Woodlots and Wildlife

A guide for creating a woodlot to provide you with firewood and valuable habitat for local wildlife

A woodlot at Glenrowan established in 2005 with rows of Yellow Box (Eucalyptus melliodora) and River Red Gum (Eucalyptus camaldulensis).

What are woodlots?

Woodlots are generally defined as smaller-scale timber plantations established on private farms, often for the purpose of providing the landholder with a supply of firewood or for producing high quality saw logs. Trees chosen solely to produce timber may be native or exotic species.

Trees grown for firewood should have the ability to coppice (re-shoot new growth) from cut stumps to ensure an ongoing supply of wood.

The North East has a range of suitable firewood species, including River Red Gum, Blakely's Red Gum, Red Box, Yellow Box and Grey Box. Choosing species for saw logs is quite specific and the details are not covered in this brochure.

This guide explains the principles of how to establish and manage a wildlife woodlot, which will offer you both a sustainable supply of firewood and provide valuable habitat for your local wildlife.

What makes a wildlife woodlot?

A wildlife woodlot is a woodlot comprising locally native plant species, including suitable trees for firewood and shrubs that provide food, shelter and shade for wildlife. Shrub species should be indigenous to your area to maximise the benefits for local wildlife.

Managing your woodlot over time involves leaving some trees to mature, while other trees are selectively harvested for firewood. Selective harvesting provides minimal disturbance to the new habitat you have created. Clear felling is not used as this creates too much disturbance. Harvesting a mix of older and younger trees will help create a more diverse wildlife habitat in your woodlot.

Many of our native trees have the ability to re-shoot from cut stumps (coppice). The ability for a tree to coppice means that harvesting will not kill the tree; in time, new stems will emerge and grow into more harvestable firewood. Coppice regrowth often grows faster than the original tree as the root system is already established.

The benefits of a wildlife woodlot

Using a mix of plant species and plant forms in the right density and at the appropriate spacing will create a healthy ecosystem for a diversity of plant and animal species.

Your woodlot can serve your needs and the needs of local wildlife. Your woodlot can also contribute to the farm's productivity by providing valuable shade and shelter from sun and wind for pasture, stock and crops.

Wildlife that use the woodlot such as bats, birds, mammals and invertebrates, will assist in maintaining woodlot health by providing natural pest control, the benefits of which will also extend to other areas of your property.

Having a sustainable source of firewood from your woodlot, avoids the need to collect either standing or fallen timber from remnant patches, paddock trees and roadsides. Fallen timber in the form of logs, branches and twigs provides essential habitat for ground dwelling and foraging wildlife, birds and beneficial insects and should be retained wherever possible.

Having a sustainable firewood woodlot will increase the resale value of your property, as the new owner will have ready access to firewood. A woodlot will also improve the amenity value of your property.

Establishing a new woodlot

Planning

When planning for a woodlot, first check with the Planning Department of your local Council. Where a plantation is being established for the first time, and where a Planning Permit is deemed not to be required by Council, a Plantation Development Notice must be lodged with the Council prior to the commencement of site preparation. This form serves as a record of your intention to establish and manage trees for wood production. **It is important not to miss this step**.

In addition, all timber production activities must comply with the *Code of Practice for Timber Production* (DEPI, 2014). Plantation development is regulated by the Victoria Planning Provisions and must be designed, managed and operated in accordance with Section 4 (Plantations) of the Code.

A woodlot planted on the windward side of a paddock can provide considerable wind protection for stock and pastures. Including shrubs or increasing the width of the plantation provides for wind protection to ground level.

Design

When designing your woodlot, you might like to consider the following:

- Use indigenous species, selected for the specific conditions of your site.
- Monocultures are to be avoided and using a diversity of species is encouraged.
- The continual partial harvest of a 2 hectare firewood plantation should be sufficient to provide a household with all their heating requirements for the year on a sustainable basis.
- Think about siting your woodlot in an area of your property that will provide maximum shade and shelter benefit e.g. on the windward side of paddocks. Incorporating shrubs in your woodlot greatly increases the wind protection at ground level.
- Consider incorporating isolated paddock trees and linking patches of other remnant vegetation.
- Locating your woodlot alongside existing fences will reduce the amount of new stock-proof fencing required (reducing costs and labour).
- Ensure suitable road access to the site for harvesting.
- Install farm gate(s) to access the woodlot for harvesting and periodic maintenance (e.g. weed and pest animal control).
- Options for plant establishment include direct seeding and planting of seedlings.
- Shrubs can be planted in patches, rather than in regular spacings, to provide dense areas for wildlife refuge and to make harvesting easier.
- Ground litter is an important component of the woodlot. Litter includes leaves, twigs and bark that are left to accumulate on the ground over time, providing homes and food to a vast array of life. Leaf litter assists with controlling erosion and returns nutrients to the soil.
- Consider installing nest boxes to provide hollows for birds, possums, bats and native marsupials as it will be many years until hollows have the opportunity to form naturally in your woodlot.

