

# WOOD HEAT

WHAT CAN IT  
SAVE YOU?



This booklet is published by NEWHeat, an impartial market development service supported by One NorthEast to help you decide whether wood fuel is the right heating solution for your organisation. NEWHeat is a strictly non-commercial organisation.



This

booklet is designed to

help you decide whether wood

heat can make significant savings to your

organisation's heating bill. And in doing so,

help radically reduce your carbon emissions.

There's a great deal of excitement about environmentally

friendly heating methods right now. Ground source heat

pumps, wind and solar power all enjoy wide coverage in

the media. Yet wood heat (using a processed wood fuel) is

a method which can cut your heating costs by up to half.

This source of renewable energy offers the greatest level

of carbon savings at the lowest capital cost of all the

available forms of renewable energy.

Wood heat provides over 50% of Europe's renewable

energy and 10% of its overall heat energy.

The North East has one of the largest sustainable

forest areas in the UK and this is available for

fuel to heat our region's businesses. Given

this resource, it's well worth asking:

what can wood heat save

you?

## REAL SAVINGS TO YOUR HEATING COSTS



Traditionally the UK has benefited from cheap and abundant coal, oil and natural gas. However, as resources dwindle, energy bills are rising.

With wood heat, this needn't be the case: it's cheaper and the price is more stable than that of fossil fuels.

