



A red fox with a bandicoot in suburban Melbourne.

Foxes use Blackberry thickets and other woody weeds as cover. Controlling weeds and removing rubbish heaps, building materials and unused outbuildings reduces fox harbour.

Reduce access to food

Foxes are scavengers and will eat a wide variety of foods. Pet food should not be left out at night and food scraps should be cleaned up. Fallen fruit under fruit trees should be removed quickly and compost heaps covered or enclosed in a sealed bin. Chickens, ducks, guinea pigs and pet rabbits must be enclosed in a secure pen each night.

Fumigation

Den fumigation can only be carried out by a registered pest controller as an Agricultural Chemical Users Permit is required. Contact Council for a list of pest control contractors. Den fumigation can be a good option if a breeding den is discovered early in the breeding season (July-August).

Dens should be destroyed after fumigation.

Other pests

Introduced mammals are the most widespread pests but birds, fish and even insects can have a damaging impact on the environment.

Feral and domestic cats destroy around 28 million native animals in Australia every year. **Domestic cat registration is compulsory in the Manningham area.** Cat bells are not effective in saving native wildlife from pet cats. Pet cats should be contained to reduce the impact of their hunting behaviour.

Pet dogs can also destroy wildlife or prevent them from using certain areas. Dogs should not be left to roam your property during the day when you are not home.

Starlings, Indian Mynas, Mallard Ducks, Blackbirds, Sparrows and Turtle Doves are introduced birds. Introduced birds spread diseases to native birds and compete with them for food and habitat. Indian Mynas attack nests of Rosellas, drive the parents away and kill the chicks. Both Mynas and Starlings damage fruit trees.

If you have nest boxes on your property they must be checked regularly to make

sure they have not been taken over by introduced birds. House eaves and sheds that provide breeding harbour for introduced birds can be secured with netting.

European Honey Bees that have escaped from hives are a threat to native bees and nectar-eating birds. They may also reduce the seed set of plants. European Honey Bees are known to occupy tree hollows and nesting boxes, depriving native mammals and birds of habitat and breeding sites.

Nest boxes and tree hollows should be checked for bees regularly. Extreme caution is necessary. An expert apiarist should always be consulted if bees need to be moved.

The release of any live exotic animal into the wild can have dire consequences. Aquarium fish (including Goldfish) released into creeks and streams are now serious aquatic pests.

Tips for effective pest control

- Identify and monitor pest numbers.
- Work together with your neighbours or a local rabbit control group.
- Combine several proven control methods including the destruction of harbour.
- Strictly adhere to the safety and handling directions on poisons.
- Record and evaluate all methods and modify if necessary. Continue to monitor pest activity after control.
- Be vigilant and persistent. Pest control is time consuming and there are no quick-fix solutions.
- Keep cats inside at night and control other potential pests.
- Control your dogs. Dogs should not be allowed to roam your property during the day when you are not home.

Protecting and improving the bush on your property will increase its value.

But the bush is much more than a commodity with economic benefits. Observe the unfolding of a delicate native orchid, follow the path of a dragonfly as it dances over a puddle and watch a family of koalas as they take an all-day nap – the bush is a source of awe and wonder.

Spending time in the bush is important for our physical and mental health. It gives us a sense of connection with the natural world and helps us to make connections with each other.

The beautiful Silver Wattle is commonly seen along Manningham's rivers and streambanks.



Children who grow up observing the rich diversity and natural cycles of the bush will learn to value ecosystems and give their protection a high priority.

Only a small portion of the bushland in the Manningham area is in parks and reserves. The majority of it is on private land where landholders are responsible for its management and protection.

Because the potential for preserving a fauna species is directly related to the area of bush it can move through, private landholders are the custodians of Manningham's biodiversity. How they manage their land will have a direct impact on the survival of our unique and precious flora and fauna.



The threatened Greening Grass Frog amongst some native sedge.

Biodiversity

Biodiversity refers to the complex variety of all life forms – the plants, animals and micro-organisms and the ecosystems that they are part of.

Humans are also part of these ecosystems and without the services the ecosystems provide we would not be able to survive.

Ecosystems provide us with clean air and water, food, pharmaceuticals (antibiotics originally come from the soil), fibre and energy. Then there are the processes that are constantly underway stabilising, repairing and sustaining ecosystems – the water cycle, filtration processes, the carbon cycle, pollination, the nutrient cycle and natural pest control.

If a dollar value were put on these ecosystem services they would be worth trillions every year. But of course they are worth much more than that – ecosystems and the services they provide are irreplaceable. We cannot make air or water or replicate the genetic structure of the millions of organisms that cycle nutrients through the soil.

Scientists can identify many individual organisms, but their knowledge of the billions of different interactions between organisms that make up ecosystems is poor. As we are not able to identify precisely which species are needed to maintain a particular ecosystem we are also not able to identify which we can do without.

The loss of any species – whether it is a tiny soil organism or a large mammal – can have potentially catastrophic consequences.

Australia's biodiversity has dramatically declined since European settlement. Many types of organisms have become extinct and in some areas whole ecosystems are disappearing.

Manningham is home to over 500 indigenous plant species including approximately 15 indigenous eucalypt species, over 20 species of wattle, over 45 species of orchids, and over 40 different species of native grasses. There are 56 threatened animal species. Some of these species are of National and State Significance like the Regent Honeyeater, Swift Parrot, Brush-tailed Phascogale, Powerful Owl, Barking Owl, Great Egret and Macquarie Perch.

The key to maintaining the biodiversity of an area is the protection and restoration of habitat.

Habitat

Loss of habitat is the most significant reason why species become extinct.

Most of the Manningham environment has been altered by gold mining, agriculture and housing. Other sources of impact are intense fires, rabbits, foxes and environmental weeds.

All of these activities reduce habitat biodiversity. The impact of blackberry provides a good example. When blackberry invades bushland the smaller herbaceous plants such as grasses and orchids are shaded out.



Native animals like this Grey Kangaroo will not survive if its habitat is reduced or degraded.

Vegetation communities

Insects that depend on these plants for food and shelter disappear and the ground-foraging birds that feed off insects no longer visit the site. The result is a degraded ecosystem that has lost its biodiversity.

The range of habitats directly effects how many species will be present in a landscape. Most plants and many animals are specially adapted to a particular habitat and will not be found beyond its range. The more types of habitat you can protect and restore on your property the better.

