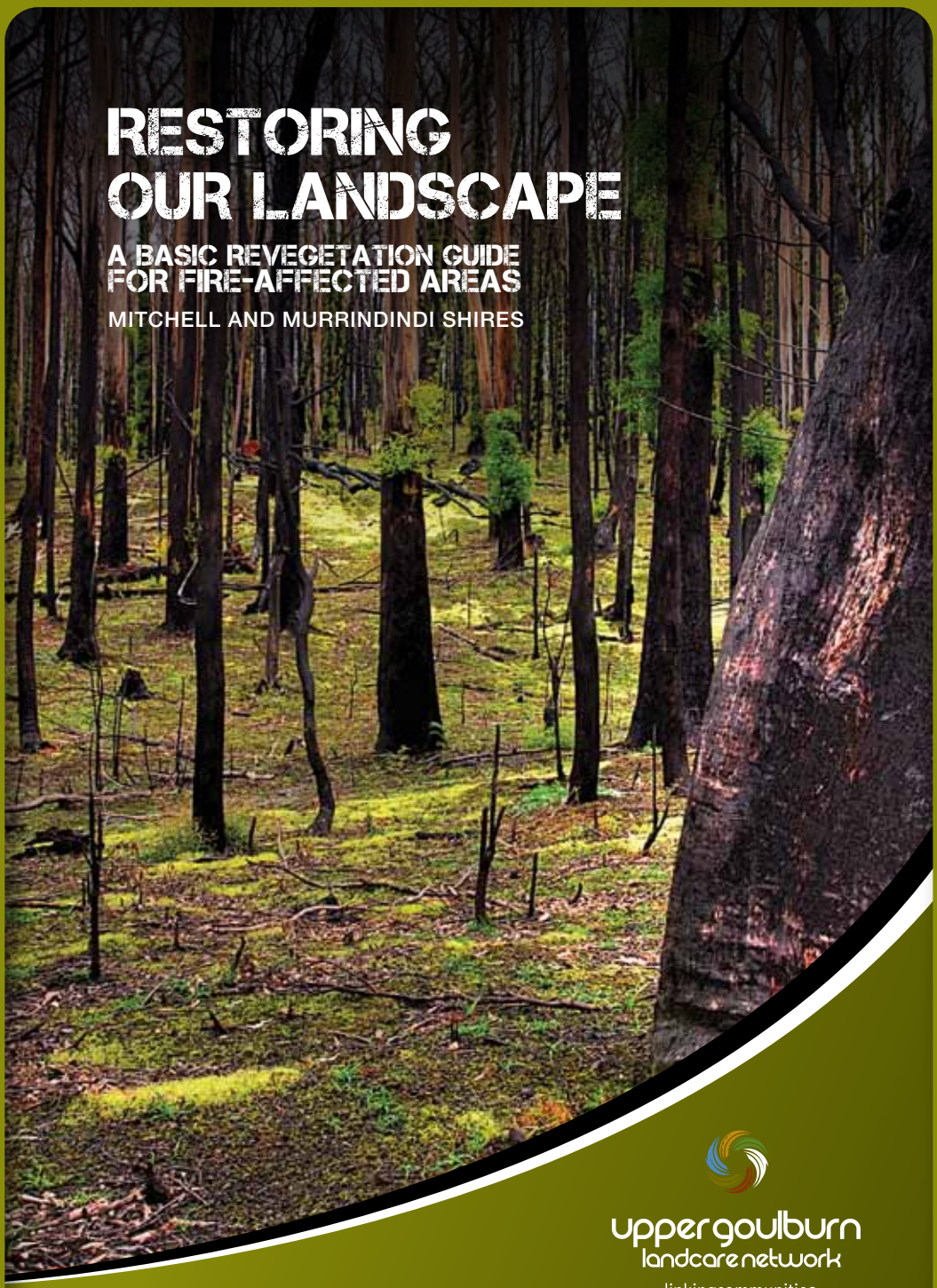

RESTORING OUR LANDSCAPE

A BASIC REVEGETATION GUIDE FOR FIRE-AFFECTED AREAS

MITCHELL AND MURRINDINDI SHIRES

upper goulburn landcare network
linkingcommunities

ACKNOWLEDGEMENTS

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Compilation and coordination:
David Wakefield.

Front cover photograph:
John Branton

CONTACT US

Upper Goulburn Landcare Network
Shop 5/10 High Street Yea Victoria 3717
T. 5736 0104 M. 0413 855 490
E. ugrecovery@gbcma.vic.gov.au

For more information about the benefits of joining the UGLN, please call us.

DISCLAIMER

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WE WOULD LIKE TO ACKNOWLEDGE OUR VALUED PROJECT PARTNERS

CARING FOR OUR COUNTRY

LANDCARE

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INTRODUCTION

The February 2009 fires left many landowners in need of information and advice on how best to revegetate their fire-ravaged properties.

While there are revegetation guides already published, they are detailed and comprehensive, do not deal with post-fire recovery and cover a far wider area than that affected by the Kilmore East-Murrindindi fires.

Fire-recovery coordinators with the Upper Goulburn Landcare Network (UGLN) felt there was a need for a simple, concise, free reference guide that landowners could readily turn to when planning revegetation on their property.

This guide is designed to fill that need.

PURPOSE
The purpose of this booklet is to provide landholders with practical advice and guidelines to allow them to make informed decisions on species selection and how, when and where to plant, and even whether to plant at all, on fire-affected land.

The booklet aims to encourage, where appropriate, the planting, retention and protection of local indigenous species.

