

The fickle gods of the hearth



Eleanor Harris describes the controversies, and the policy solutions, around firewood.

A log fire: few things are more comforting, more homely. In ancient Rome the household gods lived in the hearth: the lares. The fire is the soul of the home.

But too often recently, the charm of flickering flames has been doused by the cold water of policy controversies. Are wood-burning stoves causing an air pollution crisis? Is too much wood being burned, when it could have had greater environmental and economic benefits by being left in the forest, or made into long-lasting products? Is the demand for firewood creating a pull for imports which might harbour invasive pests and diseases? It can sometimes feel as if the heat generated by debates about firewood creates more renewable energy than the firewood itself.

The reality is more complex than binary arguments. Firewood has an important part to play in a low-carbon UK bioeconomy, but without a careful regulatory framework, the firewood fashion could cause more harm than good. We look at the work Confor is doing on each of these issues, and on how you can help to drive the development of a healthy firewood sector.

Wood use and carbon

Burning is recognised as the least beneficial use for wood fibre from a carbon point of view. While substituting wood for oil or coal saves 495kg of CO₂ for every m³, this is less than would be saved by the combined benefits of storing the carbon for decades in panels, pallets or fencing, and displacing the masonry, metal, plastic or perhaps unsustainably-harvested imported timber which would have been used instead.

But there is a difference between large-scale biomass and small-scale chip and firewood. More and more farmers and landowners are heating and powering their homes and their neighbours' with wood supplied from their own woodland. This has multiple benefits. Fossil fuel trucked for hundreds of miles is replaced by renewable energy grown on the doorstep; and native woodland which was previously a financial liability is now a vital asset, thinned, managed, and opened for business.

The landowner might reinvest some of the profits in improving the woodland for people or wildlife, encour-

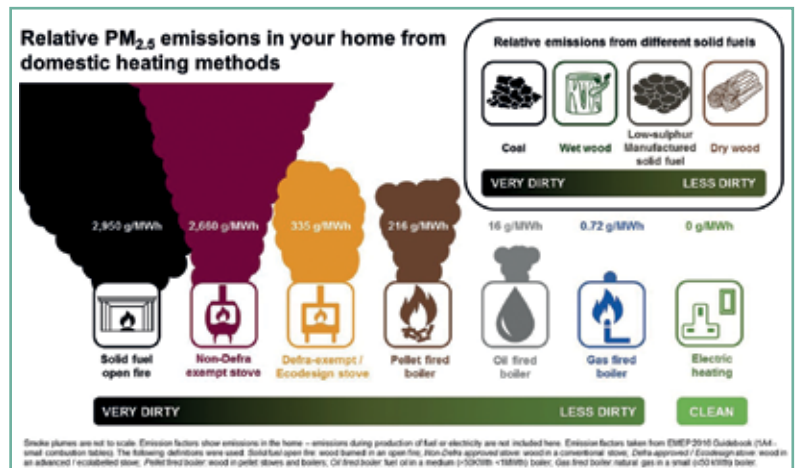


aging the bluebells which appear in the newly-thinned glades, or tackling the Grey squirrels. Or she might pursue her new interest in silviculture to start thinning for timber, learning to single out and grow on the straightest, finest trees as quality sycamore, beech, chestnut or oak worth far more than firewood. The result is a stronger, taller, richer woodland, holding far more carbon on site and delivering far more carbon-capturing and fossil-displacing products.

Air quality and burning

In January, Confor responded to Defra's consultation on domestic burning. We emphasised that in the important task of cleaning our air, the benefits for woodland management and climate being created through locally-produced firewood must not be lost. As Defra's graphic

Below: Relative air pollution from different types of fuel, from Defra's consultation on domestic burning as part of its Clean Air Strategy.



WHAT CAN YOU DO?

Confor will continue to press for these policy changes: to promote dry, clean-burning firewood and ban imports. But your role in developing, demonstrating and leading good practice across the country is also vital to demonstrate appetite for these policy changes.