By promoting regeneration in patches of forest, preventing overgrazing of native grasslands, fencing off and revegetating riparian areas and creating a floating vegetation island in your dam you will have protected four different habitats.

Habitat restoration should aim to create habitats that have high ecological value. This means that all of the different layers of vegetation are present. Learning about the vegetation communities in your area will help you to appreciate the diversity of plant species found in different habitats.

A vegetation community is made up of the various plants that grow in a particular habitat. Over 20 separate vegetation communities have been described for the Warrandyte area alone.

Vegetation communities are influenced by the topography of an area, its aspect, soil, and micro-climate. Each vegetation community is quite distinct, although some species are common to a number of vegetation communities. There are also areas where a number of different vegetation communities overlap.

Vegetation communities in the Manningham area have been classified according to how common they are and what percentage remains of their original distribution. A number of them are depleted or endangered.

A detailed species list of local vegetation communities is available from Council.



Manna Gums on the riverbank at Pound Bend.



Grass Trigger-plant (Stylidium graminifolium) is common on the sheltered slopes.



Native Tussock Grass (Poa labillardieri) on a hillside.

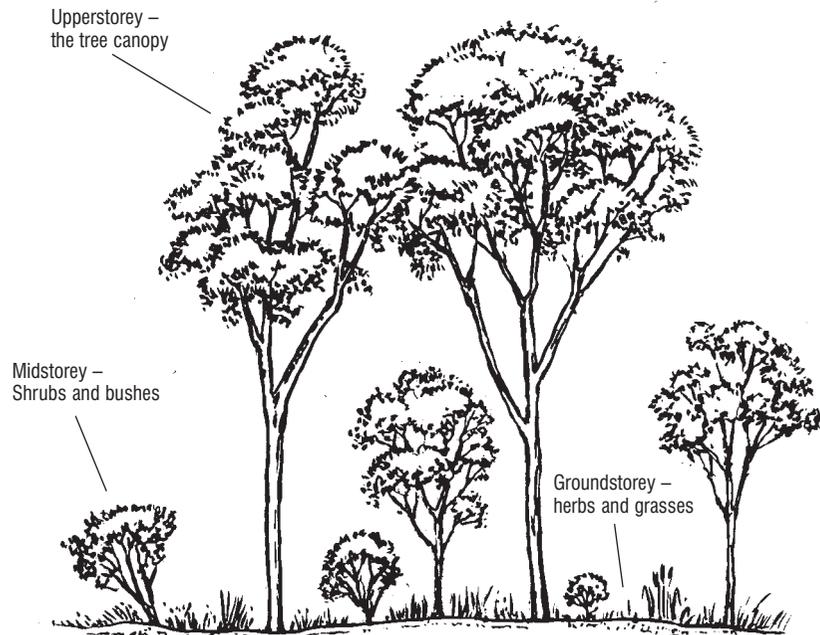


Chocolate Lily (Arthropodium strictum) can be found amongst the groundstorey on the slopes and hills.



Nodding Green Hood Orchids (Pterostylis nutans) are found in both damp and dry areas.

A vegetation community is made up of different layers of plants.



Bushland management

Our knowledge of how bushlands function is still evolving and much is yet to be learnt. Most of this learning comes from first-hand experience. The bush is in a constant state of change. Climate conditions are highly variable and the complex interrelationships between organisms are endlessly diverse.

Bushland management centers on **retaining** the existing remnant vegetation and allowing it to regenerate, **restoring** areas that have been degraded, and **revegetating** areas that have been cleared.

Protecting and restoring remnants

The term remnant refers to any native indigenous vegetation left in a particular area. A single mature tree is an important remnant, as are patches of shrubs, herbs, grasses, lichens and fungi. Remnants can be very small and localised, or larger – perhaps including a whole block or paddock.

Remnant patches of native vegetation on private land are vital to the biodiversity of the Manningham area.

An Imperial Blue Butterfly rests on a native Cassinia.





A patch of remnant vegetation at Warrandyte. This site is in a relatively intact condition and contains some rare and threatened plant species.

Some remnant patches may contain rare or endangered plants and animals or provide habitat for nomadic and migratory birds. Other remnants link areas of bush together, increasing the range of different species and contributing to the health of the remnant patches.

Good condition remnants are both rare and valuable. They provide us with unique examples of what the pre-existing flora and fauna may have been like and are an important source of seed.

The location, size and shape of the remnant are important. If possible the remnant should be connected with other areas of native vegetation to create pathways for wildlife movement. However thin, linear remnants should be avoided as they favour certain species. The Noisy Miner dominates linear habitats by aggressively defending its territory against other birds. Larger patches or blocks are actually easier to manage as they have a greater core area which is generally healthy.

Managing remnant vegetation on your property starts with assessing the health of the remnant and planning how it can be protected and improved. The aim should be to maintain or restore as much of the natural ecosystem as possible.

Reducing the pressure of grazing animals by fencing is generally the starting point. This will encourage natural regeneration. Landholders are often surprised at how quickly natural regeneration occurs. When grazing pressure is reduced and weeds and rabbits are controlled, native seeds that have been dormant in the soil for long periods can germinate. Wildlife will also bring native seeds into remnant areas.

Fire can be used as tool to promote natural regeneration of remnant vegetation. The use of fire is complex. The season in which the area is burned, the time between fires and the intensity of the fire can produce very different results.

Most Australian vegetation is designed to withstand fires of a certain frequency and intensity. Some plants shed seed from woody capsules after fire while others produce seeds with a thick coating that needs to be cracked by the heat of a fire before germination can occur. The creation of an ash bed will provide ideal conditions for the germination of groundstorey plants but it will also provide ideal conditions for weeds.

Regeneration burning should mimic the natural fire regime of the area as closely as possible. Expert advice should be sought. **A Council permit is required for any burning in the Manningham area.**

See page 55 for further information

Controlling pest animals, especially rabbits, is important for the protection of remnants.

See page 35 for further information on rabbit control. Weed control is also essential. See page 30 for information on methods of weed control.

Tree decline

The continuing loss of mature remnant trees from the landscape is known as tree decline. Tree decline has a variety of causes:

- Deliberate clearing and ringbarking.
- Natural ageing and death.
- Premature death due to grazing, disturbance or other environmental pressures.