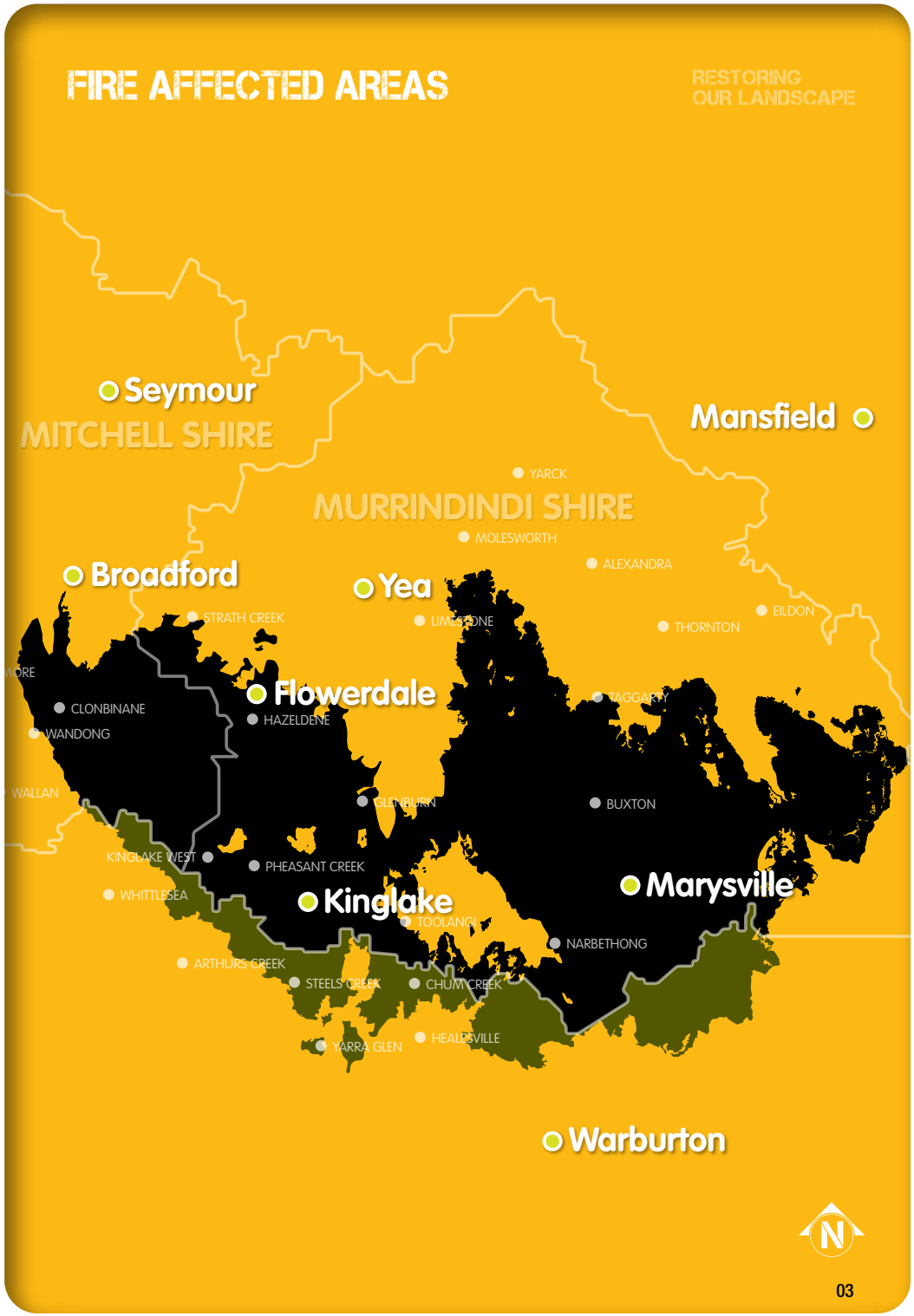
SCOPE
The guide is primarily directed at landholders in fire-affected rural areas of Mitchell and Murrindindi Shires. It is not intended for garden or home landscaping design.

It is a basic guide only, and designed to complement more detailed publications. Landholders wanting more information are referred to References on page 25, in particular to the Revegetation Guide for the Goulburn Broken Catchment.

THE ROLE OF LANDCARE
Landcare has had, and will continue to have, an important part in the restoration of our landscape. Revegetation can be a daunting task for individuals working alone.

By working together as a group on both private and public land, Landcare members can achieve a great deal and foster a sense of community.

Landcare coordinators have been working since the fires with volunteers on projects involving fencing, erosion control, weed eradication, installing nest boxes and planting.



TO PLANT OR NOT TO PLANT

After the fires, the instinctive reaction of many people to the blackened wasteland that was once their cherished landscape was that it would never be the same again, and the damage would need repairing by widespread planting.

As we are already seeing, this is not necessarily the case - Australian plants are remarkably resilient.

NATURAL REGENERATION

If you have areas of remnant vegetation, especially high quality remnants, that were burnt, even severely burnt, it is best to delay any thoughts of planting in those areas and wait to see what regenerates naturally.

Where the fire was particularly intense, this regeneration may take some years and supplementary planting may be needed to restore the original complexity of the bushland.

WHAT TO LOOK FOR

Native plants have a range of survival techniques in response to fire:

- **Trunk and branch growth.** Many eucalypts have dormant epicormic buds deep beneath the bark that can readily sprout after fire - you have no doubt noticed the many tufts of new green foliage on burnt tree trunks. Some of these will gradually break off, while others will develop into a new branched canopy. Some plants, such as tree ferns and grass trees, shoot very soon after fire from their dense fibrous trunks.

- **Basal growth.** Often the above-ground part of a plant may not survive a fire, but new growth can shoot from buds at the base of the trunk or stem, eg most eucalypts have a woody swelling partly below ground called a lignotuber that contains buds and food reserves. Grasses can also resprout from basal buds.

- **Suckering.** Regrowth from root suckers can occur up to several metres from the parent plant - many wattle and pea species regenerate this way.

- **Sprouting from bulbs, corms or tubers.** Many lilies and orchids can regenerate this way. In fact, some orchids may only ever be seen after a major fire.

- **Seedlings.** Fire causes many native plants to release seed and take advantage of the more open conditions and nutrient rich ash bed. The heat of fire can also trigger germination by cracking hard seeds in the leaf litter or that have been buried by ants.

IDENTIFY AND PROTECT

Now is a good time to try and identify the various native plants you have - there may even be rare or threatened species among them.

For help with identification there are many native plant books available, but with new young growth you may need help from government agency staff or members of your local Landcare or Field Naturalists group.

In the early stages of regeneration after fire, new growth is fragile and susceptible to physical damage, as is the soil and ash bed created by the fire. So it is important to keep stock and vehicles off burnt areas as much as possible.

DID YOU KNOW...

Rangers at Kinglake National Park report finding plants not recorded for thirty years, and even some never previously recorded.

MANAGING REGROWTH

Unfortunately fire can also trigger germination of many weeds and these also need to be identified and controlled.

Bear in mind that regrowth of some natives can be vigorous and appear weedy, e.g. fireweeds/groundsels (Senecio spp.) and Kangaroo Apple, so correctly identifying indigenous plants is important.

Regrowth can be quite thick after fire, but the density will gradually be reduced as dominant species and individual plants take over.

Depending on the species present, and the intention for the natural regeneration area, there may be a case for some ecological thinning or pruning in the future.

WHY PLANT?

Apart from remnant bushland, which will gradually recover, there are many other areas that will benefit from revegetation, and many reasons to consider planting on your property.

DID YOU KNOW...

Research shows that at least 30% native vegetation cover across the landscape is required to halt the decline in woodland bird species.

WILDLIFE HABITAT

The loss of vegetation cover due to the fires and subsequent clean-up operations represents, at least in the short term, a vast reduction in habitat available for wildlife.

Many old trees with nesting hollows were destroyed, and there was widespread loss of shrubs, ground cover and leaf litter which many animals depend on for shelter and food.

On the positive side, many new tree hollows would have been created, and existing ones enlarged, by the burning process.

Scattered patches of lush new growth in burnt areas are already providing some food sources for wildlife, but it will be some time before many animals return permanently.

Any new revegetation plantings will complement the natural regeneration that has already begun.

WATERWAYS

Fencing off streams and revegetating the banks (riparian zone) with indigenous species can have great benefits in terms of bank stability, water quality and improved biodiversity.

The Goulburn Broken Catchment Management Authority (GBCMA) is offering fire recovery assistance grants for this work, as well as for alternative livestock water supply. Contact the GBCMA for full details and eligibility requirements (see page 25).

Make sure that woody weeds, such as blackberry, hawthorn, sweet briar and willows, are controlled well before starting any streamside revegetation project.

HANDY HINT...

A woodlot for your own firewood consumption is an excellent idea and reduces the need to take fallen timber from roadsides or State forests. Choose a mixture of suitable local firewood species such as Grey Box, Red Box, Black Wattle and Drooping She-oak.

EROSION

Some areas on your property that may be susceptible to erosion from rain and wind are steep hills and gullies, and ground damaged or left bare during the fires by intense heat and/or heavy machinery.

