

The Sustainable Firewood Guide

A handy consumer guide for firewood and firewood alternatives widely and readily available in Victoria

DO YOU KNOW WHERE YOUR FIREWOOD COMES FROM?

• What's the most sustainable wood to burn?

• Where do I find it?

• How do I tell 'good' firewood from bad?



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A burning issue: what's the best firewood to burn?

Conservative estimates put the amount of firewood consumed by Victorians at more than half a million tonnes a year. That's more wood than we export as woodchips!

Such enormous use is environmentally unsustainable from current firewood sources. The same forests that supply much of our firewood are also some of the most important forests in Victoria. They harbour threatened plant and animal species which need these forests to survive.

The bulk of firewood burnt by Victorian homes comes from native forests both here and in NSW. Victorian forests, such as red gum forests at Gunbower, and the Wombat, Wellsford and Mount Cole forests in central and western Victoria, are exploited for firewood.

There is no genuine environmental accreditation for firewood sourced from these forests, so the wood you burn may be contributing to the loss of habitat for our threatened wildlife.

But there are sustainable alternatives. Farm-grown firewood, particularly in largely cleared landscapes such as Victoria's Goldfields and the Riverina, has a range of benefits for both the natural environment and the health of farming communities.

It creates much-needed habitat, can provide shelter for sheep and cattle, and helps keep salinity in check.

Farm-based woodlots purposely grown for firewood are also likely to reduce demand for firewood sourced from our precious native forests, leaving these areas more intact as healthy habitat for threatened species.

AIR QUALITY

When burnt properly, using firewood from sustainable sources to warm your home can be less polluting and more environmentally sustainable than other methods.

- An efficient firewood burner produces less carbon dioxide than other forms



Firewood myths busted

Weight for weight, all eucalypt species have approximately the same calorific (heat) value.

Density is the factor that tends to determine preference for different species. Roughly half as much wood with a high density such as Grey Box (1121kg/m³) is required to produce the same heat as a lower density species like Alpine Ash (600kg/m³).

Wood that forms glowing coals radiates more heat than wood that burns quickly. Quick-burning wood gives off heat in the form of hot gases that often pass up the chimney and are wasted. Modern wood heaters are becoming better at utilising this heat.

of fossil fuel energy, but to minimise pollution your firewood must be dry – less than 20% moisture content is recommended.

- Firewood burners must be correctly flued, ventilated and operated.
- Burning firewood in small, hot fires produces less air pollution than large, smouldering fires containing large firewood logs.
- Wood with high moisture content, burnt in a poorly ventilated heater, can cause high levels of particulate matter to be emitted.

THE CARBON IMPACTS OF FIREWOOD

Most fuels used to produce energy (gas, oil, coal and wood) release CO₂ emissions into the atmosphere that are helping to drive dangerous climate change.

But unlike the other three energy sources, burning firewood from renewable plantations is greenhouse neutral. The carbon released from burning the wood is taken back in (sequestered) by the plantation trees as they regrow.

In terms of CO₂ emissions, wood

can be classified as a renewable energy resource, but only when accompanied by a tree replacement program. VNPA supports the use of wood grown in woodlots and through private farm forestry in existing agricultural areas.

HOW DOES YOUR WOOD STACK UP?

To help Victorians choose environmentally sustainable firewood, the Victorian National Parks Association has picked six of the most easily obtainable firewood and firewood alternatives on the Victorian market today and tested how they compare in their environmental impacts.

The products we have chosen come from a range of sources:

- Traditional firewood from native forests.
- Farm-grown firewood from sustainably managed plantations.
- Compressed native forest waste products.
- Compressed forest waste product derivatives imported into Australia.

We have used a range of factors to determine the environmental sustainability of these six firewood



IMAGE: ©iStockphoto.com/colehatt

PRODUCT	SOURCE	MADE FROM	BUY FROM	RATING
Enviro Firewood (grown in Victoria)	100% plantation grown Blue Gum from western Victoria.	Australian hardwood.	BP service stations and some garden suppliers.	Excellent
Eco Logs (Victoria based)	Native Victorian forest kiln dried mill waste, predominantly from central highlands and red gum forests.	Compressed sawdust.	Selected hardware stores, service stations.	Poor
Red gum, Ironbark & other native forest timbers	Entirely from native forests in Victoria and NSW.	Australian hardwood.	Widely available.	Bad
Ekoflame Firelog (WA based)	Saw dust and waste oil (Canola/soy/animal fat blend). Wood waste sourced from kiln and naturally dried mill operations, largely from native forests in Malaysia.	Sawdust from Asia combined with other products.	Bunnings.	Poor
Eko log (WA based)	Wood waste sourced from kiln and naturally dried mill operations, largely from native forests in Malaysia.	Compressed sawdust from Asia.	Bunnings.	Poor
Hotrox woodlogs	Timber-mill sawdust and waste woodchips from furniture factories.	Waste wood and sawdust.	Bunnings.	Poor
EcoBriquettes	Made from 100% recycled timber, salvaged from Australian demolition sites. Each briquette is dry shredded timber compressed under 200 tonnes of pressure and contains no additives or accelerants.	100% recycled timber.	Some BP service stations, independent hardware stores and supermarkets.	Good