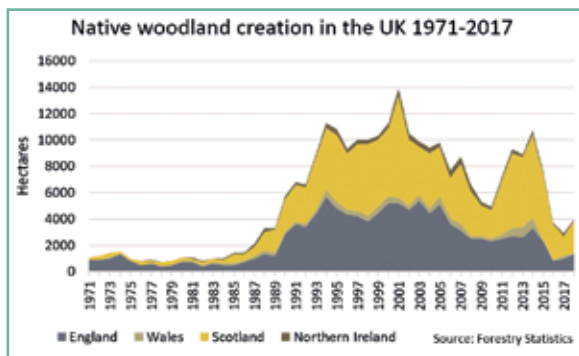
If you know a landowner who is beginning to harvest firewood from their woodland, why not pass on this magazine and invite them to join Confor to access the advice and expertise of our national managers, technical directors and specialist helplines on developing those other aspects of management?

If you produce firewood, join the firewood certification scheme Woodsure (see p49). The Ready to Burn label guarantees that firewood has been grown in the UK, and has been correctly dried to minimise emissions. By helping to create a supply of certified firewood, woodland owners make it easier for the public to choose quality local firewood, and for government to restrict risky imports.

If you buy firewood, now you know how to choose it.



areas. Policies can be made immediately to incentivise good practices in drying timber, for example by supplying moisture meters with wood burning stoves and promoting Woodsure's Ready to Burn label (below left).



(below left) shows, dry wood is the cleanest form of solid fuel, and for the foreseeable future will play a part in delivering a sustainable energy mix, especially in rural

Plant health and imports

Another challenge for the UK firewood market is high demand has created a thriving import market. Consumers are often unaware that they are buying firewood from Latvia, Lithuania or Poland, which supply tens of thousands of tons each year. There is no guarantee that the source forests are being managed sustainably; and there is a high risk that the wood will be a vector for invasive pests or their eggs, which can lurk in the bark or dunnage. The statutory notification scheme requires logs to be kiln dried, but over a quarter of inspected imports did not comply with regulations (see graphic).

The absurdity is that this firewood could easily be supplied by increasing the management of UK woodlands, meeting customer expectations and delivering all the benefits described above. Around 10,000ha of managed woodland could supply the firewood we import; tens of thousands of hectares of native woodland was created in the UK around the turn of the millennium, woodland which is now often failing to transition into healthy mature woodland due to lack of management.

Ancient gods were notoriously fickle things, so perhaps it shouldn't surprise us that the lares are causing such trouble. But in their 21st century incarnation, they respond not to prayers or offerings, but to joined-up thinking. Through a smart collaboration between the lares of the hearth and the dryads of the woods, we might be able to deliver a miraculous revival in our native woodlands, and make firewood once again a kindly, homely influence in a 21st century bioeconomy.

If not de-barked and dried correctly, firewood and wood packaging can harbour threats to the health of UK trees.

32,564

The number of reported tonnes of firewood with packaging from EU and non-EU states into England & Scotland in the first 9 months of 2017, far higher than expected.

28

The percentage of imports that were non-compliant. (13 of 46 inspections).

8,000

The hectares of managed broadleaf woodland that could supply this firewood.

34,000

The hectares of broadleaf woodland created in the last 5 years. Large amounts of UK broadleaf woodland is unmanaged.

Imports – by type and country

Sources: Statutory Notification Scheme for importing solid wood fuel, Forestry Commission GB&NI Tree Health Advisory Group Report 2017, forestry statistics.

Source: Confor's paper, Plant Health and Brexit

Scone Palace firewood continues to thrive

by **Ewan Reid** and **Anna Gunn**

Having worked as land agents for Mansfield Estates, home of the historic Scone Palace, for many years, Savills' forestry management team have worked closely with the commercial team at Scone Palace to help develop a new business that has helped optimise the management of the 400ha of hardwood timber resource across the estate.

With the 1600ha of UKWAS-certified woodlands stretching from the River Tay to North Logiealmond, the estate woodlands are a valuable resource and important landscape feature locally.

