if the worker beneath had been less fortunate, was staggering and quite chilling. I spent a lot of time after that researching the whole area of dropped object safety. These days I often refer people to the [DROPS calculator chart](#) which dramatically shows the correlation between the height of the fall, the weight of the object and its subsequent impact force. There are now also [countless videos](#) on the internet demonstrating the effect of dropped objects (usually on unfortunate water melons!), but only a few years ago such material wasn't so easy to find".

Being responsible for the safety of his own construction staff, Phil set about looking for safer alternatives to the storage of tools and materials on scaffolding and working platforms, scouring the internet for a suitable product. "I was particularly interested in finding a solution to prevent the dropping of materials due to mishandling at the workface, something I'd identified as a likely common cause of many dropped object incidents" he goes on to say.



However, Phil was surprised to find that a dedicated tool tray for use whilst working at height did not exist, so he set out to design his own. "If I had known what an uphill battle it would be to design, manufacture and bring a product like this to market, I may have thought twice; it has been a steep learning curve and has required a huge investment in time and money" he explains.

Without a background in product design or manufacturing, Phil at first relied heavily on friends in those disciplines to point him in the right direction. He eventually worked with experts at the University of East London to help refine his original designs, and the first version, made from aluminium, was eventually completed, load tested and patented in the UK. Patents in the US, Canada, Australia and Singapore were subsequently granted.

"The first generation aluminium Skafray was well received but was ultimately impractical because of its cost of manufacture and its weight. The next version, which was used to prove the concept, was made using 100% recyclable HDPE and was a great improvement" he says.



In terms of dropped object awareness, there are several initiatives globally such as the oil and gas industry's DROPS group and an All Party Parliamentary Group formed by the UK government which is currently looking at working at height safety in general.

"I was particularly excited last year to discover the work of the ISEA in Arlington, Virginia and the development of the recently introduced ANSI/ISEA 121 Dropped Object Prevention Standards" says Phil.

“From my first contact with the ISEA I have been impressed by their willingness to share their ideas and their openness to listen to mine, leading to a very interesting meeting in Washington this summer to talk about ANSI/ISEA 121 and our shared interest in dropped object prevention. I see the introduction of ANSI/ISEA 121 as a huge breakthrough in the raising of awareness of dropped object safety, and hopefully the start of a global trend.”

Looking to the future, Phil is already working on a modular Skafray as a multi-fit solution with task specific add-ons, thereby broadening the range to specific trades and access equipment.

Phil will be attending the NSC Congress and Expo in Houston with his team in October to meet potential commercial partners.

For more information about Skafray, visit Skafray.com or contact Phil at Phil.Moore@Skafray.co.uk