Fencing off and planting can help stabilise these areas. New plant roots bind the soil, and the plant canopy provides shade and some protection from wind and rain.

Plants also provide leaf-litter on the ground which acts as a physical protective barrier over the soil and allows nutrient cycling to begin again as the litter breaks down.

Depending on available funding, grants and material assistance may be provided for erosion control by the Department of Primary Industries (DPI).

SHELTER

Revegetation plantings can provide shade and shelter that have direct advantages for livestock and crops. Wide shelterbelts of indigenous trees and shrubs, while taking some land out of production, provide net benefits by decreasing wind speed, thereby reducing evapotranspiration and soil erosion.

ECONOMIC BENEFITS

Seed orchards or seed production areas offer an opportunity to earn some income from your revegetation by planting selected local understorey species required by the Goulburn Broken Indigenous Seed Bank (see page 25).

Appropriate farm forestry plantings can have commercial value as high quality saw logs, specialty timbers or firewood.

Other commercial opportunities that may be considered are native plants for oil, edible seed or cut flowers and foliage.

AESTHETIC VALUE

The fires and consequent loss of vegetation cover have destroyed much of the natural visual amenity.

As well as the benefits already mentioned, carefully planned revegetation plantings can greatly enhance the appearance of a property and contribute to a landscape that brings enjoyment and satisfaction to the landholder and community at large.

Plantings can also restore a sense of privacy to your block.

WHERE TO PLANT

Before planting make sure you are clear about your revegetation objectives. This will help when deciding where to plant on your property.

PLANNING

It is a good idea to draw up a plan, which can be a simple sketch with proposed planting sites and species marked on it, or a more detailed whole farm plan. Whole farm planning courses are run periodically by DPI where there is enough interest in a particular area.

PLANTING SITES

Some suggestions for planting include:

- **Streamsides.** If fencing off streams, provide a generous set-back (at least 20m) to allow establishment of a wide dense strip of riparian vegetation which will achieve maximum environmental benefits. It is preferable if both banks can be protected and revegetated - this may need the cooperation of a neighbouring landholder.

- **Linkages.** Try to plant strips or patches that provide wide links (corridors or "stepping stones") between remnant vegetation on your own and adjacent properties. Connectivity of vegetation is critical for the long-term survival of many wildlife species.

- **Expansion of remnants.** Blocks of plantings added to remnant vegetation patches can enhance the value of the bushland and reduce detrimental "edge effects" such as invasion by weeds or other pest species.

HANDY HINT...

With linear plantings, including along waterways, remember to allow access points for control of weeds, vermin and fire, and possibly to permit carefully managed crash-grazing once plants are established.

Fencing off and planting shrubs around isolated paddock trees will help preserve them and increase their potential as habitat for birds, bats and other native fauna.

- **Strategic linear plantings.** Strip plantings along fencelines or laneways can act as windbreaks or shelterbelts, and also provide wildlife corridors. A general rule is the wider the better! Try to persuade your neighbour to have a joint planting to achieve double the width.

- **Paddock corners.** Fencing off and planting out the corners of paddocks is a simple and cost-effective way of creating blocks of habitat and shelter. A 200 metre long fence can provide a 1 hectare block.

WHERE NOT TO PLANT

It is important to understand where not to plant. Here are some examples:

- Under power lines or within easements for any utilities
- Close to buildings
- Too close to fences where stock may be tempted to browse

WHEN TO PLANT

Late autumn and winter are probably the best times to plant in the area covered by this guide.

This allows young seedlings to become established well before the hot dry months of summer.

TIMING

The timing of the "autumn break" will determine how early planting can begin -it is always worth waiting until adequate moisture has penetrated well below the soil surface.

For low-lying areas that become water-logged in winter, planting in spring may be a better option. Spring is also the best time for direct seeding following ground preparation in the previous autumn/winter period.

FROST

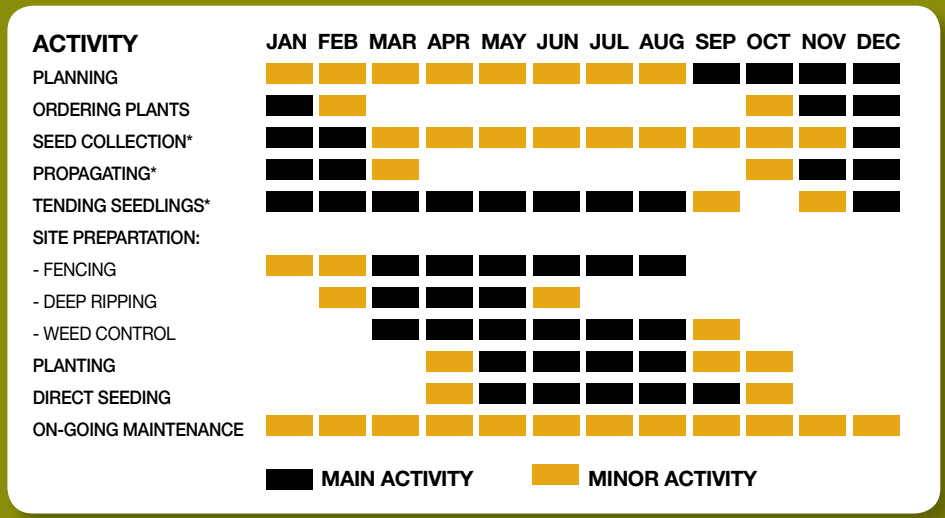
Some areas can experience severe frosts and you may consider delaying planting until early spring. However there is no guarantee that a delayed planting will avoid a late frost.

Most of the plants listed in this guide are frost-hardy but some may be susceptible when young.

Keep in mind that some understorey species can be more prone to frost damage in an open situation compared to their natural environment with protective tree cover.

Planting of frost-tender or shade-dependent species may be better delayed until some tree/large shrub cover is established.

REVEGETATION CALENDAR



* If growing your own seedlings

HOW TO PLANT

Successful seedling establishment requires careful planning and preparation.

PREPARATION
This includes:

- **Grants.** Applying early for any incentive grant that may be available.
- **Supplies.** Ordering plants, guards, stakes etc well ahead of planting time.
- **Fencing to exclude livestock.** A robust fence is essential around any revegetation project. The fence alignment should be designed to give maximum benefit for minimum cost, eg straight fences along meandering creeklines, and fencing off corners of paddocks.
- **Weed control.** This is a critical requirement for successful revegetation. Spot-spraying with a knock-down herbicide (such as glyphosate) some weeks before planting is probably the most cost-effective option. Other weed control measures at planting time include weed mats, mulch or scalping the soil around the planting hole with a mattock.
- **Deep ripping.** There are advantages in deep ripping the sub-soil, particularly if it has been compacted or cultivated over many years. Ripping is of value on heavier clays to assist root penetration, water infiltration and soil aeration.

  Ripping is best done when the subsoil is reasonably dry. Contour rip on slopes, and avoid ripping highly erodable sites such as stream banks.

HANDY HINT...
Caring for plants. Remember that seedlings in containers can dry out very quickly, so after collecting plants from the nursery, keep them in a sheltered spot and water them thoroughly and regularly until planting.

