

FIREWOOD IN THE FIRING LINE

Selling fuelwood is bread and butter for many of the small forestry businesses that are regenerating the UK's neglected woodlands. But, as forest worker MIKE GARDNER explains, this source of income is now under threat from new government regulations that deliberately target small-scale operators.

Since humans first learnt to make fire, fuelwood (charcoal and firewood) has been one of the main drivers of woodland management. In early times this woodland management often destroyed forests: the gathering of fuelwood went hand in hand with clearance for agriculture. If the forest was able to recover, whether by coppicing or reseedling, it was usually less biodiverse than before. This loss of diversity was compounded when forest managers favoured certain species over others for their end use. If it was for fuelwood, the species that coppiced vigorously and had the best calorific value thrived at the expense of others; oak coppice dominated if the end products were tannin from the bark, and charcoal.

Aside from the few tracts of genuine wildwood left in the world, the majority of the world's forests have been managed and altered by humans for millennia and some species have adapted and evolved while others have gone extinct locally, nationally or globally. As an ecology undergraduate in the late 80's, I surveyed mangrove forests around Krabi in Thailand, measuring and recording the loss of diversity in forests coppiced for charcoal compared to the untouched forests. We were only counting tree species, but the difference was obvious, including the amount of birdlife.

A year later, as an ecology and forestry graduate, keen to get my hands dirty, I was learning coppicing and charcoal production in Cumbria. The aim was to help preserve species of flora and fauna that had evolved over centuries in coppiced woodlands. But coppicing had stopped over the previous few decades, the canopy had closed over, less light was reaching the forest floor, and species associated with coppicing were dying out. Charcoal was to prove to be the economic driver of this coppicing revival. The value of fuelwood at the roadside was less than the cost of cutting the overstood coppice, but the relatively low diameter poles were ideal for making charcoal that could be sold to the Lake District tourists. (I see on p 32 that charcoal production for cooking fuel is now seen as a means of conserving Red Mangroves in Thailand, and of combating climate change, albeit with a loss of biodiversity).

From being a destroyer of forests, fuelwood production has become a saviour. But this was only because the woodlands had become so intensively managed that much of the ecology they supported evolved to become dependent on coppicing, while other biodiversity was lost.

Fuelwood Underwrites Conservation

Today fuelwood production is an important component of the profitability of various forestry operations. Approximately



Work in progress in woodland in Devon managed by Mike Gardner.

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50 percent of the woodlands in Britain are undermanaged. These woodlands are rarely self sustaining ecosystems but are isolated pockets of trees where certain species are clinging on surrounded by an ecological desert of intensive agriculture or urbanisation. The sensitive management of such woodlands can preserve or increase biodiversity, provide rural employment through the sale of fuelwood, building timber and other products, and at the same time fix carbon from the atmosphere. A truly green economy. Removing some of the trees lets in more light for better quality specimens and gives them more room to grow and reach their potential. This light reaches through the broken canopy to herbs and shrubs on the forest floor stimulating the germination of many species of plants and attracting associated insect and bird species.

Often the main product from such an operation is fuelwood, especially when the woodland has been neglected for decades. Woodlands tend to have remained intact on land unsuitable for agriculture, which is often steep and inaccessible to harvesting machines and tractors. Felled timber has to be carried out by winching the trees up or down the hill to a track, then cut to length and stacked by a paved road. Twenty-five years ago the price for firewood sold at the roadside was approximately £15 a tonne, which was not enough to pay yourself and your workers, let alone the owner as well.

More recently, as a result of increased domestic demand the economics have been better: we have been getting around £45 to £50 a tonne for hardwoods, more in places. Softwood, less in demand for logs but sought after for biomass burning, has been making about £40 per tonne at the roadside. Only since autumn 2020 has the price slipped back owing to the lack of demand from the hospitality industry during lockdown, coupled with a surplus of ash from die-back.

Over the last few years winching wood out of these areas has cost less than the value of the firewood and a lot less than the £65 to £80 a tonne paid for fencing grade material or small sawlogs. However the vast majority of the product is fuelwood,

as these inaccessible woodlands have been neglected since the 1940s in many cases.

