

Reduce, reuse, recycle

Wooden pallets are a central part of the economy's green recovery

A feature in US Smithsonian magazine refers to pallets as 'perhaps the most important thing in our global economy'; while economists often highlight pallets as a cornerstone for the smooth international movement of goods. This is because, for 70 years, they have enabled suppliers to batch up, load and transport goods; maximising space, saving time and money and making supply chains vastly more efficient.

Wood, of course, is the material of choice for around 90 per cent of pallets, because of the low cost, versatility, hygiene properties, and the fact it is widely available. But it is also most importantly the most sustainable option.

The government recognised the fact that wooden packaging lends itself to reuse and the unique status of wood in November when it released its interim packaging recycling targets for business. Wood was the only material for which targets were decreased - moving from 48 per cent to 35 per cent; all other materials were given an increase in their figures. Meanwhile, with most pallet manufacturers and repairs sourcing wood from PEFC or FSC certified sources - and the President of FEFPEB Rob van Hoesel recently calling for the industry to aim for compliancy wherever possible - the circular credentials of the

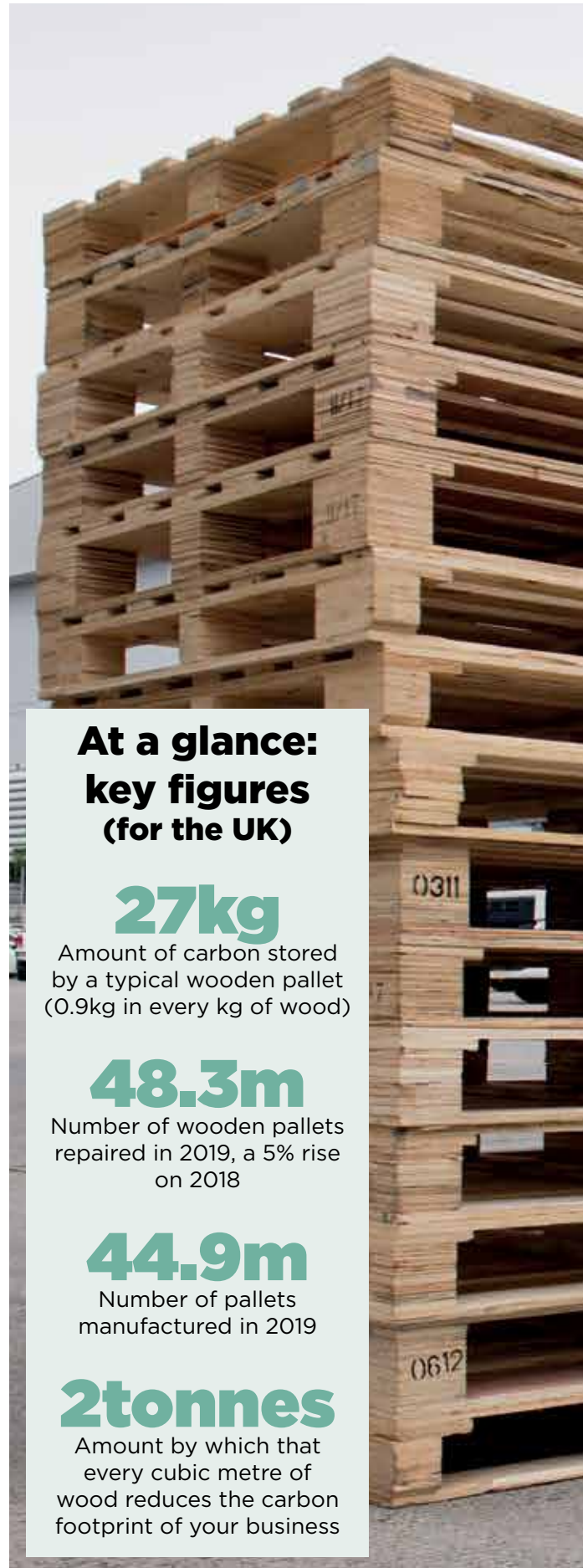
industry look set to increase further.

The critical role of wooden pallets and packaging was brought to the fore in the lead up to Brexit, when supply chains and government began to understand that supply chains simply cannot function without them. This understanding was consolidated further during the first COVID-19 lockdown last year, when the sector was designated essential by government in the UK and other parts of Europe for its role in keeping vital supply chains, particularly of food, drink and medicines, moving.

COVID aftermath

Pallets and packaging have a key role to play, too, in the aftermath of COVID-19. As governments around the world seek to rebuild their economies, sustainability is about to move out of the wings and into centre stage of business in the new world.

With circular economy principles already guiding EU legislation, the UK government's own £350 million drive towards a 'Green Recovery' from the pandemic should double down on this, elevating values of 'reduce', 'reuse', and then 'recycle', while cutting emissions and eschewing non-sustainable materials as a priority now stated as an integral part of the country's economic renewal.