In 2012, Savills and Mansfield Estates identified that the broadleaved woodland was an undermanaged resource and that an active management programme represented an opportunity to add value to the woodland resource and forestry income via better utilisation of the timber arising from thinning and clear felling. From there, Mansfield Estates' Firewood Enterprise was born.

The process of supplying timber for the Firewood Enterprise is one that is managed by the forestry team.

Ewan Reid, a senior forestry manager based in Savills' Perth office, has managed the forestry for Mansfield Estates for three years and he ensures that the timber processed has been sustainably sourced from within the estate, as part of ongoing woodland management.

Systematically

"The estate has a number of previously undermanaged hardwood woodlands approved for Low Impact Silviculture Systems (LISS) in the approved Long-Term Forest Plan. These are now being systematically thinned to improve stand quality with the birch, sycamore, ash and oak timber produced being processed by the firewood enterprise. As expected, we are already seeing coppice regrowth from past thinning and intend to manage the birch and sycamore areas as a sustainable fuelwood source for the future. In addition, we take every opportunity to retain processable hardwood from conifer clear fells to ensure steady supply of timber for air drying."

Once the forestry team have programmed an area of woodland for thinning, they work with contractors to harvest the wood. The timber is then taken to the estate's processing facility, housed in three converted cow sheds and left to air dry until the moisture content is between 18-25% depending on the species, then converted into split firewood ready for delivery to the customer.



After initially processing timber on contract, the growth in sales led to the estate acquiring its own firewood processor.

"I undertook a detailed review of the firewood enterprise which concluded that among a number of required changes, growth of the business required investment in an estate processor," Ewan added. "After weighing the capital costs versus the rental costs, the better long-term investment was to acquire our own equipment to more cost effectively increase production. This decision has allowed us to better fit firewood processing into wider work programmes for estate staff"

In 2018, the Firewood Enterprise processed about 360 tonnes of material which resulted in 530m³ of firewood. In terms of sales, the firewood business has grown 35% Y-O-Y in the past two financial years. Business is certainly booming, but what is the secret to the enterprise's success? Ewan believes there's two main reasons; customers looking for more sustainable options and Scone Palace's reputation for exceptional customer service.

"In my lifetime, using wood for fuel went out of fashion and oil-based products were the preferred option.

People weren't aware of 'green living'. Today, people are far more aware of the effect certain fuels have on the environment. The world has moved on and our customers actively seek more sustainable options and are prepared to pay a reasonable premium for a high quality product."

Welcoming 100,000+ visitors to Scone Palace every year, Mansfield Estates can demonstrate their ability to manage the estate sustainably and, as a verified source under the UK Woodland Assurance Scheme,