Mature trees play an integral role in the landscape. Trees planted now will take several hundred years before they have the same value. Trees start to develop useful wildlife hollows at around 100 years of age. The hollows increase and deepen with age. Around 40% of woodland birds are hollow dwellers. Animals like sugar gliders simply can't survive without hollows in trees.

Mature healthy trees produce more nectar, foliage and fruits than young trees. They also drop more limbs and leaf litter. The leaf litter cycles nutrients, reduces water runoff and feeds a huge variety of invertebrates. Rotten limbs underneath the tree provide habitat for snakes, frogs, lizards, mammals and birds.

Fencing off mature trees can significantly increase their lifespans. The fenced off area should be as large as possible. It must extend well beyond the canopy area so that young, establishing trees are not competing with the mature tree for light or water.

In many areas some revegetation will also be necessary to restore the middlestorey and groundstorey vegetation. Wherever possible fencing of mature trees should link with other areas of vegetation.

Revegetation

Revegetating a cleared site will improve the health of the soil and greatly increase the habitat biodiversity of the area. The first step in any revegetation project is assessing what native vegetation is already on the site. The aim of revegetation is to create a mosaic of diverse vegetation rather than simply to plant larger tree species. Middlestorey and groundstorey are all equally important.

Even a small-scale revegetation project requires planning. It is better to delay planting until all of the preparation and maintenance issues have been considered rather than rush in while the weather is good.

Site preparation should minimise weed competition by hand pulling, mowing and/or the use of a herbicide.

Care must be taken when ordering and purchasing plants. **Only indigenous plants grown from local provenance seed should be used.** Non-indigenous native plants can create serious weed problems. Indigenous plants grown from seed collected outside of the area may not be well adapted to local conditions and could interbreed with local strains and weaken them.

Plants should be sourced from a local specialist indigenous nursery that grows stock from local provenance and can give advice about site suitability. You will need to contact the nursery around six months prior to planting to find out what local provenance species will be available.

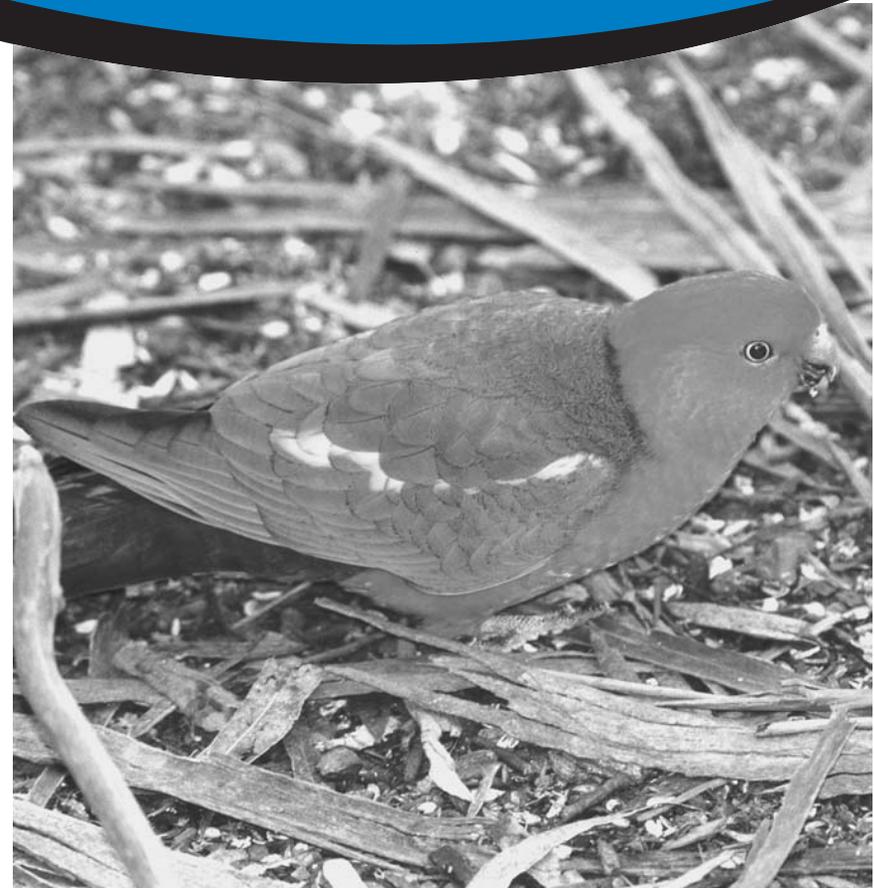
In highly degraded areas with a lot of weed competition it is better to get larger trees and shrubs established before adding smaller groundstorey species.

Planting should be timed to avoid extremes in weather such as frosts or hot, dry conditions. Planting after the autumn rains usually meets these requirements and allows the root systems to get an early start. Follow-up watering and weed control must also be considered.

Revegetation is a long-term commitment, but one with many rewards.

Some points to consider:

- What remnant vegetation is present on the site?
- What was the original vegetation community?
- Will the revegetation be acting as a screen?
- What are the fire management considerations?
- How much sun or shade does the site get?
- How will the plantings fit in with the contour of the site?
- Are there any vulnerable areas? For example, eroding hilltops or gullies.
- Will weeds from neighbours or roadsides threaten the revegetation?



A male King Parrot forages in leaf litter under a mature eucalypt.

Phytophthora root disease

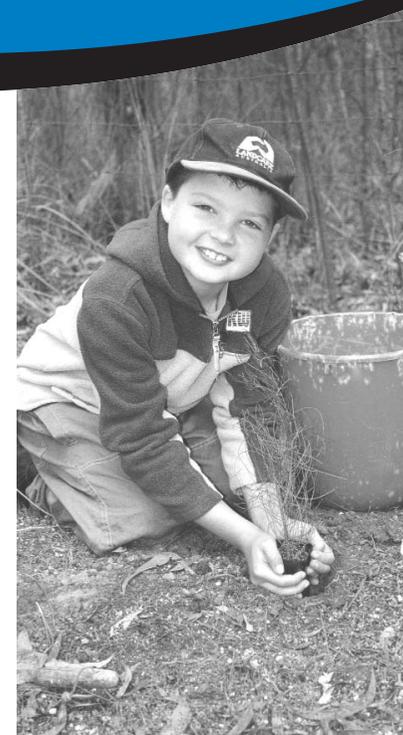
Phytophthora root disease is a serious threat to native bushland in the Manningham area. Originally introduced from Asia, this disease can destroy the tree canopy, middlestorey and groundstorey layers in bushland reducing the habitat for wildlife to breed, feed and shelter.