At a glance: key figures (for the UK)

27kg

Amount of carbon stored by a typical wooden pallet (0.9kg in every kg of wood)

48.3m

Number of wooden pallets repaired in 2019, a 5% rise on 2018

44.9m

Number of pallets manufactured in 2019

2tonnes

Amount by which that every cubic metre of wood reduces the carbon footprint of your business

REDUCE

Pallets and packaging made from wood measure up impressively against these revised standards. When it comes to reduce, being manufactured from small logs and falling boards and taking almost a third of the UK's timber output, they are a key part - alongside the likes of construction and fencing - of an economic model that sees every part of a sustainably

harvested tree used. Meanwhile, pallet software used by modern businesses - such as the US pallet association NWPCA Pallet Design Software (PDS) - facilitate eco-design and manufacture of highly effective products, complying to environmental standards, and using an optimal amount of timber for maximum strength and efficiency.

REUSE

Pallets made from timber are naturally repairable, and the replacement of damaged boards or blocks is a straightforward and cost-effective means of extending their lifespan, sometimes for decades, and enables regular reuse. The Timber Packaging & Pallet Confederation (TIMCON) is now regularly highlighting the fact that reuse of wooden packaging material (WPM) is a vital step in a truly sustainable economy and one that industry must optimise before moving to the recycling stage (see *TIMCON interview, right*). The figures certainly suggest a move in the right direction, with pallet repairs overtaking manufacture of new pallets for the first time in

TIMCON's annual wood packaging market survey last year (for 2018). Its most recent study estimates that 48.3m wooden pallets were repaired in 2019, up 5% on the previous year, compared with 44.9m pallets manufactured.

Repair is increasing the life and reuse opportunities for both 'white pallets', which are usually owned by the user, and pooled pallets, popular with volume users in the fast moving consumer goods (FMCG) sectors. Modern businesses handling both these categories have developed to provide full logistics 'systems', which will focus as much on efficiency and environmental credentials as the pallets themselves.

RECYCLE

When recovery and repair is no longer a viable option and WPM reaches the absolute end of its useful life, then it is right time to recycle. This involves processing for supply to industries including panels, composite block, or animal bedding, or sent on to biomass for renewable energy, completing the cycle.

The circular process begins again with the manufacture of new pallets from sustainably sourced wood.

Using certified wood in any business reduces its overall carbon footprint and, in Europe, the packaging and pallet industry utilises approximately 20m m³ of this every year. There are an

estimated three billion wooden pallets in circulation in the UK and EU region combined - with an annual production of around 500m - and approximately 27kg of carbon stored in each one.

Aside from this comprehensive spread of benefits there is one economic reality that will be decisive for many businesses recovering from the impact of the pandemic. Wood remains the cheapest raw material (despite recent upwards fluctuations in price), so is in pole position as the material of choice for pallets and packaging, even before we look at their substantial other credentials to become a keystone of the Green Recovery.

Pallets' green credentials

Why reuse is a viable business model

According to John Dye, President of the Timber Packaging & Pallet Confederation (TIMCON), with proper handling and repair a wooden pallet can last for anything from five years to 30 years. He has even seen pallets in the whisky industry that were manufactured in the 1970s that are still in circulation today.

"The fact that the government has stated it wants a Green Recovery to the economic challenges brought about by the pandemic and the UK's existing commitment to being carbon neutral by 2050 are key," he says. "Both of these can be helped by using - and reusing - wooden pallets and packaging."

On TIMCON's drive towards encouraging reuse before recycling, Dye says that increasing the former is a sensible business objective for manufacturers. "The users of wooden packaging are now more than ever aware of the environmental and commercial benefits of reuse and, as we are currently seeing with the unprecedented rise in supply issues and accompanying price rises; the commercials are hugely important," he says. "We are seeing increasing activity in this area, with pallet repairs having increased by approximately 20% over the last five years." He adds that while wooden packaging products are often bespoke, there is still plenty of scope for reuse of the materials.

Recycling targets

With targets already in place for recycling materials, TIMCON is seeking to encourage reuse, whenever possible, before recycling. Currently, says Dye, tens of thousands of viable pallets and other wood packaging material (WPM) are unnecessarily removed from supply chains for recycling, when they should be reused.

"TIMCON is looking to work with other wood organisations such as the Wood Recyclers Association (WRA) to educate WPM users when pallets and packaging can and should be reused," he says, adding that TIMCON will build on its strong alliances with bodies including FEFPEB, NWPCA and the Global Wood Packaging Forum to develop a coordinated international approach, too.

To further encourage reuse, Dye says temporary 'easement' measures allowing ISPM15 marked pallets to be repaired with ISPM15-treated parts - brought in last year to shore up stocks of compliant WPM in the lead up to Brexit - could help encourage reuse into the future. "Currently, we will revert back to having to fully re-treat a repaired pallet in August. However, if no issues have been raised before then I am sure the subject of continuing will be discussed with the Forestry Commission," he says.

<https://timcon.org>