PLANT DENSITY
The spacing of plants depends on the objective of the planting and the location of the planting site in the landscape. Some tips for general revegetation for creation of habitat are:

- Space trees at least 10m apart to allow them to develop a good spreading growth form rather than spindly poles. This also allows space for some shade-dependent species to be added in later years.
- For calculating plant numbers required, a general rule of thumb for a reasonably dense planting is an average spacing of 4 to 5m or 500 plants per hectare.
- Not all wildlife like dense cover, so in larger plantings leave some open grassy spaces.
- Plant some species in clumps for a more natural effect rather than in evenly spaced rows.
- In potentially weedy areas, plant shrubs and groundcovers more densely.
- For shelterbelts, trees can be planted closer and interspersed with densely planted shrubs of varying heights. If planted in rows, at least 3 and preferably 5 rows are recommended, with a minimum of 10m between fencelines. Wildlife corridors are most effective if they are 40m or more wide.

PLANTING TECHNIQUES AND TOOLS
Seedlings are available from nurseries in a range of containers such as plastic tubes, pots and Hiko trays. In soft or ripped ground, tools such as the Hamilton treeplanter or Potiputki planter are ideal, but in hard or rocky ground, a mattock will be needed to break the ground and dig a planting hole.

When releasing the seedling from the container it is important that there is as little root disturbance as possible.

TREE GUARDS
Browsing by rabbits, hares and wallabies, and destruction by cockatoos can severely affect planting success. The use of plant guards is therefore recommended. A wide range of guards is available, ranging from inexpensive milk cartons to fold-up corflute guards.

Whichever type is used, make sure the guard is anchored securely with stakes or pegs. Plastic sleeve guards are not recommended as they often end up washed or blown into waterways.

WATERING
Many revegetation projects have been successfully established without watering at planting time or subsequently, so it is not an essential requirement. Seedlings should not be dry or stressed at planting, and the soil at the site should be reasonably moist.

Watering at planting time does ensure good root contact with the soil and reduces transplant shock, so this may improve the survival rate.

DIRECT SEEDING
This can be a cost-effective method of revegetation if due attention is paid to site preparation, species selection and timing.

Thorough weed control is critical to success. In fairly flat open areas, a purpose-built seeding machine can be used. On steep or very rough ground, spot seeding by hand may be the only option.

Landcare coordinators can provide information on direct seeding contractors.

FOLLOW-UP MAINTENANCE
After all the effort of planning, preparing and planting, it pays to carry out ongoing maintenance of your plantings:

- Check fences, gates and tree guards regularly
- Keep weeds under control, but remember that young plants are also susceptible to herbicides
- Remove guards before they threaten to strangle the growing plants
- In drought years consider watering thoroughly once or twice if this is feasible

WHAT TO PLANT

There are many good reasons for choosing local indigenous species for revegetation.

WHY PLANT LOCAL SPECIES?

Indigenous plant species:

- have evolved in the region over a very long period and are well adapted to local conditions
- provide suitable habitat for local wildlife
- do not pose a risk of becoming environmental weeds
- if carefully chosen, are hardy, drought-tolerant and mostly long-lived
- help maintain our rich biodiversity heritage
- blend well with the surrounding landscape

THE IMPORTANCE OF UNDERSTOREY

Unless your planting is intended as agroforestry, it is important to select a wide range of local plants, including large and small shrubs, groundcovers, even grasses, rushes and sedges, as well as trees.

A diverse mix of plants provides food and shelter for local wildlife and enhances overall biodiversity on your property.

Problems that can occur in tree-dominant plantings, such as excessive mistletoe or defoliation by insects, can largely be avoided with the complex structure of a mixed species planting.

HANDY HINT...

For general replanting select 70 - 80% shrubs and groundcovers, with the remainder being trees. For restoring sites with remnant trees, select shrubs and groundcovers only and allow trees to regenerate.

GROUNDFLORA

The ground layer is often neglected in revegetation projects. It is difficult to recreate the original diverse groundflora, but specialist nurseries now carry a range of local low-growing plants including prostrate shrubs, herbs, twining plants, lilies, sedges, etc. Many of these fall into the general category of “wildflowers” and can add a splash of colour to your revegetation planting.

NATIVE GRASSES

Native grasses are a valuable component of revegetation projects. They:

- provide seeds for birds and tussocky habitat for a range of species
- help bind the soil and reduce erosion
- are mostly perennial and cope well with drought and fire
- present a lower fire risk compared with introduced grasses because they have a lower biomass and stay greener longer

They may be difficult to establish on more fertile sites with competition from vigorous exotic species, but on harsher sites they can spread by rhizomes or seed dispersal.

Many areas already have native grasses and they should be encouraged, especially on steep hills, by allowing them to set seed over summer.

There may be grants available from DPI for fencing suitable sites to exclude stock at critical periods.

PLANT AVAILABILITY

Regional nurseries that supply locally indigenous plants are listed on page 25. The range of plants available varies with each nursery, and you may need to search around for rarer or more difficult-to-grow plants mentioned in this guide.

Bear in mind that orders should be placed well in advance of your intended planting time. Some nurseries will grow plants to order, in which case you need to advise the nursery by November so they can plan their seed collection and quantities of required species.

For direct seeding or growing your own plants, the Goulburn Broken Indigenous Seed Bank at Dookie may be able to supply seed that is from, or is appropriate to, your local provenance.

If collecting your own seed, remember a permit is required from the Department of Sustainability and Environment (DSE) for gathering seed or other propagation material from public reserves.

The permit has certain conditions attached to ensure that local seed sources are not over-exploited.

FIRE RESISTANT SPECIES?

This is a vexed topic but one lesson learnt from the February 2009 fires seems to be that, given the right conditions, **all vegetation can burn.**

However plants do vary in their readiness to ignite, and the speed and intensity of their burning. For instance foliage with low oil content or high levels of salt may burn less readily and at a slower rate.

This guide does not recommend any particular species that would reliably improve your safety during a bushfire, as such a recommendation could be misleading.

There was, and perhaps still is, a widespread perception that planting exotic vegetation will be much safer in terms of fire protection.

Examples of exotic trees surviving fires largely intact often may have more to do with them being well watered isolated specimens or patches surrounded by lush mown lawn, rather than any intrinsically greater fire resistance.