Tree guards will protect new plants from mowers, rabbits, wind and frost and create a micro-climate that encourages growth.

Phytophthora root disease is caused by a microscopic pathogen (*Phytophthora cinnamomi*) that penetrates the roots of plants and kills the root cells. As the cells die the plant is unable to take up water and starts to show symptoms similar to drought stress. The leaves yellow and wilt and then fall off. Leaf loss starts at the outer branches and moves in towards the trunk of the tree. This is why the disease is sometimes called dieback – referring to the dying back of the leaves.

There is no known way of eradicating Phytophthora, but you can prevent it by purchasing plants from reputable nurseries that have a good knowledge of plant hygiene, and taking extreme care when moving soil. Check that soil or gravel being brought on to your property is from uninfected areas.



Tips for effective bushland management

- Identify areas for protection, restoration and/or revegetation.
- Protecting higher quality remnant vegetation should take priority.
- Identify the type of vegetation community you are protecting or restoring.
- Take photographs of the site before work has started and at regular intervals once it is underway.
- Planning and site preparation is essential for successful revegetation.
- Plant only indigenous native plants grown from local provenance seed.
- Be vigilant with monitoring and follow-up.
- Be patient. Restoring or recreating bushland is a slow process.
- Assess the risks to mature trees on your property. Fencing may be required.
- Learn to identify Phytophthora and take precautions to prevent it spreading to your property.



A large bushfire can quickly alter its course with changes in wind speed and direction.

Fire is a natural part of the Australian landscape and Victoria is one of the most fire prone places in the world. Each summer brings a high risk of bushfire. Severe fires have been recorded in Victoria on a regular basis and may occur annually.

Large fires are most likely to develop on hot days when strong gusty winds blow from the north. The intensity of a fire is determined by the fuel type, volume, temperature, relative humidity, wind direction and speed. Fires travel faster up a slope than down a slope. Steep, dry northerly slopes pose the greatest hazard. Wind pattern changes can quickly change the direction of a fire and further complicate fire fighting.

Fire needs three elements – heat, oxygen and fuel. Reducing fuel around your property can help prevent a fire from starting, reduce fire intensity or aid in the suppression of a fire once it is underway.

Reducing fuel loads

Clearing of groundfuel like bark, leaves, twigs and dead grass will reduce the spread and severity of a fire. Very fine twigs (less than a finger's width) actually provide the best fuel, not larger logs and branches.

A bushfire that either starts in a fuel-reduced area or burns into one will have less intensity, a lower flame height and will spread more slowly. These factors make fire fighting much easier.

Mowing, raking and slashing are all good methods of reducing groundfuel. Eradicating weeds and replacing them with less flammable native species also provides a fire advantage. Most weedy grasses dry off over the summer while native grasses stay greener for longer. Where possible, do not slash native grasses until after they have set seed to ensure their survival.

Weeds often contribute to high fuel loads and priority should be given to weed control. When removing weeds to replace them with indigenous native plants, look for species that have less dry matter and provide less fuel.

Contact Council before removing any native vegetation as a permit may be required.

Fuel reduction burning

Burning is one method of reducing groundfuel over large areas.

Fuel reduction burns are also called controlled burns, low intensity burns or cool burns. They are used to remove the fine, highly flammable material in areas of bush and forest.

The impact of a fuel reduction burn will vary according to the intensity of the fire, the season in which it is lit, the length of time since the last fire and the species that are present.

Fuel reduction burns are usually carried out in autumn or spring when the weather is milder and the fire will be easier to manage. Burning later in autumn minimises damage to nesting species and allows seeding of native plants.

Even a small burn requires planning. Landholders must consider:

- Regulations – a Council permit is required for all burning in the Manningham area. The permit sets

out the conditions for burning, which include the notification of neighbours. There is no need to inform the CFA or fire brigade.

- Timing – fires cannot be lit on fog alert days or when the wind speed is greater than 10 kilometres an hour.
- Resources – including people, water and firefighting equipment to control the fire and keep it within the planned boundaries.
- Safety – what are the threats to property, neighbours or surrounding bushland? Landholders must ensure fires are fully extinguished before leaving the area.

Fuel reduction burning is a specialised skill. It can be useful but it can also be dangerous. Landholders thinking about conducting a fuel reduction burn should seek advice on how to plan and carry out a burn.

Council issues permits for fuel reduction burning to landholders with properties over a certain size. The permits are issued on an annual basis for burns conducted outside of the fire danger period.

The permits outline the strict conditions under which fuel reduction burns can be conducted. Contact the Council's Health and Local Laws Unit on 9840 9237 for more information, advice or assistance.

Bushfire regulations

Fire restrictions apply throughout the fire danger period. On days of extreme weather conditions a total fire ban may be declared.

A total fire ban can be declared for a region (Manningham is in the Central Fire Ban Region), or across the whole of the State. Bans are published in newspapers and broadcast on the radio and television. The lighting of any fires is prohibited on total fire ban days – even if you have a permit. Solid fuel barbecues, campfires and incinerators cannot be lit.

Bushfire survival planning

Although the chances of your property being threatened by fire may seem remote it is essential that you and your family prepare a bushfire survival plan. Planning can make the difference between surviving a fire and losing a house, or even a life.

Preparing a bushfire survival plan will increase your knowledge of the bushfire threat. It will help you identify fire risks on your property and involve all members of the family in making important fire protection decisions.

A bushfire survival plan will include:

- The conditions that contribute to fire weather warnings.
- The likely direction and intensity of a fire in your area.

- How houses burn.
- Protecting your houses and shedding from ember attack.
- The decision to leave or stay.
- Looking after your animals.
- Landscaping for fire prevention and protection.
- Protecting the environmental assets on your property (streambank vegetation and hollow trees).
- Identifying potential fire starting spots around your property.
- House and garden maintenance.
- Defending your home on the day.

The plan will also identify where stock should be moved. Animals must be clearly identifiable with your name, address and telephone number. Nylon halters should be removed from horses as they can melt. Horses suffer most burns to the face, as they tend to turn towards the fire. Hoof paint and coat crayons can be used to mark horses.

