

Editorial

Construction—Is there a better way?

If asked, surely no right thinking person would agree that the numbers of deaths, injuries and cases of ill-health to workers seen in the construction industry over so many years, is acceptable?

So why then, on the face of it, do the lessons which have been learnt over the last 23 years to great success in the UK, appear to be being ignored in so many other places? Could it be a fear of upsetting big business and construction professionals, who have worked in a certain way for decades and like things just the way they are, or is it simply an ignorance of the potential benefits? Whatever the reason for the slow progress to date, some parts of the world now appear to be waking up to the fact that the toll of death and injury in the pursuit of construction activity, is no longer a price considered worth paying by society, and that there is a better route to take, one by which everyone wins.

So How Can This be Possible?

Wherever you are in the world, it's likely that the construction industry is recognised as having a fairly appalling health and safety record. There is often a perceived acceptance this is simply what happens when you take a largely poorly trained and badly supervised workforce, and put them to work 30 metres up in the air, or in close proximity to heavy machinery, in an outdoors environment. Left uncontrolled, it is an unmitigated recipe for disaster, and one which for too long has simply been allowed to continue unchallenged.

Many countries have measures in place to address some of the specific 'physical' issues which present risk on construction sites. They may, for example, have laws which require head protection to be worn, or for crane drivers to be trained, or for scaffolds to be inspected. These are, of course, all necessary and important components of the overall framework required to address some of the risks inherent in the industry. But, on their own they can only achieve so much. Countries which adopt **only** this approach tend to reach a plateau of health and safety performance which they find difficult to improve upon. For

many of them today, 17 years into the 21st Century, they remain firmly stuck in the place from where the UK began its journey.

The situation in the UK started to change significantly for the better back in 1994, when it decided to take a wholly different approach to the problem, with the introduction of the Construction (Design & Management) Regulations (CDM) into law. For the first time, this imposed legal duties on two critically important parties in the construction process, both of whom had been 'let off the hook' for far too long - despite having been recognised for many years, as having the potential to exert enormous positive influence on the health and safety performance of a project. Those two influential but previously ignored parties, were the client (or developer), and those who were involved in the design of whatever structure needed to be built.

Too many clients, those actually paying for the project, simply follow the traditional route for procuring their new building; identify an opportunity and source some finance, find a designer to produce some drawings and then get a contractor to build it, for as little money and in as short a timescale as possible. The results are entirely predictable. Prices get pushed further and further down, resulting in poor design, done on the cheap, build programmes are reduced in duration, and health and safety is largely ignored (if considered at all), with the result that workers are killed or injured in alarming numbers.

The construction designers who are commissioned by these clients, often have little or no idea of what challenges face the contractor who is tasked with building the structure which they have designed. In many cases their sole interest is in what the building will end up looking like, without a minute's thought being given by them, to what they could possibly do during the design process, to influence whether the workforce who are building it, will be able to go home to their families at the end of their working day. Their knowledge of the actual construction process is often very limited.

CDM has completely transformed that situation in the UK. Clients are now legally required to ensure they have put adequate resources into the programme (time and money), sufficient to allow contractors to sensibly manage

the health and safety risks relevant to the project. For their part, designers now have a legal duty to design risk out of the construction process, where it is practicable to do so, and to pass on information to the contractor about any significant risks which they have not been able to eliminate.

So what has been the outcome of this 'radical' change? Has CDM forced the UK construction industry to only build architecturally featureless boxes, which take so long to construct because of all these additional safety requirements that they inevitably force the clients into bankruptcy? You only have to look around the skylines of the major UK cities today, to realise that this is clearly not the case. Would, for example, The Shard in London really have been built, if its client had been so financially shackled by its responsibilities under CDM to resource safety during the construction phase, and would its look be so striking, if all design creativity and innovation had been stifled?

The reality is that CDM has indeed changed the construction landscape in the UK, but entirely for the better. Clients now recognise the commercial, as well as moral benefits, of giving a positive health and safety lead for their projects, demanding better performance from the designer and contractor in return for their investment. In return, they get buildings built to a better quality specification, which have been more professionally designed, including for future lifetime maintenance, and which have been built to programme and budget.