PLANT SELECTION LIST

TREES

SCIENTIFIC NAME	COMMON NAME	SITE PREFERENCE	COMMENTS
Acacia dealbata	Silver Wattle	Along watercourses & on sheltered slopes	Fast growing, excellent for habitat & erosion control. Suckers
Acacia implexa	Lightwood	Hilly sites with well-drained soil	Tough & long-lived. Good for shade, shelter & gully erosion
Acacia mearnsii	Black Wattle	Drier slopes. A range of soils & aspects	Excellent habitat. Fast-growing. Can sucker after disturbance
Acacia melanoxylon	Blackwood	Adaptable. Best in moist well-drained soil	Useful in riparian plantings, wind/fire breaks & erosion control
Allocasuarina verticillata	Drooping She-oak	Well-drained soils. Dry rocky hills	Long-lived. Tolerates strong winds. Good for habitat & shelterbelts
Eucalyptus albens	White Box	Well-drained drier soils in foothills	Tough attractive shade & shelterbelt tree. Good habitat
Eucalyptus camaldulensis	River Red Gum	Low country. Heavy soils. Tolerates inundation	Large spreading tree for shade, habitat & stream/gully erosion
Eucalyptus camphora	Mountain Swamp Gum	Heavy wet soil in upper catchments	Useful for gully erosion & boggy areas. Good habitat
Eucalyptus crenulata	Buxton Silver Gum	Swampy sites. Adaptable	Endangered in its natural habitat. For Buxton /Marysville area
Eucalyptus cypellocarpa	Mountain Grey Gum	Prefers deep moist soil. Adaptable	Upright with dense canopy. Widespread in Kinglake Ranges.
Eucalyptus dives	Broad-leaf Peppermint	Well-drained poor soils on slopes & ridges	Good shade & habitat tree. Useful in shelterbelts
Euc. globulus bicostata	Eurabbie/Blue Gum	Moist to dry soil in upper gullies & slopes	Quick growing large tree for shade, shelter & habitat
Eucalyptus goniocalyx	Bundy/Long-leaf Box	Poorer soil on dry rocky slopes	For shade, shelterbelts & general habitat planting
Eucalyptus macrorhyncha	Red Stringybark	Well-drained soil on slopes	Good revegetation tree. Keep fenced off from stock
Eucalyptus melliodora	Yellow Box	Fertile well-drained soils	Attractive. Variable in form. Habitat, shade & soil-stabilisation values
Eucalyptus microcarpa	Grey Box	Heavier soils. Adaptable	Long-lived. Good for habitat, gully erosion & shelter
Eucalyptus obliqua	Messmate	Moist, well-drained soils on upper slopes	Habitat & shelter-belts. Regenerates readily after fire
Eucalyptus ovata	Swamp Gum	Poorly drained, seasonally wet sites	Plant on creek flats & swampy areas. Good habitat
Eucalyptus polyanthemos	Red Box	Well-drained soil on ridges & dry slopes	Hardy. Useful for shade, shelter & habitat
Eucalyptus radiata	Narrow-leaf Peppermint	Best in moist deep soils	Atttractive upright tree for shelterbelts & habitat areas
Eucalyptus rubida	Candlebark	Well-drained soils. Lower slopes & creeklines	Excellent habitat tree with hollows. Attractive white/pink bark
Eucalyptus viminalis	Manna Gum	Moist soils in valleys & along streams	Excellent habitat. Bark shed in ribbons


Blackwood


Candlebark

UNDERSTOREY SHRUBS

SCIENTIFIC NAME	COMMON NAME		SITE PREFERENCE	COMMENTS
Acacia acinacea	Gold-dust Wattle	S/M	Well-drained soils on drier sites	Good habitat & low screen. Responds to browsing. Self seeds
Acacia genistifolia	Spreading Wattle	M	Reliable & adaptable as to soil & site	Fast-growing open spreading & prickly. Good bird refuge
Acacia lanigera	Woolly Wattle	S /M	Well-drained soils. Tolerates some water-logging	Low shelterbelt cover. Early flowering - provides colour in winter
Acacia leprosa	Cinnamon Wattle	L	Best in moist, well-drained partially shaded site	Variable. Fast growing. Good for habitat & shelterbelts
Acacia mucronata	Narrow-leaf Wattle	M/L	Adaptable. Best in higher rainfall areas	Useful in shelterbelts. Straggly. Suckers, especially after fire
Acacia paradoxa	Hedge Wattle	M/L	Range of soils and situations	Good for bird habitat, erosion control & shelterbelts
Acacia pycnantha	Golden Wattle	L	Very adaptable.	For habitat & shelterbelts. Fast growing. Short-lived. Readily self-seeds
Acacia rubida	Red-stemmed Wattle	L	Adaptable and hardy	Shelterbelt shrub for hills & mountain areas. Soil binder
Acacia verniciflua	Varnish Wattle	L	Well-drained shallower soils. Adaptable	Attractive shrub for shelter, erosion control & habitat
Acacia verticillata	Prickly Moses	M/L	Moist soils. Valleys & streamsides. Prefers some shade	Fine prickly foliage. Plant for habitat & shelter. Good bird refuge
Banksia marginata	Silver Banksia	L	Adaptable. Not on fertilised sites. Best on flats	Large shrub or small tree for shelter and habitat. Good nectar producer


Spreading Wattle

UNDERSTOREY SHRUBS cont.

SCIENTIFIC NAME	COMMON NAME		SITE PREFERENCE	COMMENTS
Bursaria spinosa	**Sweet Bursaria**	M/L	Well-drained soils on a range of sites	Hardy & adaptable. Prickly. Habitat for birds & butterflies. Erosion control
Callistemon sieberi	**River Bottlebrush**	L	Moist soils along watercourses	Hardy streamside shrub. Stabilises banks. Good habitat
Calytrix tetragona	**Fringe Myrtle**	M	Gravelly soils. Rocky ridges	Useful in shelterbelts. Colonises bare ground. Attractive in flower
Cassinia aculeata	**Common Cassinia**	L	Best in moist well-drained soils, part shade. Adaptable	Fast-growing pioneer species. Colonises bare ground. Good shelter & habitat
Cassinia arcuata	**Drooping Cassinia**	M	Well-drained soils. Dry sites and poor soils	Graceful easily-grown shrub. Readily colonises disturbed areas
Cassinia longifolia	**Shiny Cassinia**	L	Moist well-drained soil in semi-shade	Fast-growing easily-established shrub for bare ground, shelter & habitat
Coprosma quadrifida	**Prickly Currant Bush**	M/L	Moist soil in valleys, creeklines, sheltered slopes	Use in riparian plantings. Good habitat - birds eat berries
Correa lawrenciana	**Mountain Correa**	L	Moist heavier shaded soils at higher elevations	Long-flowering shrub. Good habitat & shelter. Drought sensitive
Correa reflexa	**Common Correa**	M	Well-drained soils. Adaptable as to aspect	Variable in form. Plant local provenance. Long-flowering habitat plant
Daviesia latifolia	**Hop Bitter-pea**	M	Adaptable to most well-drained soils	Interesting foliage & flowers. Plant in clumps. Good habitat & shelter
Daviesia leptophylla	**Narrow-leaf Bitter-pea**	M	Well-drained shallow soils	Useful in habitat & shelter plantings. Plant in clumps
Daviesia ulicifolia	**Gorse Bitter-pea**	M	Dry well-drained soils in partial shade	Prickly - good bird habitat. Attractive pea flowers
Dillwynia cinerascens	**Grey Parrot-pea**	S/M	Dry soils. Prefers some shade	Low attractive shrub for understorey plantings on dryish sites
Dillwynia sericea	**Showy Parrot-pea**	S/M	Adaptable. Drought- tolerant	Good understorey plant. Does well under established trees. Showy flowers
Dodonaea viscosa	**Hop Bush**	M/L	Hardy and adaptable to various sites	Excellent habitat for insects & small birds. For shelterbelts & stabilising soils
Epacris impressa	**Common Heath**	S	Moist well-drained soil in partial shade	Open prickly shrub. Good nectar supplier for birds. Victoria's floral emblem
Goodenia ovata	**Hop Goodenia**	M	Moist sheltered sites but tolerates harsher sites	Adaptable, hardy, quick-growing. Suckers readily. For stream/gully erosion
Grevillea alpina	**Mountain Grevillea**	M	Well-drained dry stony soils in part shade	Attractive shrub. Good habitat for honeyeaters
Gynatrix pulchella	**Hemp Bush**	M/L	Moist soils in sheltered gullies and creeklines	Good soil stabiliser on stream banks. Straggly. Fragrant flowers
Hibbertia obtusifolia	**Grey Guinea-flower**	S	Well-drained shallow soils. Dry shady sites	Low shrub. Good habitat plant. Showy yellow flowers - long flowering
Indigofera australis	**Austral Indigo**	M	Adaptable to any well-drained soil. Prefers part shade	Attractive mauve flowers. Good habitat. Can be frost-tender in open situation
Leptospermum continentale	**Prickly Tea-tree**	M/L	Poorly-drained sites. Adaptable	Excellent plant for habitat, erosion control & shelterbelts
Leptospermum grandifolium	**Mountain Tea-tree**	L	Wet sites & streamsides. Adaptable	Excellent for habitat, stream & gully erosion, shelterbelts
Leptospermum lanigerum	**Woolly Tea-tree**	M/L	Creek banks & gullies. Wet areas	Excellent for habitat, stream & gully erosion, shelterbelts
Leptospermum obovatum	**River Tea-tree**	M/L	Riparian sites at lower elevations	Excellent for habitat, stream & gully erosion
Melaleuca parvistaminea	**Rough-bark Honey-myrtle**	M/L	Moist less fertile soils. Streamsides & gullies	Valuable for riparian habitat. Controls gully erosion, can form thickets
Melicytus dentatus	**Tree Violet**	M/L	Well drained soils. Riparian & rocky sites	Hardy. Useful for habitat, erosion control & shelter. Strong floral perfume
Olearia argophylla	**Musk Daisy-bush**	L	Moist rich well-drained soils in sheltered sites	Fast-growing large shrub or small tree with profuse flowers in Spring
Olearia lirata	**Snowy Daisy-bush**	M/L	Moist well-drained soils in sheltered sites	Soft open shrub. May regenerate prolifically after fire
Olearia phlogopappa	**Dusty Daisy-bush**	M	Moist well-drained soils	Fast-growing shrub with profuse showy flowers
Ozothamnus obcordatus	**Grey Everlasting**	S/M	Well-drained dryish sites	Usually an erect slender shrub with shiny foliage. Hardy. For shelter & habitat
Platylobium formosum	**Handsome Flat-pea**	S	Moist well-drained soils. Prefers semi-shade	Scrambling or prostrate plant. Good habitat. Several bird species eat seeds
Pomaderris aspera	**Hazel Pomaderris**	L	Moist well-drained soil in sheltered sites	Large shrub or small tree for streamsides & dense habitat
Prostanthera lasianthos	**Victorian Christmas Bush**	L	Moist well-drained soil in sheltered areas	Hardy & attractive shrub for streamsides & moist gullies
Pultenaea daphnoides	**Large-leaf Bush-pea**	M	Well-drained soil. Tolerates dryness once established	Hardy. Useful for shelterbelts & general understorey planting
Spyridium parvifolium	**Dusty Miller**	M	Well-drained soils in sheltered sites	Interesting foliage. Native bees & wasps feed on flowers

