



# Don't Miss



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# The rise and falls of access

The spectacular rise in the development and usage of powered access equipment has to some degree, overshadowed the non-powered access sector. Many of you have also reminded us that this magazine is called Cranes&Access, not Cranes&Powered Access.

In an effort to re-dress the balance particularly with the impact legislation is having on the non-powered sector, we are stepping up our coverage, particularly in areas that are undergoing dynamic development such as alloy towers and low level access equipment. This feature

that predicted the end of alloy scaffold towers and ladder usage. And yet there are still more than two million ladders in regular use in the UK alone and more towers are sold today than ever before. Surprisingly, the largest markets for alloy towers are the same as

the largest European markets for powered access - the UK, Ireland, Scandinavia and Holland not to mention the large emerging markets for both forms of access in Spain and Dubai, at least until recently.

So what do these countries have in common? A strong rental sector and a habit, even among smaller companies, of renting equipment rather than buying it is one factor. They are also countries where high efficiency and safe forms of access are preferred

over traditional, more labour intensive methods, A further reason in most of them is the degree that the relevant work at height regulations are enforced encouraging employers to use 'safe' methods of access.

We all know - and can see from the Death Wish series on Vertikal.net -

Correct training is essential - even for a ladder

will be a regular item in the editorial calendar and there is also a major pull out insert planned for the September issue in co-operation with PASMA.

When booms and scissor lifts really began to catch on in the late 1980's and early 1990's there were many





that there are still many companies and tradesmen who don't put their brain in gear before tackling a job at height. This is reflected in the fact that every month, more than 1,000 workers in the UK suffer a serious injury following a slip, trip or fall.

These injuries can be avoided by sensible and proportionate management

of the risks, including the use of the most suitable piece of equipment for the job. Despite the increased use of powered access products in use, a huge proportion of work is still carried out using ladders, podiums, towers and scaffolding, and for a large number of jobs they are still the most suitable method.

#### Work at Height

Accident reports showing common situations where falls from height occur illustrate that incidents are usually due to poor management, rather than equipment failure. Tasks

tend to be the more regular and mundane such as gutter and window cleaning, erecting signs and displays, low-level roof work, shelf stacking, unloading a vehicle and machine maintenance.

The most common cause of accidents include failure to recognise a problem and not providing or ensuring that the correct equipment is available; not providing adequate information, instruction or training on how best to do the job, or using unsafe equipment, in effect making-do with something that is immediately at hand, no matter how unsuited it might be for the job.

The Work at Height Regulations 2005, which came into force on the 6th April 2005, apply where there is a risk of a fall liable to cause personal injury. In reality, this

means working at any height as injuries can be sustained by falling a few inches. The regulations place duties on employers, the self-employed and any person that controls the work of others (for example facilities managers or building owners who may contract others to work at height).



These 'duty holders' must ensure that all work at height is properly planned and organised and that those working at height are competent to do so.

In addition they must ensure that the risks from work at height are

the risks from work at height are fully assessed and the appropriate equipment is selected and used.

In choosing the correct equipment a simple hierarchy should always be followed, the first of which is to completely avoid working at height where possible, if it cannot be avoided then equipment that prevents falls should be used, if this is not possible then and only then should the choice revert to the use of equipment that minimises of eliminates the consequences of a fall should it occur.



What this means in plain English is that once it is clear that the only way to do a job is to get up in the air the first choice must be a piece of equipment that eliminates the risk of falling (if used properly). A lift that takes a person from the ground directly to the job clearly achieves this, as the person is protected at all times by the guardrails of the platform. However it is not always practical to bring in a powered platform, and in some cases it can create its own hazards - for example on ground that has a very low load bearing capacity. An alloy tower or

podium step can be ideal for such jobs and it can be argued that it is almost as safe for most jobs, in that the only additional risk is erecting it and then climbing to the platform. However it eliminates risks such as elevating the platform into obstacles or driving off a kerb.

Finally if there is a reason why a product such as a tower cannot be used, a regular ladder or step ladder comes into play. They do not have the guardrail protection but they are light and for very short work that does not involve the use of two

This tower was specifically designed for a TV crew and equipment

hands, they can be perfectly suitable, safe and satisfactory.