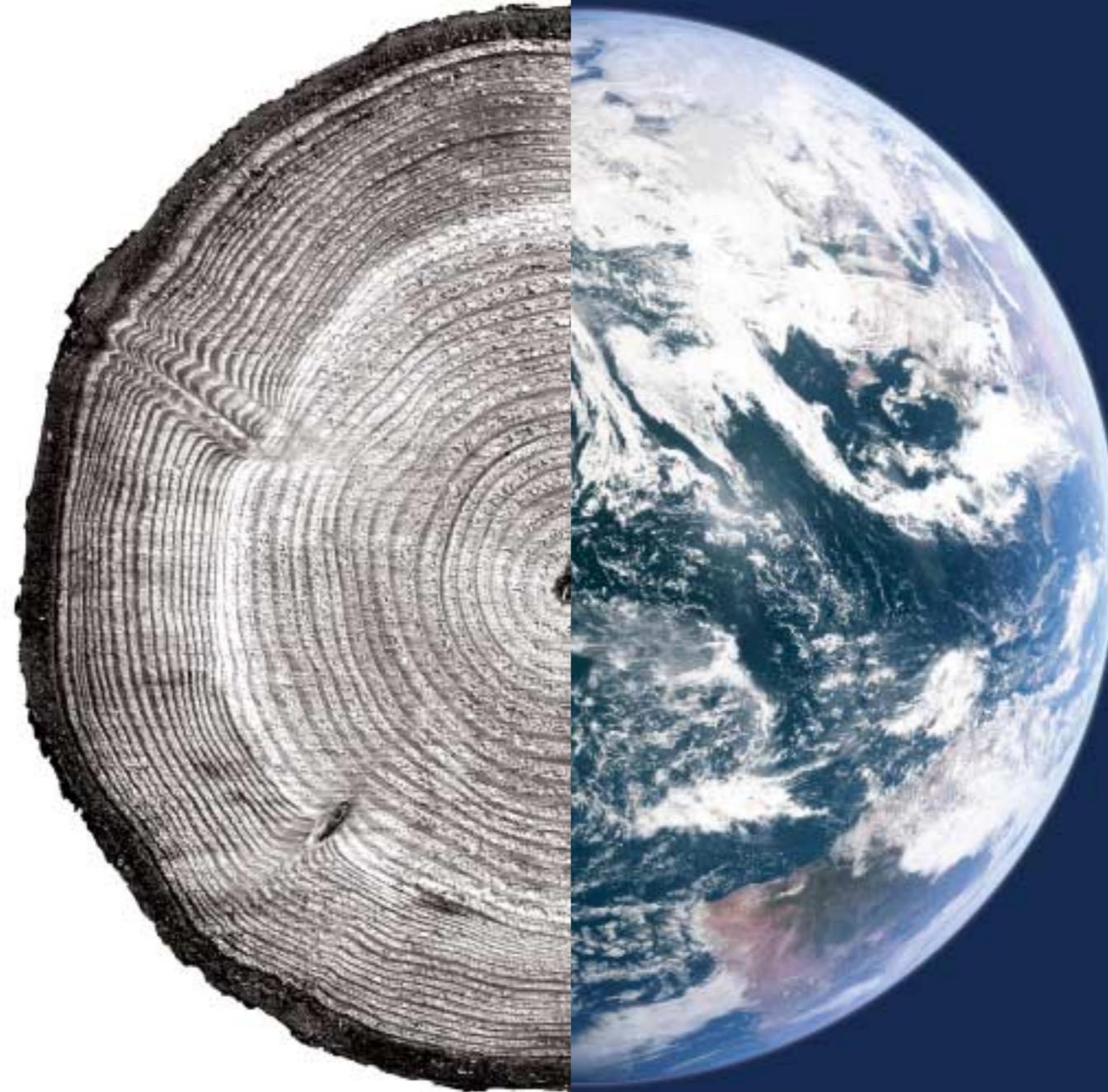
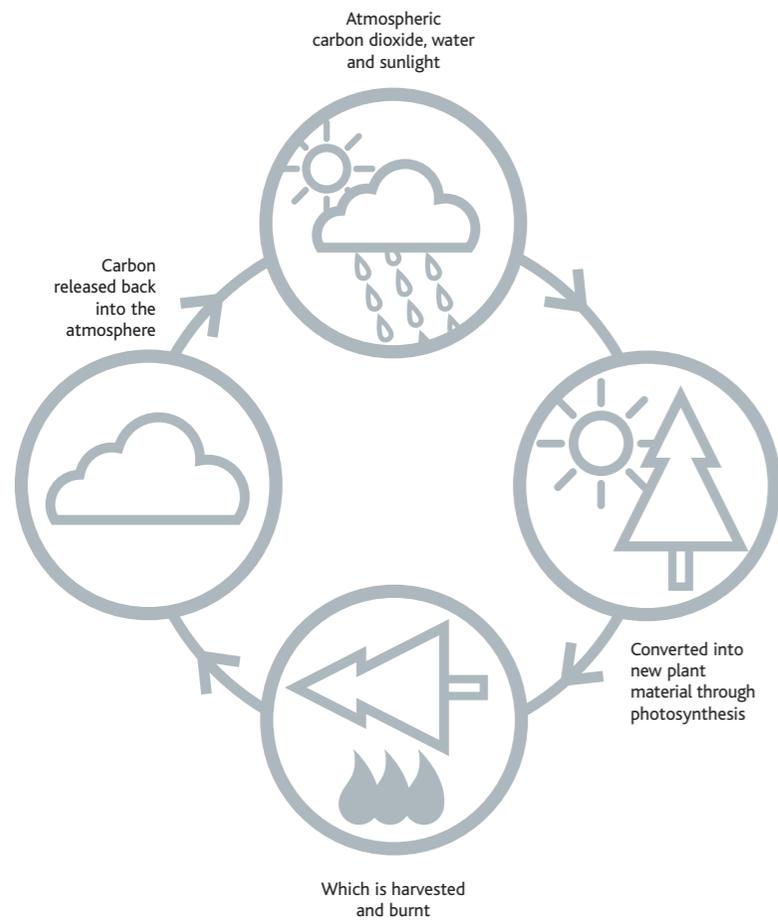
A viable wood heat project can reduce your heating bills by up to 50%.

This means that the cost of installing a wood heat system could be recovered in two to five years for a larger energy user and less if you factor in the grants and financial assistance currently available for the technology.

Wood heat has been the renewable energy of choice for years in Europe, where it's an established heating method with a proven track record.