So it is that this winter, like the last three winters, I and my workmates are thinning the old oak coppice, extracting various products, the majority of which is fuelwood, and leaving the best quality trees to grow on for quality timber, allowing light to enter and seeds to regenerate. In places we are also planting different species of trees, some native and some exotic to increase the biodiversity of the woodland and also to build up resilience of the forest against pests, diseases and climate change. The better trees that we leave will extend their canopies and suck up more carbon as will the younger trees and shrubs in the glades we have created.

Fuelwood is an economic driver in most other silvicultural systems of forest management, especially in small woodlands and those operating continuous cover systems of silviculture, where there is a wide range of species and ages and hence sizes of trees. Even a large valuable tree will have a lot of small and wobbly or knotty material which is only good for fuelwood.

In such systems forest operations tend to be little and often, and hence produce small amounts of various different grades of timber and fuelwood. The standard unit of sale in industrial forestry tends to be the lorry load of between 18 to 28 tonnes for each product, so the different lower quality products such as fencing, bars and chip wood may not make up a full lorry load and have no market. With good fuelwood prices it can all be lumped together and sold as fuelwood.

All these woodland operations have the following benefits, that they:

- Increase the timber quality of the forest;
- Increase the biodiversity of the forest;
- Increase the forest's resilience to climate change,
- Increase the forest's capacity to take up carbon;
- Replace fossil fuels with renewable wood fuel;
- Substitute local fuelwood for wood from further away;
- Provide truly green local employment.

All this can happen when the local price of fuelwood is greater than the costs of its extraction.

One Law for the Large . . .

Unfortunately the imminent introduction of the Government's new laws on selling green firewood could have a deleterious effect on the management of our woodlands — especially on small-scale woodland management operations which often have greater ecological benefits and greater biodiversity. From February 2021, as part of a government drive to cut small particulate air pollution (PM2.5), sales of unseasoned firewood will be banned in units under two cubic metres, while volumes greater than two cubic metres will have to be sold with advice on how to dry it before burning.

The choice of two cubic metres is interesting. That volume of green oak weighs close to two tonnes, and of green ash about 1.3 tonnes. Both of these are greater than the payload of a tonne pick-up truck, which tends to be the delivery vehicle of choice for your average hands-on forestry worker or chainsaw operator, for several reasons. Being four wheel drive, they can



How to pack two cubic metres of firewood into a pick-up.

Photo taken in Mali.

bring everything needed for the day into the woods down forestry tracks, and can carry out small loads of added value produce such as hazel sticks or fuelwood. In the short days of winter, when most forestry work is carried out, filling up the pick-up and delivering firewood on the way home is a handy bit of well-paid work which can be done in the twilight.

A tonne pick-up is also more convenient at the point of delivery. In rural areas, people often have space to store and season their wood at home so can take pick-up loads of green logs as and when it makes sense for the cutter. But access at their home may be limited and a pickup can get into places bigger vehicles cannot. And larger vehicles cost a lot more money to buy and run, and can't go off-road.

By setting the threshold at two cubic metres, the new regulations appear to be deliberately targeted at small scale operators. Under the proposed legislation, all suppliers of wood in volumes under two cubic metres will have to sell only seasoned wood and comply with the "Ready to Burn" scheme operated by Woodsure. They will face a fixed fee of £507.60 for the first year and then £385.20 for every year after. Along with professional administrative costs estimated by DEFRA to be £288 per annum, this could lumber firewood suppliers with annual costs of £650-£800, possibly more. Since many small businesses sell fewer than 100 loads per annum, it could increase the cost of a load of firewood by 10 to 30 percent.

To ensure compliance, Woodsure "assess the production process, test products to industry standards and check adequate controls are in place. The entire process is checked, from sourcing the timber through to delivery." That's a lot of paper pushing, sample delivering and driving around auditing, all of which will produce small particulate matter, not to mention carbon emissions, from the vans, cars and their tyre and road wear.

Woodsure are a subsidiary of HETAS (the certification body who ensure that the cost of fixing a flue onto your woodburner stretches well into four figures) and part of a drive to certify almost everything. I gave up certifying my sawmill through the Forestry Stewardship Council, partly because of the expense of providing a certificate that none of my local customers asked for — but mainly when a nice French lady and Belgian man flew from their respective countries especially to audit me for the day, which flew in the face of my "source local and sell local" business ethos.