According to the Health and Safety Executive, the introduction of the Health and Safety (Offences) Act 2008 on 16 January this year will act as 'a real deterrent' to those who do not take their health and safety responsibilities seriously.

#### **Tower power**

The reasons why towers are so popular are similar to those for using a ladder. Firstly towers are relatively cheap and a tradesman can pick up a four or six metre tower from a tool hire shop along with other items, arrive at site and have it set up and ready to go in 15 minutes or so, without the need to wait for an aerial lift to be delivered, while saving the delivery cost involved with short term aerial lift hires. On top of that the tower can go anywhere - up stairs, through a window opening, over a fence into a back yard or onto a roof - all without the need of an elevator or lifting equipment. There is also the benefit of an extremely light foot print, and the fact that they can be set up on stairs or over voids.

#### New ideas to the fore

Since the Work at Height regulations first came into force, a number of contractors have been frightened away from ladders and many have ended up on towers or low level access equipment for working heights of up to six metres. Manufacturers have satisfied this new demand by producing a raft of new products from plastic building blocks to stand on, to heavy-duty, relatively expensive podium steps. Since then the sector has matured a little with new ideas and products coming to the fore, including push

including push around scissor lifts, low level mast lifts and efficient, lightweight podium-type steps and platforms.

Even the leading non powered access equipment manufacturer, Youngman, has dipped its toe into this market with the introduction of a push around scissor lift last month.

The ladder manufacturers are also fighting back with new ideas, new products and good practical training courses covering the safe use of ladders.

When used properly



and for the right application the ladder is still the most efficient form of access - fast and easy to set up, lightweight, easy to transport, inexpensive and easy to use. But when used by the uninitiated and for the wrong application it is an inefficient death trap.

#### Ladder training

The Ladder Association has a clear message if it's right to use a ladder, use the right ladder and get trained to use it safely. Despite the many myths, the HSE has not banned

ladders and for straight forward, short duration work, ladders and stepladders remain a good option.





says Don Aers, chairman of the Ladder Association. "Significantly, many users have never received any formal training in the way ladders should be inspected, positioned, used and maintained. The importance of training was brought home last year when a school caretaker who suffered injury as the result of a fall from height, successfully sued his

employer for failing to provide adequate training in the safe and

proper use of a stepladder."

According to the Ladder Association, training should enable a competent person to identify hazards and minimise risk; assess and determine when it is appropriate to use ladders and stepladders; correctly position and safely use the equipment; and finally, carry out basic inspection and maintenance.

"Under the regulations the small contractor needs to confirm competence on the part of himself or his personnel. If he was to use a different piece of access equipment, such as a cherry picker, he would naturally look to train his staff, so what's different about using ladders? We all think we can use one, but it's surprising, even the hardened 20-year user is likely to come away from a course having earned something new. Following the

introduction of the new legislation, it's more important than ever that you shouldn't decide if a ladder is the right piece of equipment when you're climbing up it!"

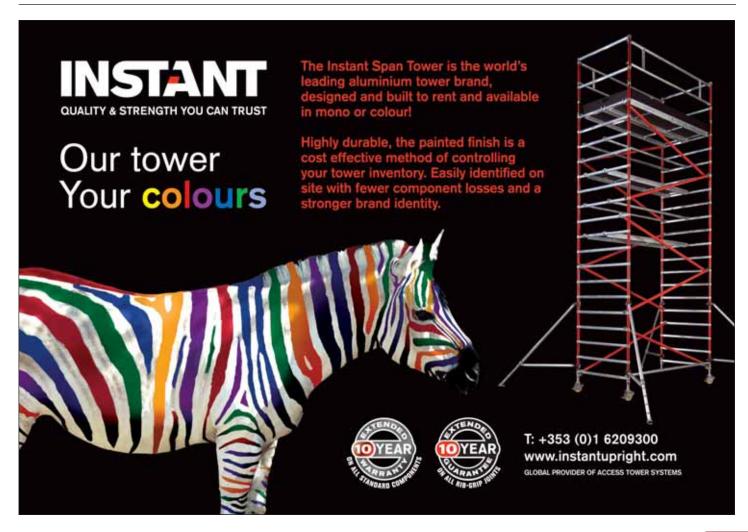
The fact is that no one piece of access equipment is suitable for every type of job, whether scissor, boom, truck or trailer mount, spider lift, alloy tower, ladder or mastclimber each and everyone

is a superstar in the right application - safe, efficient and cost effective. As always the key is choosing the right tool for the job and then making sure that you now how to use it properly.