Contact the CFA's Yarra Office on 9735 0511 for copies of the Bushfire Survival Plan Workbook. The CFA also has information about Community Fireguard Groups. These local groups get together with the CFA to learn about fire protection. Many people find Community Fireguard Groups a great way to make links with other people and work together to take responsibility for local fire safety.



A burnt paddock. Your bushfire survival plan will identify where stock should be moved to in the event of a fire. Paddocks with the shortest grass cover are generally the safest.

Tips for bushfire prevention and protection

- Prepare a bushfire survival plan.
- Be alert for Total Fire Ban days. Look out for local CFA fire warning signs and listen to the radio for weather information and warnings.
- Be vigilant in reducing fire risks around your property, especially the protection of your house and sheds from ember attack.
- Remember that clearing up and removing fire hazards is a constant job to be carried out throughout the year, not just in the fire season.
- Reduce fine groundfuel by mowing, slashing, raking or fuel reduction burning.
- Ensure that fire breaks and tracks are clear.
- Check that water supplies have adequate capacity and easy access.
- Keep vegetation clear of overhead power lines and away from your house – especially the roof.
- Plan where you would move your stock.

Property management planning requires landholders to do a stocktake of their property's assets – the soil, water, pastures, fences, trees and wildlife, and plan how to manage them sustainably. The plan will also identify the risks to the property's assets.

Preparing a plan gives you something to work towards and makes you more aware of the continual changes underway on your property. A plan also increases your understanding of the interrelationships between the different components of your property – for example how grazing can contribute to weed infestation and erosion.

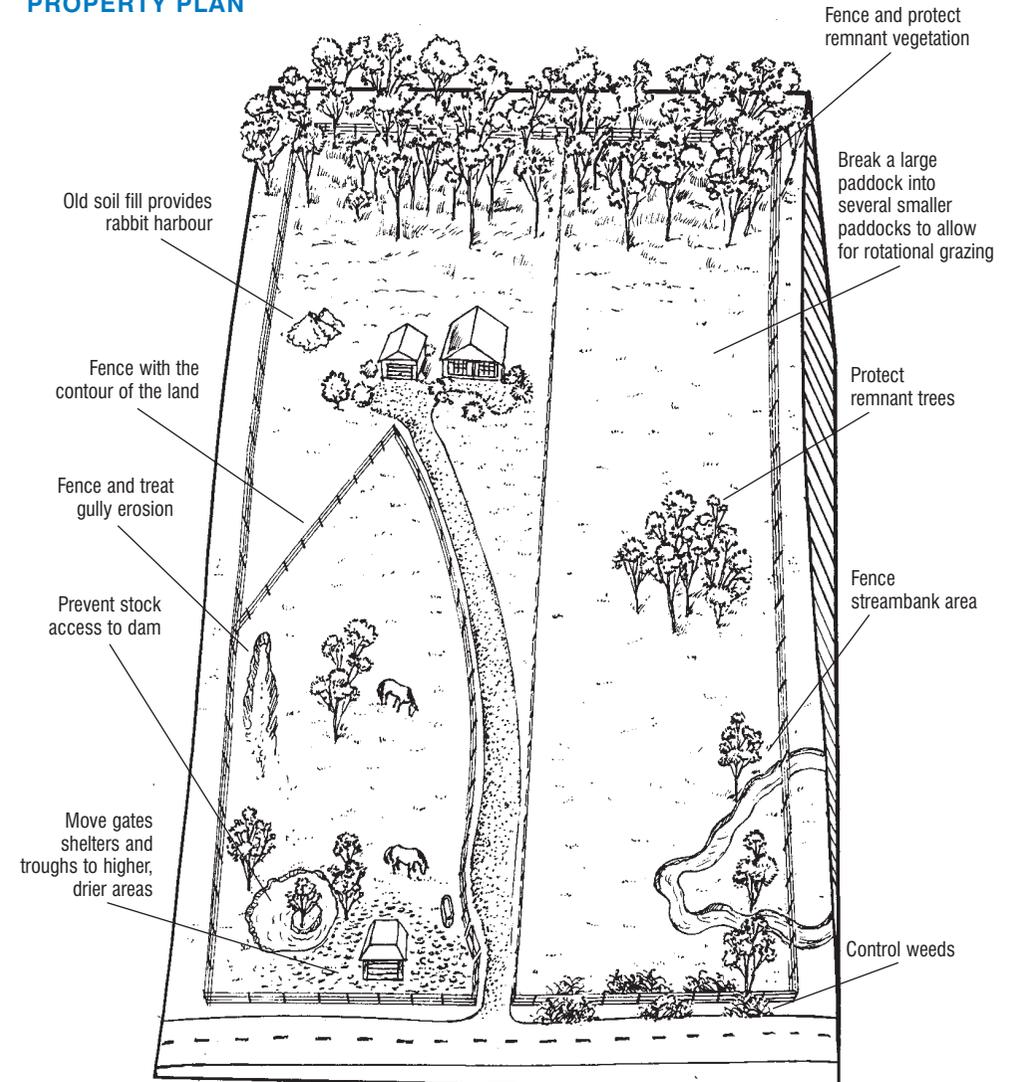
A plan can also assist you in working with your neighbours on issues of common concern and in applying for grants for various improvement projects.

The first step in completing a property management plan is to map and record your natural and built assets.

A map should show:

- Property boundary. The shape of your property can impact on how you manage it. A long thin block of land has a high ratio of boundary. This can increase the need for weed and pest animal control and the requirement to work with your neighbours.
- Houses, sheds and fences, driveways, tracks and gates.
- Landforms and contours. In the Manningham area steep land needs careful management. Land can be classified as crest, upper slope, steep upper slopes, mid to lower gentle slopes, and drainage depressions.
- Drainage lines, streams, dams and wetlands, water supply.
- Any historical or archaeological sites.
- Remnant vegetation.

PROPERTY PLAN



A property management plan identifies the assets on a property and the risks to those assets. The plan is an important tool for planning and prioritising improvements.

The next step is to divide the land into land classes. There are five different land classes.

Class 1 has the highest capability, with little risk of degradation. This land can support a wide variety of uses with few hazards.

Class 2 & 3 have reduced capability, more limitations and more hazards. This land is able to support some uses but there are risks of land degradation that will need to be managed.

Class 4 has low capability and high hazards. It is generally unsuitable for the intended use. This land has severe land degradation potential and would need specialised management.

