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Danger.. working with trees

Working with trees is probably one of most dangerous occupations in the world, combining a lethal mixture of working at height, powerful cutting equipment and the unknown nature of individual trees. Add in the risk of electrocution from hidden power lines and it is hardly surprising then that so many tree workers die at work each year.

On average Vertikal.net reports two tree worker fatalities a month, while in the UK, HSE statistics show that 32 people died from falls in the agriculture, forestry and fishing industry last year. Meanwhile in the USA the Tree **Care Industry Association reported** 153 tree care related occupational incidents for 2016, of which 92 were fatal. The youngest was just 18, the oldest 70, with the median age of 39. The 'Big Three' causes were Falls at 31 percent, Struck-by 25 percent and Electrical contact incidents at 22 percent - figures that according to the association have remained constant for several years.

Just last month online news service Vertikal.net reported yet another arborist fatality in Inman, near Greenville, South Carolina, USA. A man was cutting down a tree for a neighbour and had apparently attached two tree sections to a davit jib on his truck mounted platform. The rope holding the trees broke, causing a rapid unloading force on the boom which catapulted him out

of the platform. He was clearly not wearing a harness and fell around five to six metres and died at the scene from his injuries.

However, as dangerous as tree work is, it is far safer when carried out from an aerial work platform rather than actually climbing the tree. The growing use of platforms has made tree work more efficient, quicker and safer, it also allows experienced tree care workers who may be finding it difficult to climb as they get older, to continue to work in later years so that the industry benefits from their years of experience.

There are also specific issues such as the growing problem of ash dieback and the presence of the processionary oak moth, which are beginning to drive more tree surgeons to switch from climbing trees to using work platforms and given the nature of those diseases this trend is likely to gather pace.

Cranes in arboriculture

While falls from platforms are a major cause of incident reports, a similar level of incidents in the tree

Draft for Consultation Tèchnical Guide 4: Safe Use of Mobile Cranes in Arboriculture

The Proposed AA Technical Guide 4: Safe Use of Mobile Cranes in Arboriculture has received input from the HSE and the UK crane hire association the CPA.



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care industry involves cranes. This is particularly prevalent in the United States, possibly due to the larger number of sizeable trees in the back yards of homes, but it also occurs regularly in Europe. The cause is usually down to three issues overloading, with the cutting team slicing off trunk sections that are too large in a bid to reduce the number of cuts, the wind catching the tree section and moving it out of radius, or the ground giving way under the outriggers - see C&A October.

In stark comparison to aerial lifts, tree related crane incidents rarely result in fatalities. However such is the concern that the UK Arboricultural Association is working on a guidance document for the use of cranes and aerial work platforms with trees. The Proposed AA Technical Guide 4: Safe Use of Mobile Cranes in Arboriculture has received input from the HSE and the UK crane hire association the CPA. It is currently available in draft form and is open for comment. The comprehensive 94 page guide covers all aspects involved with using cranes or aerial work platforms for tree work, including planning, slinging, set up and safe methods for various types of tree work. The draft is open for consultation until the Friday 13th December, anyone may comment on the document,

at https://www.trees.org.uk/News-Blog/Latest-News/New-Technical-Guide-4-%E2%80%93-Draft-Consultation . The final document is due to be published sometime during 2020.

arborists

Ash Dieback

Ash Dieback is a fungal disease that according to the UK's Woodland Trust is expected to kill off 95 percent of the UK's ash trees - one of the country's most common species - at a cost estimated a £15 billion. The disease makes branches brittle, so tree workers are unable to climb



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in them. The only way to safely bring them down when they cannot be felled complete, will be to use aerial work platforms such as truck mounts and spider lifts.

Some tree care companies have reported that Ash Dieback already represents around 20 percent of their workload, and that this is likely to double in percentage terms over the next two years.

Oak processionary moth

The oak processionary moth (OPM) is another damaging tree problem, and is prevalent across much of Southern, Central and Western Europe and as far north as the UK, Northern Germany and The Netherlands. In the UK it is currently centres around Greater London but looks set to spread. The moth's caterpillar and nests can trigger allergic reactions and skin irritation so tree surgeons working on infected trees - either to eradicate the moths, prune, add limb supporting cables, or in the worst case fell the tree must work from platforms, wearing specialist Personal Protection Equipment and carry insect sprays. Scientist believe the spread of the moth northwards across Europe



may be due to climate change, so the pest is likely to be a permanent issue, which is also likely to result in a growing demand for powered access by tree companies.

Spiders rule

Encouraged by safety and industry bodies in the UK like the Health & Safety Executive and the Arboricultural Association, many tree service companies are already switching from rope access systems to platforms. The association's risk assessment procedure that most tree surgeons now use asks the question: "Can the project be carried out with an access platform?" making it clear

that working from a platform should be the first choice, not a secondary

Spider lifts have become the 'go to' platform of choice for tree companies, given that it can be transported easily on a trailer behind a 4x4 or 7.5 tonne chipper truck. The machines can track into position across difficult and soft terrain, or over sensitive ground or flooring, such as soft tarmac and paving slabs into position and set up as close to the tree as required.

The most popular spider lifts with tree companies range from 15 to 22 metres with Hinowa claiming a sizeable share of the market with its 17 metre Hinowa Lightlift 17.75 and the 20 metre Lightlift 20.14 - the largest Hinowa spider lift that can be transported on a trailer behind a 4x4 given its overall weight of 2,840kg. The need to be trailer transportable behind a 4x4 is critical right across Europe, given that most small tree crane companies use 4x4s and two axle equipment trailers for all of their transport requirements.