SHRUB SIZES

S. Small up to 1 metre high **M.** Medium 1 to 2.5 m high **L.** Large more than 2.5 m high


Hop Bitter-pea

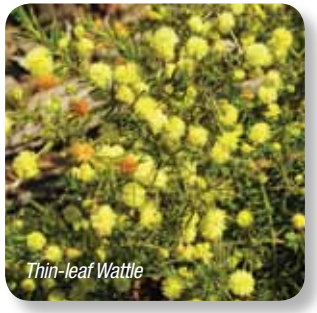

Austral Indigo


Rough-bark Honey-myrtle


Snowy Daisy-Bush

GROUNDCOVERS AND CLIMBERS

SCIENTIFIC NAME	COMMON NAME	SITE PREFERENCE	COMMENTS
Acacia aculeatissima	**Thin-leaf Wattle**	Well-drained clay soils. Part shaded, rocky sites	Hardy prostrate or low sprawling shrub
Arthropodium milleflorum	**Pale Vanilla Lily**	Moist soils in dappled shade. Creek banks	Tufted perennial herb. Long flowering. Lilies add interest & diversity
Arthropodium minus	**Small Vanilla Lily**	Moist well-drained soils in full sun or semi-shade	Tufted perennial herb. Good for habitat areas. Plant in groups
Arthropodium strictum	**Chocolate Lily**	Well-drained soils. Adaptable	Tufted perennial herb. Attractive flowers on long stems
Billardiera scandens	**Common Apple Berry**	Well-drained soils. Good under established trees	Adaptable light climber, bushier out in open. Flowers & berries good for birds
Brachyscome multifida	**Cut-leaf Daisy**	Moist clay soils. Tolerates dry when established	Attractive long-flowering daisy. Suckers. Useful soil binder
Bracteantha viscosa	**Sticky Everlasting**	Well-drained soil in full sun	Showy long-lasting yellow flowers. Good for butterflies. Regenerates after fire
Bulbine bulbosa	**Bulbine Lily**	Moist well-drained soils in a range of sites	Tufted succulent perennial herb. Plant in groups - will spread
Carex appressa	**Tall Sedge**	Moist soils, tolerates inundation. Streams & swamps	Perennial bright green tufted plant. Use for erosion control
Carex fascicularis	**Tassel Sedge**	Moist to wet soil. Creek banks & swamp margins	Graceful tussocky sedge. Excellent habitat & erosion control along streams
Chrysocephalum apiculatum	**Common Everlasting**	A range of well-drained soils	Variable dense spreading perennial herb. Long-flowering. Soil binder
C. semipapposum	**Clustered Everlasting**	A range of soils	Variable in form. Long-flowering with yellow flower clusters
Clematis aristata	**Mountain Clematis**	Moist well-drained soils in sheltered sites	Showy climber. Best planted below trees or beside logs. Habitat for birds
Clematis microphylla	**Small-leaf Clematis**	Well-drained soils. Takes full sun	Climber. Often dense with profuse flowers. Good nest sites for birds
Craspedia variabilis	**Variable Billy Buttons**	Various soils, even boggy sites	Low tufted herb for habitat areas. Attractive yellow globular flowers
Dianella admixta	**Black-anther Flax-lily**	Well-drained soils. Does well under established trees	Hardy tufting perennial. Spreads by rhizomes. Birds eat berries
Dianella longifolia	**Pale Flax-lily**	Moist well-drained soils. Better in semi-shade	Hardy tufting perennial. Dianellas provide good contrast to shrubs
Dianella tasmanica	**Tasman Flax-lily**	Moist shady sites at higher elevations	Robust tufting perennial with broad strap leaves
Glycine clandestina	**Twining Glycine**	Well-drained soils with some shade	Slender light climber. Hardy once established. Good habitat
Hardenbergia violacea	**Purple Coral-pea**	Well-drained soils. Good for embankments	Climbing or prostrate scrambler. Showy purple pea flowers. Good habitat
Helichrysum scorpioides	**Button Everlasting**	Well-drained soils. Prefers higher rainfall areas	Woolly perennial herb with yellow flowers. Spreads easily
Isotoma axillaris	**Rock Isotome**	Rocky well-drained soils	Small bushy perennial herb. Showy star-shaped flowers
Kennedia prostrata	**Running Postman**	Well-drained soils. Drought tolerant	Trailing or matting perennial. Scarlet pea flowers. Good habitat
Linum marginale	**Native Flax**	Well-drained soils in open position. Adaptable	Slender low upright perennial with blue flowers. Plant several together
Lomandra filiformis	**Wattle Mat-rush**	A range of soils & sites	Hardy low tufting perennial. Often persists in rough paddocks
Lomandra longifolia	**Spiny-headed Mat-rush**	Versatile. Prefers moist well-drained soil, some shade	Tough large tussocky perennial. Good habitat for ground fauna
Lomandra multiflora	**Many-flowered Mat-rush**	Well-drained shallower soils, with some shade	Hardy low tufted perennial. Interesting flower clusters
Pelargonium australe	**Austral Stork's-bill**	Well-drained soils. Tolerates dry open sites	Hardy soft-foliaged clumping herb. Readily self-seeds. Soil binder
Pelargonium rodneyanum	**Magenta Stork's-bill**	Well-drained soils. Tolerates harsh rocky sites	Small perennial herb with soft leaves & showy magenta flowers
Stylidium graminifolium	**Grass Trigger-plant**	Moist well-drained soils. Hardy when established	Tufted perennial with narrow leaves & spikes of pink flowers. Plant in clumps
Viola hederacaea	**Ivy-leaf Violet**	Moist sheltered sites	Small perennial herb. White & purple flowers. Spreads readily