### non powered access C&a

# **AMP and Folscaf from Clow**

The Clow Group has launched two new products designed to meet all the requirements of the Work at Height Regulations 2005 - the Adjustable Magic Platform (AMP) and the Clow Fibreglass Folscaf.

The AMP offers three different working heights up to 3.6 metres in a convenient, flexible and portable one-man working platform.

With no loose components to be lost, the AMP is easily moved on large diameter wheels through most standard doorways and can be assembled by one person in seconds. Integral locking stabilisers can be

adjusted to allow working against a wall and the large platform area, complete with toe boards, full guardrail and self closing gate allows safe and stable 360 degree working.

The Clow Fibreglass Folscaf is a fully insulated, lightweight folding scaffold platform for use where there is any risk of exposure to electrical power or chemical agents.

Once folded, the unit can be moved through most standard doorways. The AMP offers three working heights up to 3.6metres. Assembly is quick and easy thanks to a one-piece folding base section which ensures the platform is always erected correctly and safely. The platform height can be adjusted

> to 2.86 metres. Safe access to the platform is provided by means of a side frame which is fitted with serrated

in 500mm increments up to a height of 1.86 metres on the standard unit.

Optional guardrails and an extension

increase the overall platform height

section are also available to

non-slip rungs at 250mm intervals.

### ayher world record

German system scaffold company Layher erected a record breaking structure in the middle of Moscow this January, to support a massive ski ramp used to promote the 2014 Winter Olympics in Sochi.

Fourteen world class skiers and two Russian champions competed in a parallel slalom down the 37 metre wide, 150 metres long, 56 metres high ski slope. Situated in front of the main building of Moscow State University, the event was organised by the International Ski Federation (FIS), Russian Alpine Ski And Snowboard Federation (RASSF) and the New League Sport Club which was responsible for the ski slope.

When the order was placed for this huge structure, the main factors were flexibility in the use of the material and the capacity to deliver. The scaffolding system

for the ski ramp will be used in February and March in other freestyle and snowboard competitions and therefore had to be quick to assemble and dismantle, and yet very strong. The Layher Allround system proved ideal thanks to the versatility of of the Allround connector with eight connections allowing variable angles on a single plane. Another deciding factor was the high strength of the system as the ski ramp is exposed to high wind loads.

In addition, stringent requirements were placed on the design for snow loads. The load of 1,000 kg per square metre meant a small and expensive grid configuration of 1.09 x 2.07 metres. To permit building with the larger grid size of 2.07 x 2.07 metres, Layher's planners halved the load by inserting



double rosettes in the transverse direction, i.e. two Allround standards, each connected using a double wedge coupler. To transfer the loads from the ramp superstructure into these standards, a special part was also designed and manufactured. A total of 1,300 tonnes of material was used in the structure requiring 70 trucks and 40 men working less than two months to assemble the ramp.

Entire sections were preassembled on the ground and installed by crane. The only thing that Layher was unable to manage was the weather - so snow from the Kemerovo region of Siberia 3,500 km away was brought to Moscow in around 100 trucks.

### Klik 232 tower

Northampton-based Euro Towers has introduced the new Klik 232 tower. Available in two widths single 700mm and double 1,350mm - the tower has a 232mm rung spacing which enables climbing access on either side of the tower. The new Tower contains three types of frames, six rung, eight rung and 10 rung to ensure a maximum range of platform heights and is available in three different lengths two, two and a half and three metres. Features include multi-start square threaded adjustable legs, heavy duty splined spigots, unique 10impression crimped joint, specially designed to improve resistance to abuse, and reduce repair costs, a brace hook assembly that incorporates a double torsion stainless steel spring for durable and reliable use and bolted hook extrusions on platforms for easy low cost repairs.





# An Instant solution

UK heavy plant and machinery specialists Fox Plant approached Instant UpRight to find an access solution to help maintain its earthmoving equipment.