Class 5 indicates the intended use could never be sustained on this land, even with substantial works. This land, if not already degraded, has a severe risk of serious land degradation.

Once the land capability of the property has been mapped you can assess whether it is suitable for its current use or the use to which you would like to put it.

Alpacas have soft feet and cause fewer soil erosion problems than horses and cattle.



General property management guidelines

Carrying capacity

The number of stock you can sustainably graze on your property is called its carrying capacity. Carrying capacity depends on the type of animal you want to graze, the type of pasture you have and the land capability of your paddocks.

Horses and cattle require high amounts of feed for maintenance and growth. Five goats or six alpacas are roughly equal to one horse. The highest rate of carrying capacity in the Manningham area is one horse per two hectares on land that is flat or gently sloped.

Soils are also relevant to carrying capacity. Horses, donkeys and cattle have hard hooves which cause soil compaction and erosion. Alpacas, llamas, emus and ostriches have soft, padded feet and cause few soil problems.

Fencing

Your property management plan will identify where new fences are needed and/or recommend the moving or upgrading of existing fences. Electric fencing is a popular way of rejuvenating permanent fences and creating temporary fences suited to rotational grazing.

Fences should follow the contour of the land. Fencing across the contour can divert runoff leading to erosion. Drainage lines and ridges should be fenced out.

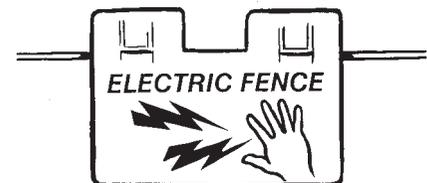


A survey of horse injuries showed that one in six injuries were caused by a fence or a gate. Improving your fencing is a worthwhile investment.

Fenced tracks and laneways can provide good opportunities for revegetation.

Gates are areas of concentrated stock movement. They should be on high ground where there is less erosion risk.

Some types of fences reduce the movement of wildlife and can cause entanglements. Seek advice on fencing designs that are wildlife friendly.



Electric fencing must be clearly marked.

Shade and shelter

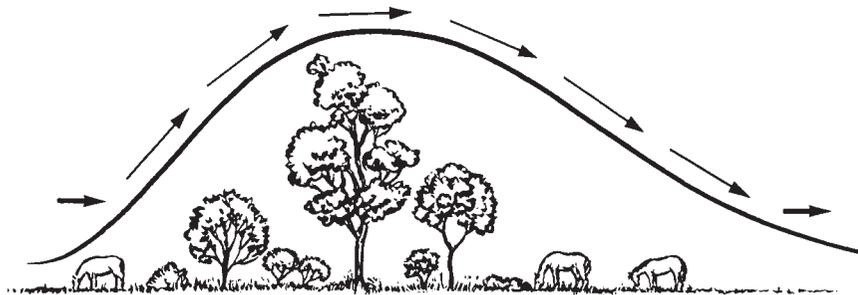
Strong or hot winds reduce soil moisture which slows down pasture growth and reduces the survival rate of native vegetation. Animals unable to find shade over the hot summer months are at risk of sunburn and heat exposure.

Cold winds will force stock to congregate anywhere that shelter can be found. Horses in cold, windy paddocks will require more supplementary feeding than those in protected areas.

A well-designed shelterbelt will protect stock and provide important wildlife habitat. Shelterbelts are most effective when they are at right angles to the critical wind. The belt should be as wide as possible. Gaps can be avoided by planting large trees, middlestorey and groundstorey plants.

A shelterbelt should be designed around indigenous native plants grown from local provenance seed. These plants are best suited to local conditions and provide habitat for ground foraging birds that will reduce insect pests in the surrounding paddocks.

The most effective shelterbelts are wide and include large trees, middlestorey and groundstorey plants.



Driveways and tracks

Traffic on driveways and tracks can create a high risk of erosion. If tracks are on slopes the erosion risk is reduced by running tracks as close to the contour as possible. Avoid angling tracks across the slope as they will divert water flow.

Avoid moving stock, machinery or vehicles in areas where soils are wet and easily compacted.

Driveways and tracks often double as firebreaks and will need to be kept clear for fire fighting access.

Streams and creeks

Streams and creeks and the vegetation that grows alongside them have a very high conservation value. Fencing to prevent stock access will prevent the banks from erosion and allow native vegetation to regenerate.

Streamside vegetation provides habitat, food and spawning sites for native fish.

Restoring streams and creeks can create corridors for wildlife to move between isolated patches of habitat. It will also improve water quality and aid flood mitigation.

Dams

The key to good dam management is preventing stock from drinking from the side of the dam. Stock access to dams causes trampling and erosion around the dam banks and reduces water quality.

Water should be piped from the dam to planned watering points around the property.

Stock should also be excluded from land directly above the dam as they will cause soil and manure to run into it.

A dam can be a great way to attract wildlife to your property. See page 13 on creating a wildlife dam.

Menages

Building a menage – a flat sand-covered area for schooling horses – can create land management problems if the menage is not properly sited or constructed. **A Council permit is required to construct a menage.** Landholders will need to consider possible drainage and soil erosion problems caused by major earthworks.

Some steep properties are not suitable for menages and the clearing of remnant native vegetation to make way for menages is not appropriate.

Landholders should investigate whether a local pony club, riding school or private menage can be hired, or consider sharing a menage between a number of neighbouring properties.

Remnant vegetation

Managing existing native trees, shrubs and grasses should be given a high priority in property management. These patches of remnant vegetation provide us with an important link to the natural history of Manningham and provide a guide we can use when restoring degraded areas.



Single mature trees in a paddock, areas of native herbs and grasses and 'the bush paddock' down the back, all require protection and management. With fencing, weed control and rabbit eradication many remnants will start to regenerate naturally. Where a number of layers of vegetation are missing revegetation may be appropriate.

See page 47 for more information on managing bushland.

Using all of the information above you can mark proposed improvements on your property map and start to plan how and when you will make them.

Tips for property management planning

- By mapping your property and assessing its assets and risks you will be better able to plan and prioritise improvements.
- Completing a property management plan will greatly increase your knowledge and appreciation of your land and the local area.
- A good property management plan takes time to develop.
- Your plan should be flexible and take into account changes in the family, in finances and the natural environment.
- A property management planning course and/or consultant can be of great assistance in the planning process.