Thin-leaf Wattle


Pale Vanilla Lily


Running Postman


Magenta Stork's-bill

NATIVE GRASSES

In addition to the above list, some regional plant nurseries stock a range of native grasses including: Austrodanthonia spp. (Wallaby Grasses), Austrostipa spp. (Spear Grasses), Microlaena stipoides (Weeping Grass), Poa spp. (Tussock Grasses) and Themeda triandra (Kangaroo Grass)

SELECTING YOUR PLANTS

A basic guide such as this can only include a fraction of the large range of plants indigenous to the fire-affected area. Many local plants are difficult to grow from seed or to establish in the harsh open conditions of a revegetation site, and are therefore not generally stocked by nurseries.

PLANT SELECTION

The plant list on pages 14-19 provides a selection of **100 trees, shrubs and groundflora** that are indigenous to all or part of the region affected by the Kilmore East-Murrindindi fires, and which may be available from the local nurseries listed on page 25.

There is a wide diversity of soils, topography, rainfall and vegetation types across the area from Wandong to Marysville, which presents a challenge in selecting appropriate plants for a particular site.

The Site Preference column gives some guidance as to where to plant the listed species. In addition, try to identify any indigenous plants still remaining in the area.

HANDY HINT...

Local DPI officers are available to visit your revegetation site and help with plant identification and selection.

GBCMA staff can also provide advice on waterway plantings.

TYPICAL PLANTING SITUATIONS

This section provides some very broadly defined landscape locations that may be encountered and lists examples of plants that would be suitable for those situations.

Study your site and try to describe where the site is in the landscape (e.g. creekline, low hill, upper slope, ridge etc). Look at the aspect, steepness of slope, soil type and presence of exposed rock, and find the best match in the following categories.

Remember, **the listed plants are examples only** – some other plants listed would also be suitable, or at least tolerant of these situations, especially those plants described as “adaptable”.

STREAMSIDES, FLOOD PLAINS AND MOIST LOWER GULLIES

STREAMSIDES, FLOOD PLAINS AND MOIST LOWER GULLIES:
INDICATIVE PROFILE

SOME SUITABLE SPECIES:

TREES
Silver Wattle
Blackwood
River Red Gum
Swamp Gum
Narrow-leaf Peppermint
Candlebark
Manna Gum

SHRUBS
Sweet Bursaria
River Bottlebrush
Prickly Currant Bush
Hemp Bush
Hop Bush
Hop Goodenia
Woolly Tea-tree
Rough-bark Honey-myrtle
Tree Violet
Victorian Christmas Bush

GROUNDCOVERS/CLIMBERS
Pale Vanilla Lily
Tall Sedge
Tassel Sedge
Variable Billy Buttons
Common Tussock Grass
Spiny Headed Mat-rush

ROLLING LOWER HILLS AND WIDE VALLEYS

ROLLING LOWER HILLS AND WIDE VALLEYS:
INDICATIVE PROFILE

SOME SUITABLE SPECIES:

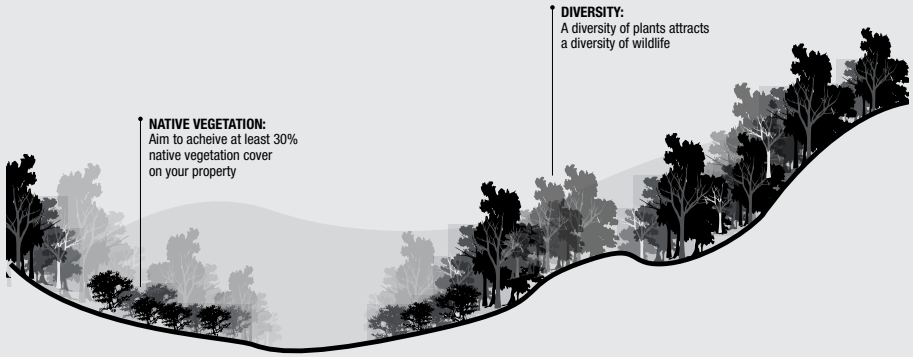
TREES
Silver Wattle
Lightwood
Black Wattle
Blackwood
Broad-leaf Peppermint
Red Stringybark
Yellow Box
Grey Box
Candlebark

SHRUBS
Hedge Wattle
Varnish Wattle
Sweet Bursaria
Common Cassinia
Grey Parrot-pea
Austral Indigo
Grey Guinea-flower
Tree Violet

GROUNDCOVERS/CLIMBERS
Thin-leaf Wattle
Clustered Everlasting
Pale Flax-lily
Twining Glycine
Running Postman
Wattle Matt-rush

SHELTERED SLOPES, HIGHER ALTITUDE AND HIGHER RAINFALL AREAS

SHELTERED SLOPES, HIGHER ALTITUDE AND HIGHER RAINFALL AREAS:
INDICATIVE PROFILE



SOME SUITABLE SPECIES:

TREES
Silver Wattle
Blackwood
Mountain Grey Gum
Eurabbie/Blue Gum
Messmate
Narrow-leaf Peppermint
Manna Gum

SHRUBS
Cinnamon Wattle
Narrow-leaf Wattle
Prickly Currant Bush
Mountain Correa
Hop Bitter-pea
Hop Goodenia
Austral Indigo
Dusty Daisy-bush
Hazel Pomaderris
Dusty Miller

GROUNDCOVERS/CLIMBERS
Common Apple Berry
Mountain Clematis
Tasman Flax-lily
Button Everlasting
Ivy-leaf Violet
Sword Tussock Grass

DRY NORTH AND WEST FACING SLOPES AND ROCKY RIDGES

DRY NORTH AND WEST FACING SLOPES AND ROCKY RIDGES:
INDICATIVE PROFILE

SOME SUITABLE SPECIES:

TREES
Lightwood
Black Wattle
Drooping She-oak
Broad-leaf Peppermint
Long-leaf Box
Red Stringybark
Red Box