Access was needed to reach up and over the tracked machines to carry out maintenance and repairs on the engines. The Instant engineering team quickly designed the Terratower, a lightweight, high tensile tower system which is fast and easy to assemble.

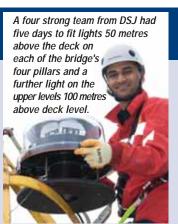
Using two cantilever frames it has adjustable legs which can be lowered onto the tracks to support the structure and provide quarding while the mechanic works on the engine. In addition, an extra slide-out guard on each frame is used which can be positioned to cover any

**C&a** non powered access

additional space between the cantilever frame and engine cowlings of different machines.

The Terratower can be used in both the workshop and on-site and is completely weather proof due to its aluminium construction. Instant says that this concept can be adapted to provide maintenance stands for all types of plant and equipment including cranes, access platforms and telehandlers and because the design is made up from standard components tailored to suit particular applications, it provides a cost effective solution from as little as £2,000.





Accessing the pillars of one of Britain's busiest road bridges to install a new aircraft warning light system is no easy task, especially when they are hundreds of feet above the River Thames Delta International Steeplejacks (DSJ) recently replaced the system on the Queen Elizabeth II Road Bridge across the Thames at Dartford. At 137 metres high, the QEII is

## Bridge over the river Thames

Britain's second highest cable-stayed road bridge but it is easily Britain's busiest, with 180,000 cars passing over it daily. When renovation, cleaning or maintenance work is required careful consideration needs to be taken to ensure access is quick, effective and safe.

Its location under the flight-path of nearby London City Airport means its visibility to descending pilots is paramount, particularly at night. Since 1991, its pillars have been illuminated by an arrangement of white xenon flashers but recent changes to Civil Aviation Legislation have banned their use prompting the need for a full system overhaul.

DSJ's sister company 'Delta Obstruction Lighting' (DOL) which specialises in designing and manufacturing Aircraft Warning

lighting systems won the tender with a brief to design, manufacture and install a lighting system that was compatible with the bridge's remote-controlled SCADA (Supervisory Control and Data Acquisition) framework with six lights at each fixing point lasting at least 100,000 hours. DSJ was then commissioned for the installation work.

With six light units ready to be installed, a four strong team from DSJ had five days to fit a single light at mid level - 50 metres above deck - on each of the bridge's four pillars and a further light on the upper levels of the Southwest and Northeast towers - 100 metres above deck level.

Access to the bridge was particularly tricky. A service lift inside each tower and a hand-railed platform

at each level made work up the tower relatively safe but the only way to get to the pillars was from the A282's inside lanes and, with such incredible volumes of traffic crossing the bridge daily, that was no easy task.

For 10 minutes each morning and evening, one lane of the four-lane carriageway was closed to protect the team. Beginning on the South west tower the four men used ropes and harnesses to access parts of the tower unreachable from the platform. Despite bitterly cold and windy conditions, the job flowed without snag as the lights were attached to the bridge with a bracket and a pole.

The system has now passed its function tests and was signed off by the client in early March.

### On a different Planet

The current economic crunch does not appear to be affecting the rail industry with more business travellers conscious about the rising cost of fuel, opting for rail journeys instead of driving to meetings, while rail freight has grown rapidly over the last 10 years.

2007's Freight Route Utilisation Strategy published by Network Rail forecasts further growth of 30 percent - the equivalent of extra 240 freight trains per day - over the next 10 years.

Work at height specialist Planet Platforms' has designed a number of rail solutions, focusing not only on work at height but also on work below ground.

Planet's Alutec, aluminium access tower system and Protec, Glass Reinforced Plastic (GRP) towers, are used to design bespoke access solutions such as carriage door access steps, door safety barriers, roof access systems, pit boards and cab-end roof access systems.

Protec is becoming increasingly popular due to its non-conductive, non-corrosive, spark resistant properties as well as its cleanliness. Protec access solutions also include spanned windscreen

wiper access staging, while Protec towers have been mounted on an insulated rail bogey. Planet has also supplied 13 GRP steps to Bombardier Transportation where they are used to test the new carriages at one of the testing facilities in Derby. The GRP access steps were developed to enter and exit access points in the carriages as opposed to having a single point of entry at the end or beginning and having to walk along the length of the carriage to reach a specific point.



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