Not Seeing the Wood for the Trees

Like many compulsory certification schemes, the Woodsure legislation is born out of myopic devotion to a single issue, at the expense of a holistic overview. The Government's Impact Assessment admits that there will be a "disproportionate burden" imposed upon small and microbusinesses, and acknowledges that the 2013 *Better Regulation Framework Manual* allows for small businesses to be exempted from legislation. However because small businesses make up the vast majority of the 3,400 companies selling firewood in small quantities, they conclude: "full exemption is not compatible with achieving the intended benefits of the measure." Instead it is large operators who are exempted from the regulations.

The Impact Assessment has a section outlining the environmental benefits of reducing particulate emissions, but offers no analysis of any harmful environmental impacts that might arise. Banning deliveries of green wood threatens the viability of small-scale operators who are the greenest sector of the forestry industry, and the only sector in a position to manage small-scale woodlands. But this is a matter that the Government is determined to ignore.

Mike Gardner contributed to the recently published
Land Workers' Alliance Forestry Manifesto
<https://landworkersalliance.org.uk>

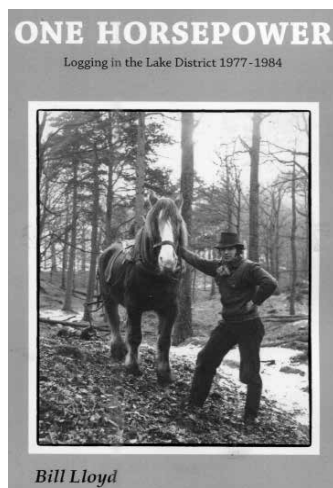
A Horse and His Man

One Horsepower: Logging in the Lake District 1977-1984, and Other Horse Tales.
Bill Lloyd. Wildwood Acoustic 2020.

This is a remarkable book, and may well become a classic of its times and genre. It's the account of a personal, practical and spiritual journey into what was, in the 1970s, a forgotten skill and way of life: the verb to *snig*, meaning to extract trees from woodland using only horses for traction, had all but vanished from the language. Bill Lloyd's pioneering efforts helped to open the way for what is, forty years later, a viable trade for many: there is even a Horse Loggers' Association. But it wasn't always so.

Bill's quest to find the skills and tools, the old boys who could teach him, the woodlands to work in, and most vitally The Horse himself, the indomitable Ginger, best teacher of all, makes a gripping tale. He tells it like it was, with a wry humour, and cracking yarns, which tend to start "One day, while sitting in the car waiting for the rain to stop...". Cumbria, with all its rugged landscapes and plentiful discomforts, is portrayed up close and personal.

This is also a record of a dying breed: an ancient society of hereditary woodsmen, and horsemen, all but extinct, passing on their skills just in time. Those years between the 70s and 80s were the cusp between the old world of muscle-power and the coming tyranny of fossil-fuels. Working a horse on terrain where no machine could go was an act of defiance and of hope, as well as an adventurous way to scrape an honest living.



It is as much a cunningly-disguised textbook as a memoir. Interwoven with the story of these years is a wealth of practical knowledge, an invaluable "how-to" of the Snigging Arts, and general horsemanship. This knowledge is all the more vivid because Bill and Ali, Mrs Lloyd, had to work most of it out for themselves, by trial and error, with almost no money, two small daughters, many disasters and some brilliant strokes of luck; the sort that tell you you must be doing something right.

For any practicing, or aspiring, woodland worker there are many useful extras: a chart for working out hoppus feet, and another on how to price up a job, for instance; tips on finding (and repairing) the right harness and implements for various terrains and types of work; horse dentistry; herbal remedies and other magic tricks (most of which don't work) and lots more. For those with no horsemanly ambitions,

there's a hilarious chapter on how to keep motor vehicles bought from the scrapyards going for just a little bit longer.

For anyone lucky enough to have worked long-term with a good horse, Bill's account of his lively relationship with Ginger will bring back fond and vivid memories. For anyone who hasn't, much is revealed about the telepathic chemistry that grows from this most co-operative collaboration between man and animal. A thoughtful, moving, funny, and most informative book all round. Highly recommended.

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Softback; with over 100 photos & illustrations, 305 pp including glossary, charts and index. Available from the author's website: www.billlloyd.co.uk, price £15 + £3 p&p