Other models in this market segment, that are widely used in tree work include the 18.7 metre CMC S19HD which has been designed specifically for tree work, weighs 2,617kg, and offers a decent 11.5 metres of outreach. Platform Basket is possibly the market leader in the tree care market in North America and the UK offering several models for tree work including the 17.7 metre Spider 18.75, mainly due to the fact that it weighs just over 2,000kg. The downside is that outreach is not quite as good at 7.5 metres. The company's Spider 18.90 however offers 9.2 metres and weighs 2,300kg.

Urban arb work

There is also much tree work that is carried out along roads and in green spaces within towns and cities. The advent of electric and hybrid platforms mean that such work can be now carried out with fewer or zero emissions and with minimal noise, although the same cannot be said of the chain saws that the work requires. Manufacturers such as Klubb now have a full range of electric and hybrid compact van mounted platforms.

For example its K20 eNV200 van mount has 10.1 metre working height and 4.1 metres of outreach, with a travel range of between 100 and 175 miles, depending on the





battery pack selected. Its latest conversion is the K21B on a three tonne van which features a regular diesel powered van, but the work platforms is battery powered offering a working height of 11.4 metres and 6.8 metres of outreach.

Pick up mounted trucks are also gaining some traction in the tree industry, given that they offer four wheel drive, some payload, can be used for street work or off road, are relatively compact and can be driven on a regular car licence.







arborists

The downside is that they tend to be limited to 12 or 13 metre working heights. Manufacturers include Versalift, Socage, Palfinger and Klubb, while CTE has installed its 14.7 metre Zed 15.2 on the Isuzu D-Max 4x4 or Toyota Hylux

4x4 pick-up chassis. More recently Spanish manufacturer Movex has just launched the 13.2 metre ATL14 and the 15.2 metre ATL15. They both offer 225kg platform capacity, with 6.5 and eight metres outreach respectively.



Reducing an oak tree

Specialist tree pruning, dismantling and felling services company Tree Fellas Devon recently used a Hinowa Lightlift 20.10 spider lift to reduce an oak tree, which is protected by a tree preservation order, and located in the back garden of a house in Exeter, south west, England.

The main problem was that the only access to the garden was through a narrow gate. Two previous plans to carry out the work by conventional tree climbing had been blocked by the local council, which was concerned with tree damage and pruning it too severely. Tree Fellas submitted a plan using its Hinowa LL 20.10 spider lift, which was approved.

With an overall width of just 790mm it was narrow enough to drive through the gate, while its low weight - 2,840kg - and rubber tracks allowed it to track across the lawn and set up without causing damage. The lift was able to reach and set up all around the tree and reach all areas of the canopy without damaging the tree. It was also a lot easier to trim precisely the right amount off each branch. The contract was completed in less than a day, with minimal disruption to the property owner.

Ben Van Walsum of Tree Fellas said: "We are winning work we couldn't do before because we can respond more quickly to urgent projects.



We can stay competitive on price, even when factoring in the cost of the platform because our jobs take less time, so we can do more work. The working height and outreach of the Hinowa for a platform that is so narrow, is phenomenal. Also, the fact that the basket capacity is the same at full outreach is very useful. I am very hot on safety, as are many



of our clients. I never think now about climbing with ropes."



What makes a good spider for arb work?

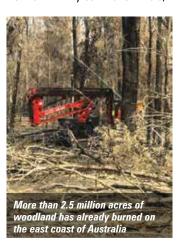
- Can be transported on a two axle trailer behind a 4x4
- Has generous ground clearance and levelling ability.
- Offers low ground bearing pressure with rubber tracks for less damage to ground and the ability to cross soft ground. Extending tracks are also an advantage for moving over uneven ground.
- · Can fit through a garden gate, travel down a pathway and move between trees in wooded areas
- Tough heavy-duty build quality and steel protection covers over vulnerable hydraulic cylinders.
- DC/AC electric power option for low noise and emissions
- · Radio remote controls for travel, manoeuvring

Rescuing koalas

Koala colonies have been badly affected by Australia's ongoing bush fires, with as many as 350 koalas dying in a week, and that number rising in the aftermath as they dehydrate or starve to death. More than 2.5 million acres of woodland has already burned on the east coast. When the fires hit Lake Innes Nature Reserve, near Port Macquarie, New South Wales, there was concern in that it was home to a colony of around 600 koalas, sadly many of them died in the trees while seeking shelter as the fire spread.

However, arborist Port Tree Fella was on hand to assist. It has been rescuing Koala's caught in bush fires for The Port Macquarie Koala Hospital for more than 10 years. The company initially climbed the trees to try and get close enough to the Koalas to capture them in a bag. More often than not this was unsuccessful, especially with the larger species of koala. However, the company now uses a Platform Basket 18.90 spider lift for the rescues.

Arborist Peter Berecry said: "We can safely access the canopy with two operators and retrieve Koalas that may be hard to handle,





such as mothers with small joeys on their backs or those that are severely injured. Recent bushfire casualties with severe burnt claws and wounds can be carefully retrieved and bagged without causing too much stress."

Koalas are already considered vulnerable to extinction due to increased forest clearance, with numbers falling to fewer than 20,000 in their primary habitat in New South Wales. The World Wildlife Fund had warned that they could be extinct by 2050 but the fires have been so devastating they may be reclassified as endangered in the state.



