# Building Design and Work at Height transcript

0:14
Hi, my name's Toby and I work for the City of London Corporation and our skyline
0:25
here in the City has undergone significant change over recent years.
0:28
With over 50% of buildings having been redeveloped since 1997 and what's new
0:34
architectural heights have quite literally been achieved in some cases
0:37
that all poses challenges for the facade cleaning and building maintenance
0:42
strategies of the end user.
0:44
We're going to talk about the CDM regulations and how they influence
0:47
building design and how designers need to plan for and minimize work at height
0:52
problems that are commonly encountered by the end user.
0:55
Let's talk to some industry experts. [music]
1:06
A designer would be somebody who is specified and that in fact could be the
1:15
client for example sofa clients I want to particular finish, I want to
1:20
particular roof light, I want something done in a particular way, any fact
1:25
that the client is working as a designer you've also got the the architects
1:30
structural engineers, specialist contractors themselves in
1:35
thinking about how they're going to carry out the work they may actually
1:38
also fall into the into the definition of what is designed under the CDM
1:43
regulations so it's quite a broad spectrum and I would suspect this many
1:48
people designing on construction projects that don't actually realise
1:52
that they are designers.
1:57
The primary responsibility of the designer under the CDM regulations is to
2:01
eliminate the risk if it's not possible to eliminate the risk of working at
2:06
height then part of what the designer then need to do is think about how that
2:10
risk can be mitigated or reduced. There is sometimes a temptation for designers

2:17
to say well let's just use rope access because that's what level were and that's
2:20
what they've already done in the past.
2:23
Whereas rope access carries particular risks that have to be managed.
2:29
I think competences is is an interesting loaded word because its association
2:37
with competence and linked into cards games the CDM Regulations hopefully
2:42
described that now skills knowledge and experience like a key requirement of the
2:47
design function is an understanding of the principles of prevention and making
2:52
sure that their primary responsibility is to eliminate the hazard where they
2:56
can eliminate the risk where they can't and where they can't then working down
3:00
the hierarchy and to do that they may not have in-house the health and safety
3:05
skills, they may have the technical skills to carry out the design that been
3:09
asked to do and there's nothing wrong in principle with them bringing in a health
3:13
and safety specialist who has an understanding of the principles of
3:17
prevention to assist the design function to think about that in a proper way as
3:22
required by the regulations.
3:24
So that's the duties and the theory but what does that mean in practice. Let's
3:30
hear from someone who works in design.
3:45
You must not be just considered in isolation, it must balance up all these
3:51
other factors including fitness for purpose, client brief sustainability,
3:55
structural issues and aesthetics that are in there as much as any of the others
4:00
and the introduction of that in the context of safety is often perceived as
4:06
being not a good balance actually it has to be considered it within that balance
4:11
with all those other factors so as much as I've been working in the CDM area to
4:16
think of health and safety issues that is just one more colt in a wheel of
4:20

lots of colts which architects and designers will have to consider on every project and it must
4:25
make take any higher priority than any of those on the colts in a wheel so I
4:31
think that is the balance of benefit and sacrifice, injury and costs which the
4:38
industry and the HSE and tolerability of risk framework have also explained some
4:45
links within their own website and in previous legislation.
4:48
When we start off with a building design we frankly do not think about how we are
4:57
going to clean the windows to start with. That building is dictated by its
5:01
location on the site's proximity to other features, the planning requirements,
5:06
the views, do they all constitute the ingredients for that design and the type
5:11
of facades, the type of roofs are very much part of an envelope which is
5:16
appearing from almost like a sculptural method of analysis which then we have to
5:21
start thinking about having thought about the form how can we physically
5:25
suitably cleanness or access facades. It can't be done from the other way around
5:30
otherwise you end up with the same building every time. A lot of people in
5:34
our industry feel that you just think from a window cleaning perspective that
5:39
you actually dumb down design and you prevent creativity so we're trying to
5:44
encourage creativity with good access so now having established the form we now
5:49
start thinking about this facade access and then looking at the options
5:53
alternatives which there might be a building maintenance unit BMU
5:57
or commute for mobile devices work platform road access or long poles or
6:03
dare I say ladders which have not been banned by the open windows but they're
6:09
not always appropriate so getting that right balance of all of them in the
6:12
context of all the other issues of the design is a very involved process.
6:20
Will very much trying to help empower our project teams to work
6:24
collaboratively and not just in their own arena would it be structural

6:29
services architecture but actually get them all together with the client
6:32
ideally with the client's FMC. The schools of architecture trying to
6:37
help the the architects to have these skills to actually bring you the whole
6:41
team together to come up with a coordinated solution embracing all the
6:46
professions within the industry into one coherent package and give the
6:52
disempowerment which is what the regulations actually ask the team to
6:57
do within this this term of reasonable practicability.
7:03
Whilst there are occasions when design gets it wrong there are occasions
7:07
when it works. I think the best example I can give for London next to use the Coliseum.
7:14
We had an interesting project at the London Coliseum whereby a hundred
7:19
year old building was being refurbished. The dome originally had light bulbs put
7:23
in it which right at the top of a very tall building quite an exposed location
7:28
so one light bulb goes we want something out there and replace it.
7:32
The designer had to think about how can we get up there and replace the light
7:37
bulbs that we're going to refurbish. So we looked at various options. We looked at
7:40
getting a mobile-elevated work platform into St Martin's lane. The cost and the
7:46
difficulty of access to this town within St Martins lane was disproportionate to
7:52
change a light bulb. The designer very helpfully took a step back and say well
7:56
actually what is it are we trying to achieve. Until one day our lighting
8:00
designer said have we thought about fibre optic. Lets have fibre optic cables which
8:05
will give the same image and immediately eliminates all future maintenance. And
8:11
this really got us into a thought process - well road access is perfectly suitable for
8:14
certain parts of the tower, fibre optics for the very top it where you couldn't get
8:18
rope access and then being used in conjunction if on existing buildings then
8:23

why not on new buildings. And I think in terms of carrying out the hierarchy
8:29
of the responsibilities the designer has to think about eliminating the future need
8:34
to go up and maintain these roofs. I think is the best example and come up.
8:38
You've heard from the experts and their views one that shed by us as the
8:42
regulator for the City of London. Building designers have a key critical
8:47
role to play in eliminating or reducing risk so far as is reasonably practicable
8:52
in the first instance. If you're planning a project in the City at all and you've
8:56
got any questions please feel free to get in touch.
English
AllFrom City of London Corporation