In the UK it protects businesses from the impact of the Climate Change Levy. Further taxes of this sort can be anticipated if Britain is to achieve its long term carbon reduction targets.

## SUBSTANTIAL REDUCTION IN CARBON EMISSIONS



Wood fuel is an environmentally sound energy source.

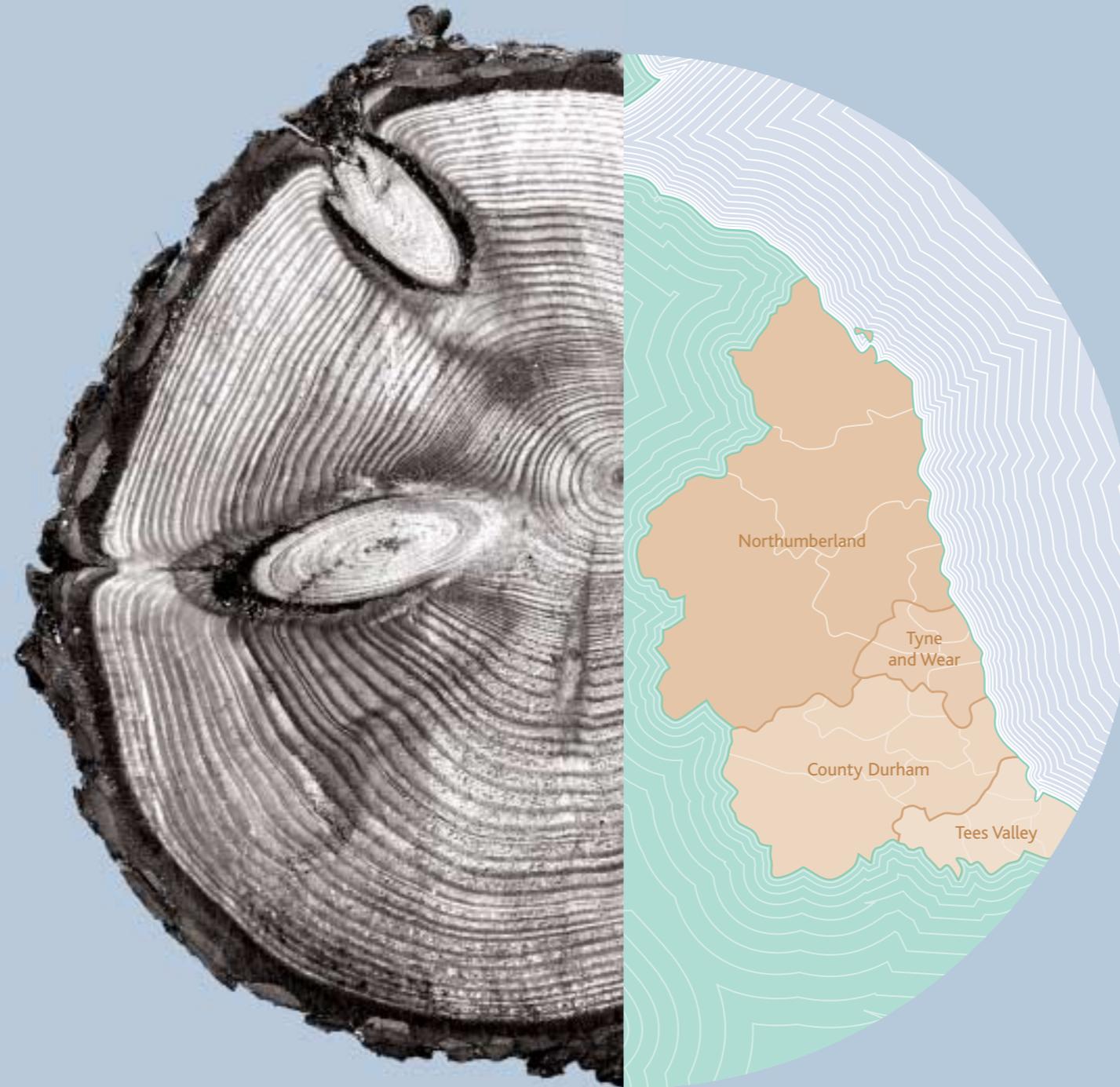
Compared to fossil fuel heating systems, it can reduce carbon emissions by more than 90%.