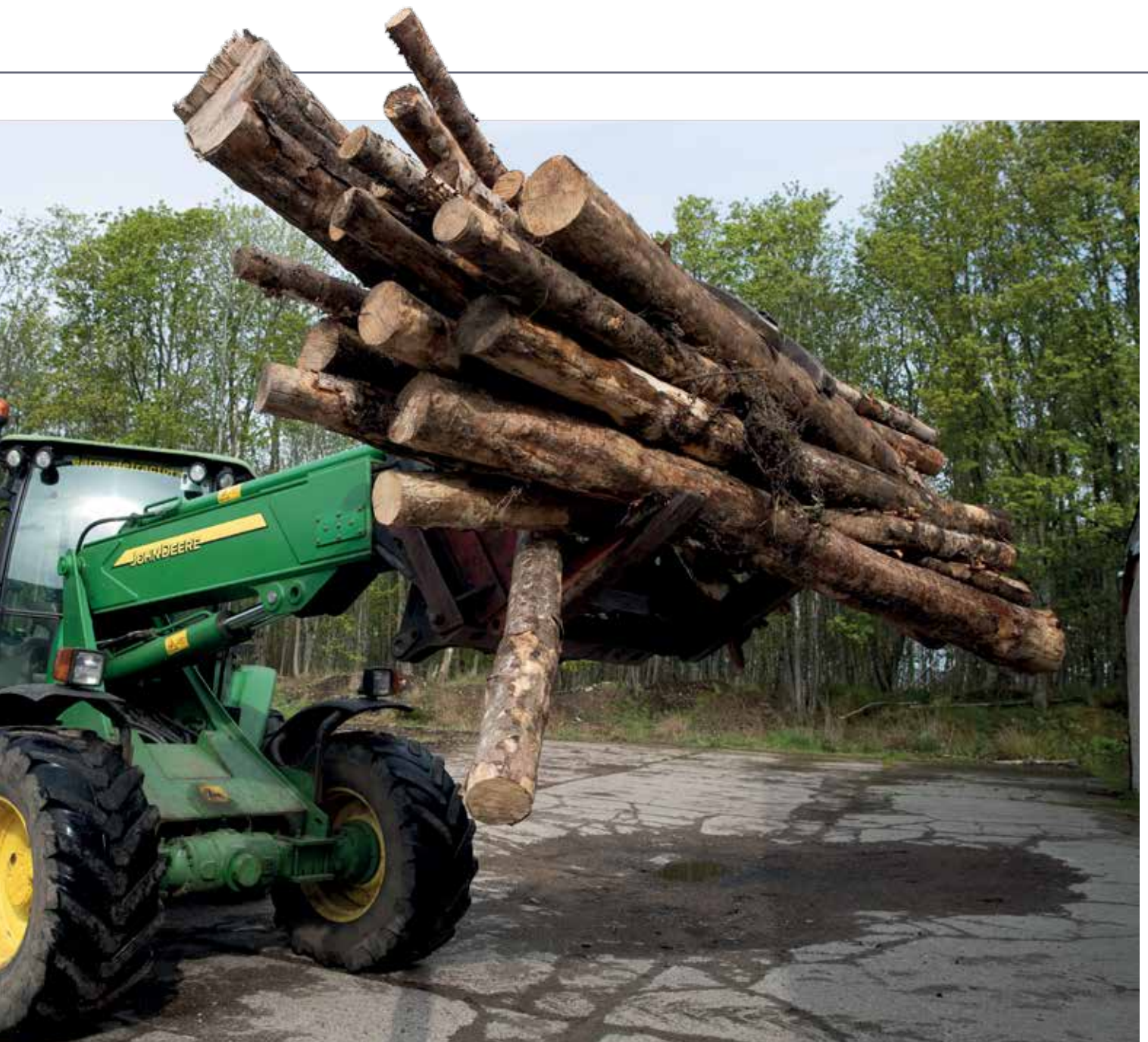
customers know they can rely on the sustainability and quality of the product. Gregor Cameron, retail manager at Scone Palace oversees the commercial end of the enterprise and believes one particular part of the service sets them apart from their competitors.

"As one of Scotland's most popular visitor attractions, we pride ourselves on providing excellent customer service," Gregor said. "The firewood service itself is outstanding in terms of the level of care taken by the forestry team, but I also believe our value-added stacking service has given us a competitive edge with 30% of our repeat customers taking up this particular service."

With the enterprise gathering momentum, what's next for the business? While the systems in place are working very well, Ewan believes there are always areas they would want to develop and further improve. "Cur-



The estate woodlands are a valuable resource and important landscape feature locally



rently, when loading logs for delivery, sometimes processing debris is inadvertently mixed into the load. As the demand has grown, there has been the occasional issue caused by this at the quality control stage. As a result, we are now investigating acquiring a firewood cleaner which tumbles material as its being loaded, meaning most of the debris will be excluded, further improving product quality.”

While optimising the core business is the team’s main priority for 2019, other future value-added options are being considered including bagged firewood and kindling and these options will likely be developed in the next 12 months.

“What has also been exciting is that, while the business has been growing, there has been a lot more proactive management of the hard wood woodland resource on the Estate,” said Ewan.

“The enterprise has inspired colleagues to look for further opportunities to add value for customers. This is one of the most rewarding parts of the enterprise and everyone involved is looking forward to seeing what’s next for the venture.”