Contact Council about local Property Management Planning Courses. These courses (subsidised by Council) help landholders to complete a five-year plan for their properties.

Local planning restrictions

Manningham City Council is responsible for implementing the State Government's Planning Scheme throughout the municipality. The Planning Scheme defines a series of zones and overlays that cover all land.

The zones control the land use, development type and the minimum size of the property. The overlays influence how subdivisions, buildings and works are carried out. They operate in addition to the zone requirements and are designed to protect environmental, landscape and heritage values, built form, and land and site management issues. The overlays can restrict and control activities such as the clearing of native vegetation and building works.

A property may be covered by several separate overlays and not all properties in the same area are covered by the same overlays.

The Manningham Green Wedge (see map page 66) is an Environmental Rural Zone defined by the Planning Scheme. This zone has many significant planning restrictions.

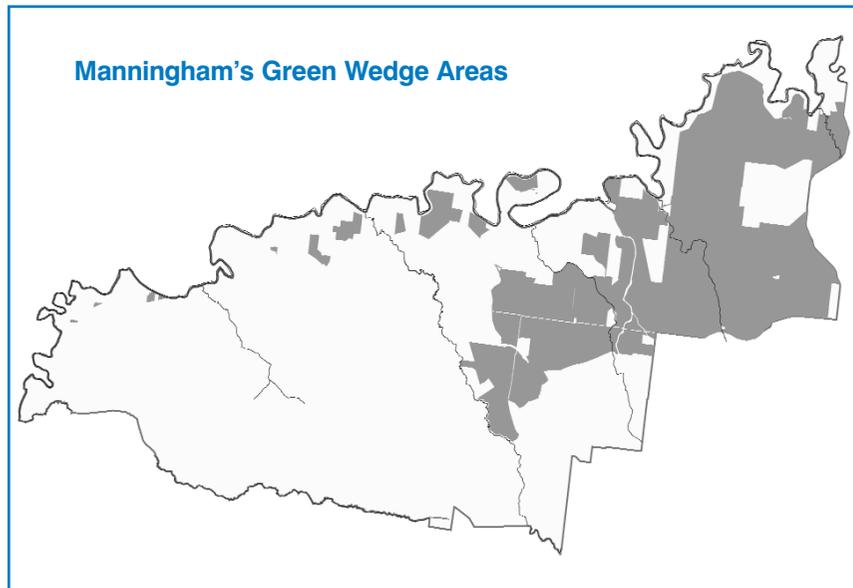
It is important to contact Council and clarify the planning restrictions that apply to your property before any property improvement works have commenced. Failing to comply with planning restrictions can attract substantial penalties and the onus is on the landholder to be aware of and comply with local planning restrictions.

People living or managing land in Manningham often face highly challenging land management issues including weeds, rabbit and fox invasion and soil erosion.

Manningham City Council provides financial incentives to help landholders combat these problems so they can maintain and improve their land for present and future generations.

Incentives are available to groups and to individuals who meet the eligibility criteria, which include:

- Specified large hectare properties in the Green Wedge
- Properties with Land for Wildlife status
- Properties covered by a Conservation Covenant
- Properties adjoining a conservation park or reserve
- Properties with adjoining stream frontage
- Properties with an environmental significance overlay
- Landholders undertaking fox control works



The Green Wedge. Dark shaded areas show parks and reserves. Light shaded areas show private land.

Local Environment Assistance Fund (LEAF)

The Local Environmental Assistance Fund provides assistance and advice to individuals or groups in the non-urban area to help them maintain and improve the environmental quality of their land.

Landowners are eligible for up to \$800 (on a dollar for dollar basis), for weed, rabbit and fox control, revegetation with local native plants and erosion control.

Other programs

Protection through covenanting

Council provides a one-off grant of \$35 per hectare of affected land up to a maximum of \$800. Landowners are encouraged to protect native bush forever by placing conservation covenants on their land with Trust for Nature. A conservation covenant is an agreement between the Trust and a landowner, which permanently protects land of high conservation value from clearing and other damaging activities.

Protection through Land for Wildlife

Council provides a one-off grant of \$10 per hectare of land covered by the agreement up to a maximum of \$200. Land for Wildlife is a voluntary scheme operated by the Department of Sustainability and Environment to encourage and assist private landholders to provide habitats for wildlife on their property.



This Land for Wildlife sign on the front gate of a Warrandyte property demonstrates that the owners have made a commitment to providing wildlife habitat on their property.

Park Care and Urban Stream-Frontage

Council provides up to \$200 (on a dollar for dollar basis) for environmental works in an area covered by an environmental significance overlay, within 20 metres of a stream or on park/reserve boundaries.

This scheme targets park neighbours (properties adjoining a conservation park/reserve) and those with an environmental significance overlay or stream frontage.

Fox Control

Council provides assistance to landowners undertaking integrated fox control works on their property. Landowners are eligible for up to \$200 (on a dollar for dollar basis). Funding priority is given to co-ordinated groups and projects across the municipality.

Groups, courses and seminars

Community Rabbit Control Groups

Rabbits are one of the most critical management issues for landowners in Manningham. Over 1500 Manningham residents participate in community rabbit control programs throughout the region each summer.

Working together with neighbours has a much greater impact on reducing rabbit numbers, than trying to eradicate rabbits alone. To find out more about how you can get involved in the annual rabbit control program, contact the Council's Economic and Environmental Planning Unit.

Property Management Planning Course

Are you prepared for the fire season? Concerned about weed or rabbit invasion on your property? Want to know more about the environmental value of your land? Want to be able to identify local native plants?

Participants in the Manningham City Council Property Management Planning Course learn how to improve the environmental quality of their land, how to tackle land management issues and how to get the most out of pastures. Each landholder develops a detailed five-year management plan for their property.

The course runs once a week for seven weeks with costs subsidised by Council. Several Courses run each year. To find out more about future courses and dates, call Council's Economic and Environmental Planning Unit.

Monthly Environmental Seminar Series

Free environmental seminars are held in the Manningham area each month. All residents are welcome. The seminars explore everything from eco-living to bushland management, habitat creation and pests. To obtain this year's program, contact the Economic and Environmental Planning Unit.

Environmental Community Email Group

Council operates an environmental community email group to help people keep up to date on the latest environmental events and stories and share ideas with others. To be added to the group email list contact the Economic and Environmental Planning Unit.

Property Management Planning Course participants inspect revegetation work at Tuscany Rise.