SHRUBS
Gold-dust Wattle
Woolly Wattle
Hedge Wattle
Fringe Myrtle
Drooping Cassinia
Showy Parrot-pea
Grey Everlasting
Large-leaf Bush-pea

GROUNDCOVERS/CLIMBERS
Thin-leaf Wattle
Sticky Everlasting
Small-leaf Clematis
Black-anther Flax-lily
Purple Coral-pea
Rock Isotome
Running Postman
Austral Stork's-bill

INFORMATION

INDIGENOUS PLANT NURSERIES

A&B NURSERY
5433 2236
HEATHCOTE

EUROA ARBORETUM
0419 506 764
EUROA

KEELBUNDOORA NURSERY
9479 2871
BUNDOORA

JURY'S NATIVE TREES
5778 9552
0409 196 568
ANCONA

MURRINDINDI NATIVE FLORA
0417 082 296
NARBETHONG

REDGATE REVEGETATION
5772 3023
0412 197 889
ALEXANDRA

SK NURSERIES
5775 1964
0418 568 776
MANSFIELD

TALLAROOK TREES
5792 2821
0422 625 973
TALLAROOK

VALLEY OF A THOUSAND HILLS FARM NURSERY
5784 9286
REEDY CREEK

REFERENCES

Earl, G., Stelling, F., Titcumb, M. & Berwick, S. (eds.) (2001)
Revegetation Guide for the Goulburn Broken Catchment.
Department of Natural Resources and Environment, Victoria

Australian Plants Society Maroondah (2001)
Flora of Melbourne
Hyland House, Melbourne

Peate, N., Macdonald, G. & Talbot, A. (2006)
Grow What Where.
Bloomings Books, Melbourne

Costermans, L. (1983)
Native Trees and Shrubs of South-eastern Australia.
Rigby, Adelaide

Boyes, G. (2006)
Local Plants: A guide to the more common indigenous plant species found in the Mansfield district.
Upper Goulburn Landcare Network

Upper Goulburn Waterway Authority (1997)
Riparian Vegetation Guidelines for the Upper Goulburn Catchment.
UGWA, Yea

Platt, S. J. (2002)
How To Plan Wildlife Landscapes:
A guide for community organisations.
Department of Natural Resources and Environment, Melbourne

Department of Sustainability and Environment (2004)
The Effects of Fire on Victorian Bushland Environments.
Vic Govt DSE, Melbourne

Radford, J., Bennett, A. & MacRaild, L (2004)
How Much Habitat is Enough?:
Planning for wildlife conservation in rural landscapes.
Deakin University

Barrett, G. (2000)
Birds on Farms:
Ecological Management for Agricultural Sustainability.
Supplement to Wingspan, Vol 10 No 4, Birds Australia
Hawthorn

CONTACTS

Department of Primary Industries (DPI)
Alexandra 5772 0200
Broadford 5784 0600

Department of Sustainability and Environment (DSE)
Alexandra 5772 0200

Goulburn Broken Catchment Management Authority (GBCMA)
Yea 5736 0100

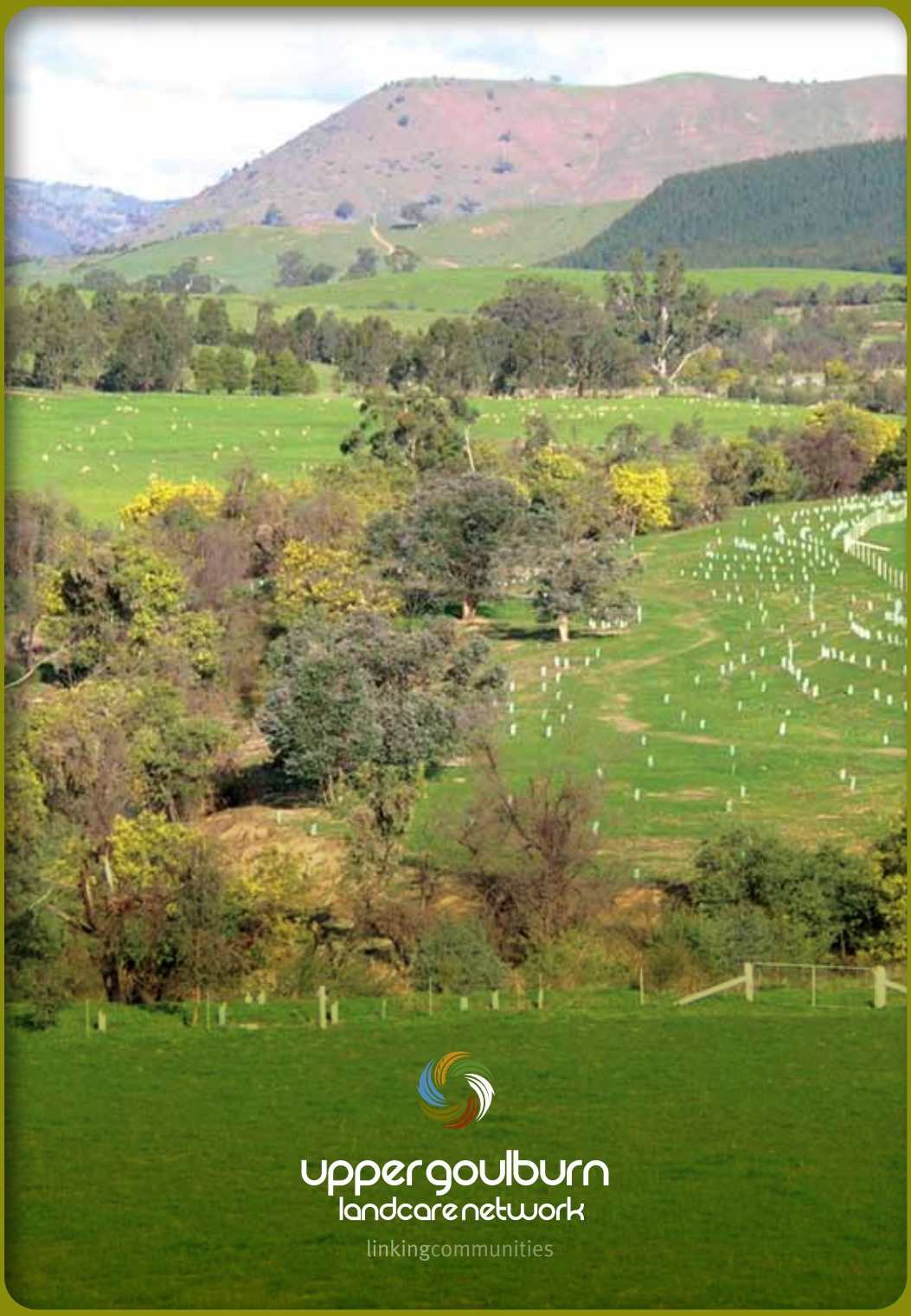
Goulburn Broken Indigenous Seedbank
Dookie 5833 9279

Shire of Mitchell
Environmental Programs Unit
Broadford 5734 6200

Shire of Murrindindi
Environment Projects Officer
Alexandra 5772 0333

South West Goulburn Landcare Network
Coordinator, Ian Julian
5734 6312

Upper Goulburn Landcare Network (UGLN)
Coordinators,
Bridget Clarke 5736 0105
Chris Cobern 5736 0104



upper goulburn
landcare network

linkingcommunities