For their part, designers are now entirely integral to, and not artificially separated from, the construction process. Gone is the old silo mentality that "I design the structure. How it gets built is someone else's problem". Their professionalism and knowledge of constructability issues has had to improve, quite considerably in some parts of the design sector, and the whole industry has woken up to the fact that given some consideration at that critical, early design stage, many of the issues which historically would have left contractors scratching their heads, wondering how they were possibly supposed to build safely to the design in front of them, have simply evaporated away. It seems so staggeringly obvious, but, if you can design a risk out of the construction process completely, then the contractor's task of managing the on-site, residual risks has to be easier. The end result of that being of course, that more workers go home to their families at the end of the working day.

The success of the UK's CDM journey since 1994 can not only be measured in the attractiveness of the skyline however. The example of the 'Big Build', associated with the construction and infrastructure work required ahead of the London Olympics in 2012, is testament to what can be

achieved when the influence of both the client and design team are fully focussed on achieving what CDM requires.

The Big Build was a massive construction project, involving a workforce of over 46,000 people, constructing five permanent venues including the main Olympic stadium, 11 residential blocks, plus all the normal bridges, rail, road links and everything else you would expect of such an event, all achieved on what had once been a heavily contaminated site, very close to the centre of one of the busiest and most vibrant capital cities in the world. The commitment and buy-in, starting with the client and working right down to each individual worker, with risk being designed out of the process to a level not previously achieved, secured a health and safety performance for the project which set a new benchmark of expectation for the construction industry, not only in the UK, but around the world.

One inescapable fact when you start constructing for an Olympic Games is that on a fixed date in the future, someone is going to come running into that stadium carrying a burning torch and, under the eyes of most of the world, the stadium had better be good and it had better be finished. In achieving that amazing end product, with the eyes of the world very firmly fixed upon in London in 2012, more than 80 million hours had been worked on the construction project, without a single fatal accident. Not one! It was the safest Olympic build, ever, and it was of course completed to the timescale fixed by that incoming, burning torch. This did not just happen by chance.

The CDM approach works by harnessing the massive influence of those two critical parties, whom many parts of the world still seem unwilling, or unable, to want to challenge to perform better. Here in the UK we took on that challenge directly and, as I know from my own personal experience, not every step of our journey was an easy one. However, as a result of all that effort over the last 23 years, by all parts of the industry, including by ourselves in HSE as the regulator, we now know that the CDM approach works. Not just because of our success on the larger landmark projects, such as the Olympics, but from our wider record.

The UK construction industry's health and safety performance, when compared internationally, is now exceptionally high, and indeed it has improved more than five-fold during the CDM era, to a rate where today, fewer than 2 workers are killed each year per 100,000 working in the industry. We are not complacent however. We know it can be improved still further, and that of course is our goal and the focus of our continued efforts. We also know, from the

work which I and my colleagues in the UK Health and Safety Executive (HSE) are currently doing around the globe to assist other Governments by sharing our experience and educating them in the CDM approach, that the world is finally waking up to the realisation, that it is simply no longer tenable to continue to allow respective construction industries to kill and injure their workforces at the level which they are currently achieving. Society is simply no longer willing to accept this as the norm.

Here in the UK, we started our CDM journey from the relatively poor position where much of the rest of the constructing world is still languishing at today. Surely it would be more sensible to learn from our experience and start to achieve the progress which we have enjoyed.

So in answer to my earlier question, NO, it is not acceptable for the construction industry to kill and injure so many workers. There is an alternative way, the CDM way.

Note:

The Author: Nic Rigby is one of Her Majesty's Principal Inspectors of Health and Safety, employed by the Health & Safety Executive, the national regulator for workplace health and safety in the UK. He has been employed by HSE for 29 years, much of that time spent specialising in the construction industry. He currently leads on much of HSE's work in the Far East, particularly in the provision of support to other Governments to improve their country's health & safety performance, particularly in the construction sector.

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