Firewood from Mansfield Estates can be ordered at www.scone-palaceshop.co.uk or over the phone on 01738 552300 and is delivered within five working days.



FIREWOOD

Our firewood sector past and present

Michael Large highlights some challenges and opportunities facing the industry today.

I sold my first bag of logs in 1968, having cut them by hand from an Oak tree which had recently fallen. My customers thought these wet logs were great as they kept their fires burning all night. I have learnt a lot about firewood since then.

Firewood is the oldest form of fuel used by mankind for cooking and providing warmth since the dawn of history and remains one of the most important fuels used throughout the world today. In Europe, as populations grew from the middle ages, there was frequently a shortage of timber available for firewood and some countries, including Ireland, The Netherlands and Scandinavia, relied on peat. In Britain, coal became the major source of fuel and remained so until the introduction of oil in the 20th century. This also led to the reduction of firewood use until recent times.

Choice of tools for firewood processing

Firewood was traditionally cut by hand before being seasoned until about 40 years ago when firewood processors and log splitters began to appear. At first, fairly basic equipment with manual controls was popular and still capable of producing good outputs compared to previous methods. By the late 80ies, more sophisticated equipment became available and today we have a vast range of equipment to suit every size of operation.

In choosing a firewood processor one of the most common questions asked is whether to use a chainsaw

cutting system or a circular saw, both of which are in common use.

With a chainsaw system you have a much larger capacity in a relatively compact and low powered machine. Saw chains are cheap, easily sharpened and if severely damaged can be discarded. They are safer, as in operation they store little kinetic energy and can stop instantly.

A circular saw is much better for cutting wood and its speed can outperform most chainsaw systems. This advantage is lost because the processor output is usually determined by the splitter speed which can rarely match that of cutting. Circular saws are mostly tungsten tipped and can cut hundreds of tonnes of clean wood easily before sharpening. This is a specialist job and if the blade is badly damaged they are expensive to replace. Although accidents are very rare they have the potential to cause more harm because of the stored energy in the spinning blade.

Kiln drying

In recent years, kiln drying firewood has become more common due in part to the increasing demand for dry firewood and the time and logistics required for natural seasoning. Even if kiln drying can be economically viable, it is difficult to argue that it is the most environmentally friendly method unless the heat used is a by-product of another process. Kiln drying operations are quite often supported by generous grants and this can distort the economics of the operation.

Much of the kiln dried firewood we burn is imported >>

>> from Eastern Europe where there is still a good supply of suitable logs and a skilled lower paid workforce to produce it. To comply with our plant health regulations in place to protect our forestry, agricultural and horticultural sectors, only properly kiln dried firewood can be imported. Unfortunately, these regulations have been flaunted on a regular basis since importing began. Container-loads of firewood often arrive with moisture content exceeding 30%. We will never know if some of our recent plant diseases arrived this way.

Our firewood industry

For various reasons it is difficult to know the exact size of the firewood industry at present. Many producers operate on a casual cash-based system and are not recorded anywhere. I believe this may account for up to a quarter of all firewood production. Firewood may also be a small part of a larger sawmilling or contracting operation and not show up in any statistics.

In the British Isles there may be as many as 10,000 producers from part-time one-person operations to large-scale producers turning out huge quantities of firewood annually.

This thriving industry now faces a new challenge from a rather unexpected source. Having spent years getting people to use firewood in place of fossil fuels some research has shown that burning firewood may be damaging to our health. Under the Government's Clean-Air-Strategy 2019 new regulations will be introduced to ban the sale of the most polluting household fuels which is mainly coal and the use of the most inefficient open fires.

This is not a ban on burning firewood. On the contrary it offers opportunities for producers of good quality dried firewood to educate the public in the best use of this sustainable fuel well into the future.



More than flag waving



UK consumers want to know the origin of the products they buy and by nature they want to buy local. Grown in Britain licensing gives them the assurance they need. Too often we see the use of the British flag slapped onto products and packaging that simply could not be from our own woods and forests and are at best, imported in bulk and re-packaged in the UK. We live in a time when it is more important than ever to challenge the use of the British flag on wood products without independent assurance.