The carbon released by burning wood chip is equal to the carbon absorbed by the trees during growth. Take a look at the Wood Fuel Cycle on the opposite page.

Even when you take into account the energy used in harvesting and transportation, wood fuel has the lowest carbon impact of all the existing renewable energy technologies.

There are misconceptions about tree-felling, most of them derived from news reports and documentaries on the destruction of tropical rain forests. Wood used for energy is harvested from the annual crop growth of our region's forests. Any substantial tree-felling in the UK is regulated by a controlled forestry programme and is designed to actually contribute to our region's biodiversity, wildlife, woodlands and landscape.

## SIGNIFICANT BENEFITS TO OUR REGION'S ECONOMY



With one of Europe's largest man-made forests and a wealth of commercial woodland, the North East has some of the largest areas of forest resource in the UK. It also has a sizeable number of economically fragile rural communities.

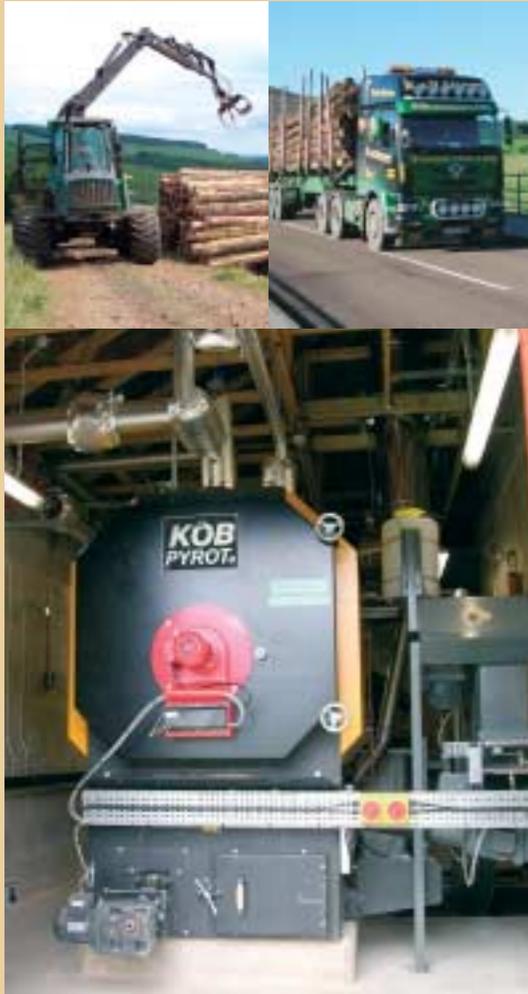
Wood fuel has the potential to strengthen these communities by providing long-term employment and reduce our reliance on imported fossil fuels.

In addition, the economic benefits generated by wood heat businesses are retained in the region. All the jobs in the sector are local, unlike those created by the supply of fossil fuels from distant and more unstable regions of the world.

The North East has the capability to lead the UK in the creation of a viable and sustainable energy industry based around wood heat.

A robust fuel supplier network is already in place and more local businesses are converting to wood heat every month.

## HOW DOES WOOD HEAT WORK?



Wood heat is a clean, safe and smoke-free fuel.

First, a fully automated wood fuel system is installed. It can run alongside or replace your existing fossil fuel system. It can be operated totally automatically from ignition to ash disposal. All modern wood fuelled boilers are extremely efficient, with over 90% of the fuel used converted to heat. This level of efficiency would be classed as A-grade in comparable oil or gas boilers.

Heat is generated by burning wood chip or pellet which is contained in a fuel store next to or near the boiler.

The fuel store is replenished by delivery from a regional wood fuel supplier. The systems require space for the fuel store and in most situations a solution can be found. A range of options is available and includes above ground silos and buried hoppers.