HOW WE RATED EACH PRODUCT	ENVIRO FIREWOOD	ECO LOGS	RED GUM, IRONBARK & OTHER NATIVE FOREST TIMBERS	EKOFLAME FIRELOG	EKO LOG	HOTROX WOODLOGS	ECOBRIQUETTES
Sourced from outside native forests	3	0	0	1	1	1	3
Victorian product sustainably produced	3	1	0	0	0	0	2
Tree replanting program	2	0	0	0	0	0	0
Plantation based or woodlots on private land	3	0	0	0	0	0	0
RATING	11	1	0	1	1	1	5

Rating system: Excellent 10-12. Good 5-9. Poor 1-4. Bad-0.

Note: This analysis is based on available product information in stores and on company websites. The analysis is not scientifically based, but is the most comprehensive on these products to date.

products, each factor being rated on a scale of 1 to 3. The higher the score, the better the product is for the environment.

While not exhaustive, the assessment is the most comprehensive to date of the impacts individual firewood products have on the health of our forests.

Choose wisely when buying your firewood. Ask your supplier, service station or hardware store for the most sustainably produced firewood. Our analysis clearly identifies Enviro Firewood as the best available firewood choice in terms of environmental impact in Victoria.

AN UNSUSTAINABLE NATIVE FOREST FIREWOOD INDUSTRY

Significant quantities of wood are suspected of being harvested illegally from roadsides and public native forests. These forests provide wood for domestic use and commercial firewood sellers.

Sadly, most of this firewood is logged unsustainably from poorly managed forests, despite claims from the logging industry and government.

Many current forest management

plans and regional forestry agreements are outdated, or subject to changes by the Victorian Government, which has weakened environmental safeguards protecting forests and threatened species.

The removal of a permit system for firewood collection in Victoria's state forests – previously in place since 1958 – has also increased pressure on traditional firewood sources.

Unregulated firewood collectors have moved in, stripping forests of fallen timber, and leaving some rural communities that rely on firewood as their only source of heating short of fuel.

Don't send their homes up in smoke!

Collecting firewood from the forest is a great Aussie tradition, but what we see as 'dead wood' and fuel, birds, mammals and insects use as shelter and food sources.

Across Australia 21 species of native birds are considered threatened by firewood collection – 19 of them are found in Victoria.

Victoria's hollow-nesting Brown Treecreeper, for example, forages mostly among standing dead trees and logs, searching out insects that hide in fissures and hollows.

In River Red Gum forests, densities of the Brown Treecreeper have been found to be substantially higher in areas where fallen timber on the ground exceeded 40 tonnes per hectare.

In our Box-Ironbark forests, bird numbers have been found to be nine times greater, and the number of bird species present three times higher, in areas containing piles of fallen timber.

Mammals also need 'dead wood' in the form of hollow-bearing trees, both dead and alive, for shelter and nesting.



SQUIRREL GLIDER

Firewood from our forests

- If left on the ground in a forest, fallen branches form valuable shelter for native species. Removing them for firewood results in habitat loss.
- Taking firewood from native forests particularly threatens reptiles, birds and mammals. It can impact upon threatened species such as the Squirrel Glider, Carpet Python and Brush-tailed Phascogale (Tuan).
- Firewood harvesting from native forests can destroy native understorey plants and introduce weeds.
- The use of firewood from native forests threatens the viability of other sustainable firewood producers such as farm-based woodlots.
- Firewood sourced from native forests is largely unregulated and poorly monitored.

The removal of wood from the forest floor exposes soil to wind and water, potentially leading to an increase in soil erosion and sedimentation.

It also has negative impacts on our

native plants. Nine Victorian plant communities likely to be affected by firewood harvesting are listed under the state's Flora and Fauna Guarantee Act (FFG), which lists our most vulnerable species.

At a federal level, three ecological communities likely to be affected by firewood harvesting are listed under the Commonwealth Environment Protection and Biodiversity Conservation Act (EPBC). And about 60 plant species that occur in forests or woodlands of concern are listed under the EPBC, FFG or both.

Source: *Ecological Impacts of Firewood Collection* – Department of Sustainability and Environment, May 2010



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The Sustainable Firewood Guide is published by the Victorian National Parks Association, a not-for-profit community conservation organisation and Victoria's leading voice on protection of the natural environment.