The Grown in Britain bespoke licensing scheme is specific to the UK, reflecting the UK's policies for sustainable and legal forest management and a Grown in Britain licence guarantees to your customers that the timber or fuel is legally grown in the UK and is from a woodland that is managed according to the UK Forestry Standard.

Why use homegrown firewood?

If we look at woodfuel logs, it is one of the products that we import unnecessarily, and yet there are many benefits of using British assured woodfuel logs including:

- Bringing woodlands back into management for water, carbon and wildlife
- Increased job opportunities
- Reducing waste
- Improving air quality
- Reducing woodfuel miles
- Reducing the import of pests and diseases

The Grown in Britain woodfuel licence is also recognised by the Biomass Suppliers List (BSL) and assists with the Renewable Heat Incentive (RHI) evidence (as detailed in the Timber Standard for Heat and Electricity).

One of our newest woodfuel licence holders, All Seasons GM Ltd had this to say:

"We joined Grown in Britain to make our customers aware that we source all sustainable timber from within the UK. We strongly feel that UK sourced timber should be highlighted to the public more as there is no need to be importing the large volumes of overseas timber as the market currently does. With the support of Grown in Britain, DEFRA and Woodsure, the market and quality of firewood can only get better and the license process is straight forward."

For more information on the licensing process and to download an application pack go to www.growninbritain.org

Be Woodsure

Do you know where your wood comes from? Quality assurance scheme encourages consumers to consider what they burn

This World Environment Day (5 June), Woodsure, the UK's only wood fuel quality assurance scheme, is encouraging all homeowners to consider what they burn. Using good quality wood fuel from well managed woodlands not only has the potential to reduce particulates in the air, improving air quality but also ensures the continuation of a healthy wood fuel industry.

Today, the Woodsure scheme is a recognised standard within the UK's wood fuel market. It identifies the conscientious, responsible suppliers who produce a trusted product. There are approximately 800 wood fuel suppliers and producers in the UK. Woodsure certifies nearly 200 depots, with Woodsure Ready to Burn fuel available in thousands of retail outlets and online.

By making responsible choices about fuel quality and the woodland it's sourced from, we can all play our part in securing its future and reducing carbon emissions. As stove or boiler manufacturers continue to develop new and enhanced products to improve efficiency, it is vital



that the issue of the quality of the fuel burnt that is not overlooked, says Bruce Allen, Chair of Woodsure.

Bruce says, "It is important homeowners and businesses think about what they burn. The Woodsure stamp of approval for fuel suppliers reassures buyers that the fuel they are purchasing is well-sourced and subject to a quality control process. For those who have just spent a few thousand on getting the right stove for their home or business, it is vital to buy good quality fuel to ensure the stove works efficiently and reliably."

He says, "The Woodsure Certification scheme offers a universally recognised mark of quality, that both industry practitioners and consumers can trust. When businesses and consumers use good quality fuel, such as those with the Woodsure stamp of approval, they will also be assured of a better burn. This is because Woodsure Ready to Burn products are dried thoroughly to ensure up

to 20% moisture content, which in turn ensures lower levels of PM2.5 particulates released into the atmosphere, more heat efficiency achieved and less appliance maintenance.

"In this way, appliance heat exchangers and chimneys are less likely to block, will remain easier to clean and maintain and will have a longer lifespan. We're asking consumers to look out for the Woodsure logo when purchasing fuel and businesses and installers to recommend only Woodsure certified fuel for optimum performance."

For more information on woodfuel quality, visit www.woodsurre.co.uk, or for helpful leaflets on choosing the correct wood fuel visit www.hetas.co.uk and download from the HETAS Advice section.



- ▶ All aspects of woodland management and design
- ▶ Woodland creation, establishment and maintenance
- ▶ Timber harvesting and marketing
- ▶ Arboricultural surveys and assessments



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