# WOOD HEAT AT WORK

## BEARL FARM, STOCKSFIELD

Allendale Estates has recently developed redundant and underused properties at Bearl Farm, Stocksfield to provide modern offices for businesses.

Allendale Estates produces large quantities of timber from 1000 hectares of woodland. A proportion of this timber supplied low value small roundwood markets. It was recognised that the same timber had the potential to produce wood chip for wood fuel heating. This could add value to an otherwise low value product. Wood chips also provide potential to utilise unmarketable timber products from the woodlands.

During the redevelopment process, a 110 kw wood fuel boiler was installed on site. This uses timber from the estate as its fuel source. It has been successfully implemented and now heats all properties on the development, which includes over 15,000 square feet of office space.



## STRABANE MILLS, CO. TYRONE

Strabane Mills is an animal feed mill which, in the winter months, needs huge amounts of steam 24 hours a day. The system utilises locally derived wood fuel from sawmill residues and short rotation coppice. It replaces the need for approximately 400,000 litres of oil annually.

Managing Director Tim Trail is impressed with the system. "The reliability and cost-savings provided by our new boiler help strengthen our business in a competitive marketplace" he says.

## SWINTON PARK HOTEL AND ESTATE

Swinton Park Hotel is a luxury 30 bed country hotel near Ripon, North Yorkshire. The cost of heating the hotel with oil increased dramatically during 2004/5. This led owner Mark Cunliffe-Lister to explore the idea of replacing oil with wood fuel. In 2005 he installed a high efficiency automatic wood-fired boiler with two 6,000 litre buffer tanks. Fuelled by wood chip from the estate, the system can easily cope with instantaneous demand for large amounts of hot water, performs excellently in extreme weather and operates efficiently on low fuel loads.

## HOW WE CAN HELP

NEWHeat is a service funded by One NorthEast to provide impartial advice to businesses in order to promote viable wood heat projects in the North East.

Services provided are:

- **APPRAISAL AND INITIAL FEASIBILITY ASSESSMENT.**

We will visit your building(s) and provide a short initial report setting out if and how an investment project can be taken forward. This will describe the costs and savings and any issues that will affect the implementation of successful renewable energy project for you. It will show you the business and technical case for the investment. We will sign-post you to other renewable energy and environmental assistance even if wood heat is not appropriate for you.

- **FUEL SUPPLY ADVICE.** You will be converting from a largely imported heating fuel such as oil or gas to a locally supplied and processed wood fuel. We will help you secure a tendered price for this new fuel supply (and related maintenance requirements) based upon a suitable bespoke contract we will draft for you.

- **GENERAL ADVICE AND SUPPORT.** We will provide you with advice in terms of grants, loans, financing, contracts, permissions, planning and regulations.

- **TENDER AND PROCUREMENT PROCESS.** We will produce a tender document for you, to secure a final scheme design and fixed price cost. This stage involves specialist engineering design and NEWHeat will meet 80% of this cost. You will be asked to contribute 20% of the costs which will be typically less than £2000.



## CONTACT US

Wood heat can be installed in most buildings. However, the economic benefits make wood heat most attractive to certain kinds of energy users. The key factors include:

- A **substantial existing energy bill** – as wood heat will dramatically reduce this.
- An **ability to fund renewable energy investment** that shows a return in investment over 2 to 5 years in many cases.
- **Ownership or control over your buildings** and perhaps the need to upgrade your heating in the coming years.
- A **desire to reduce your organisation's carbon emissions** and to contribute to local economic development.
- For **new build projects wood heat can be effectively integrated** to achieve cost effective environmental standards and low cost energy bills.

If you're interested in finding out what wood heat can save your business, get in touch. We can help you make the right decision.

Call us on **0845 4786 300** Email us at [enquiries@newheat.org](mailto:enquiries@newheat.org)  
Or visit [www.newheat.org](http://www.newheat.org) for more information.