A woodlot at Glenrowan established adjacent to an unused road reserve provides easy access for harvesting and site maintenance

A large woodlot approximately 4 hectares in size, amongst scattered paddock trees. When siting your woodlot, consider linkages with remnant vegetation and incorporating large old trees into your woodlot.

Maintaining your woodlot

Regular inspection and some periodic maintenance will be required to keep your woodlot in good order. Things to consider include:

- **Pest animals** - Increased cover can also create habitat for pest species such as foxes, rabbits, cats and Indian Mynas. Control programs may be required.
- **Weeds** - Firewood plantations require weed control in the first year or two to ensure good tree survival and only require further weed control if noxious weeds are present. Keep an eye out for the appearance of new and existing weeds and control as required.
- **Fences** – Undertake regular fence inspections and complete maintenance as required.
- **Grazing** – Stock should be totally excluded from your woodlot until trees and shrubs are established (4-5 years). They may then be permitted for short periods for protection from extreme weather, or to reduce grass loads and fire risk (e.g. crash grazing).
- **Fallen timber** – Consider leaving fallen timber on the ground in your woodlot to increase structure and diversity of habitat for wildlife.
- **Replanting** – Over time you may have losses in your woodlot. Consider replanting both trees and shrubs as needed to maintain an appropriate density of plants.

Harvesting your woodlot

The general principles for harvesting your woodlot are:

- Clear-felling your woodlot, or parts of it, will create significant disturbance. Selective harvesting of trees is better as it is far less disruptive to soils and vegetation.
- Younger trees are much easier to harvest than older trees. They are smaller in diameter, safer to fell, are more easily cut into lengths and will require less (if any) splitting.
- If you have included older remnant trees in your woodlot, make sure to leave these as they provide essential habitat such as hollows. Hollows take a minimum of 80 years to form and large hollows can be over 200 years old.
- Plan to fell enough trees in advance to allow for adequate drying time, at least one year. Harvesting approximately 10% of your woodlot each year will ensure an ongoing firewood supply every year.
- Cut up your trees into final lengths whilst green, as the timber is much easier to cut and pieces will dry faster. Green wood also often splits whilst drying, so reducing any required splitting.
- Harvest when soils are compact and dry to reduce site disturbance.

A 24 hectare trial woodlot planted in the Carlyle water reserve in Rutherglen in 2004, with understorey planted using different configurations (lines, strip and block layouts) in 1 hectare test plots. Thirteen years on, results indicate that the survival of the specific understorey species over time and through drought and wet years, played a greater factor in success of understorey planting than the initial planting configuration.

Monitoring your woodlot

Take an interest in your new woodlot and observe the various species of wildlife using your area. Birds in particular will utilise your woodlot and will be the first to arrive. If you have installed nest boxes, check and maintain these regularly.

Your local Landcare group will be able to provide information on bird identification and nest box monitoring and maintenance.

References

Haughton, M (2011). Develop a woodlot for fuel and for wildlife habitat: A guide for creating a woodlot to provide you with firewood and valuable habitat for local wildlife. East Gippsland Landcare Network, Bairnsdale.

Noble, P (2011). Growing Firewood on Farms: A Practical Guide. Department of Primary Industries, Wangaratta.

Platt, S (2002). Woodlots and Wildlife. Land for Wildlife Note 19. Department of Natural Resources and Environment, State of Victoria.

Other Resources

The following references provide local advice on firewood species selection, including burning characteristics and site requirements for common firewood species. These references are available electronically on **www.gretalandcare.org.au**

Brock, G (2004). The Properties of Firewood. DPI Note AG1150.

DEPI (2014). Code of Practice for Timber Production. Department of Environment and Primary Industries, State of Victoria.

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