For further information on all of the above programs, grants, groups and courses contact:

**Manningham City Council
Economic and Environmental Planning Unit
PO Box 1
Doncaster, VIC 3108
Tel: 9840 9333**



General information

Manningham City Council

The Environment & Economic Planning Unit can provide advice on all aspects of land management in Manningham.

City Offices:

699 Doncaster Road

Doncaster, VIC 3108

Tel: 9840 9333

www.manningham.vic.gov.au

The City Parks Unit can provide information on the parks and reserves managed by Council.

Depot:

cnr Blackburn & Warrandyte Roads

East Doncaster, VIC 3109

Tel: 9846 0515

www.manningham.vic.gov.au

Whitehorse Manningham

Regional Library Corporation

Our local libraries have a good range of titles on native plants, managing bushland, horse husbandry, landcare and property management planning.

Call for a list of library addresses and opening hours.

Tel: 9841 0555

www.wev.vic.gov.au

Department of Sustainability & Environment

Department of Primary Industries

These State Government departments provide a broad range of general environmental and land management information and run a specialist bookshop.

DSE/DPI Information Centre

8 Nicholson Street

East Melbourne, VIC 3002

Tel: 9637 8325

www.dse.vic.gov.au

(Follow the links to 'Agriculture' on the DSE website to access Landcare Notes & Agnotes)

Parks Victoria

Information about the local parks and reserves that they manage.

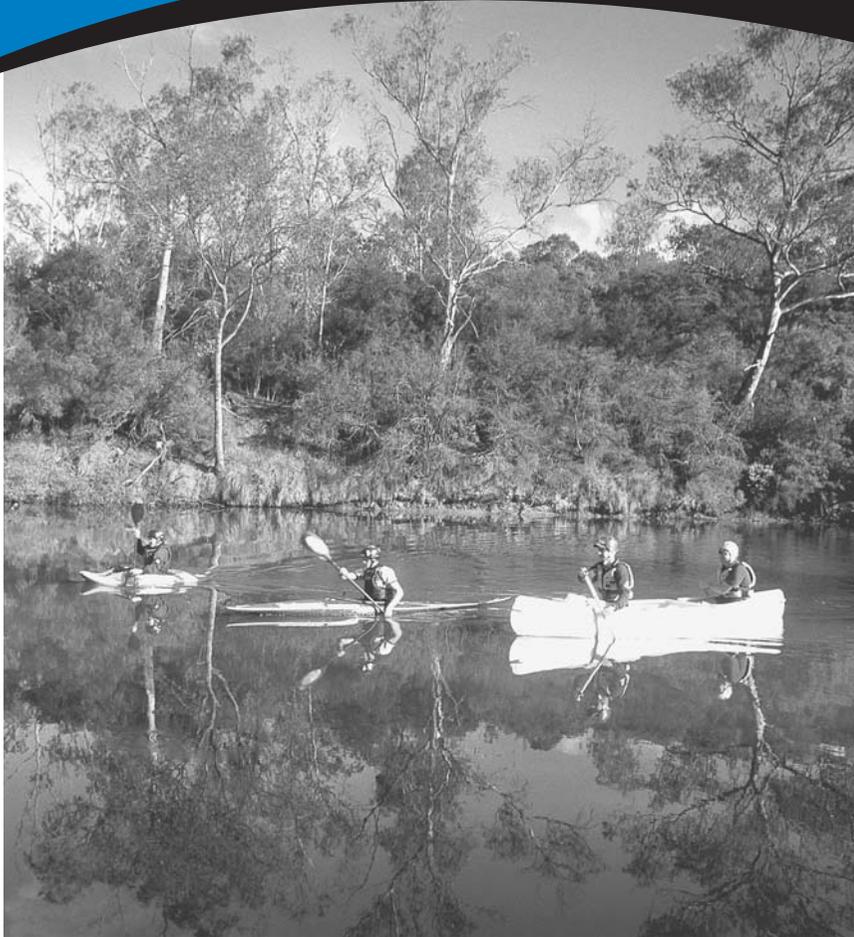
Warrandyte State Park

Pound Bend Road

Warrandyte, VIC 3113

Tel: 9844 2659

www.parkweb.vic.gov.au



Specific information

Bushland

Land for Wildlife

Information and advice on wildlife habitat on private land.

Department of Sustainability & Environment
Port Phillip Region.
KTRI Ballarto Road
Frankston, VIC 3199
Tel: 9785 0134
www.dse.vic.gov.au

Trust for Nature

Advice and information about conservation covenants
Level 2 385 Little Lonsdale Street
Melbourne, VIC 3000
Tel: 9670 9933
www.tfn.org.au

Conservation Volunteers Australia

Linking volunteers to environmental projects.
62-74 Pickles Street
South Melbourne, VIC 3205
Tel: 9686 5554
www.conservationvolunteers.com.au

Greening Australia Victoria

Technical advice and support for vegetation management projects.
10 Buckingham Drive
Heidelberg, VIC 3084
Tel: 9450 5300
www.gavic.org.au

Contractors

There are a number of weed and vermin control contractors in the Manningham area. Ask your neighbours for a recommendation, check the local paper and yellow pages or call Council's Economic & Environmental Planning Unit for a list of contractors and the services they provide.
Tel: 9840 9122

Fire

Country Fire Authority

Free copies of the Bushfire Survival Plan Workbook and information about fire in the local area.
Yarra Office:
18-22 Lakeview Drive
Lilydale, VIC 3140
Tel: 9735 0511
www.cfa.vic.gov.au

Native plants

Native Splendour

Call Council's Economic & Environmental Planning Unit for a copy of this free guide to the indigenous plants of Manningham. The guide also lists local indigenous nurseries.
Tel: 9840 9333



Wildlife

Wildlife Victoria

A referral service putting people with injured or orphaned wildlife in touch with local wildlife shelters.

Tel: 0500 547 000



Weeds

Manningham Weed Identification Booklet

Call Council's Economic & Environmental Planning Unit for a copy of this free guide.
Tel: 9840 9333

Books on weed identification and management

RG & FJ Richardson
PO Box 42
Meredith, VIC 3333
www.weedinfo.com.au

Local conservation and friends groups

These groups of volunteers work together to protect and conserve local bushland. They can be an excellent source of local knowledge and advice.

Friends of Mullum Mullum Creek Valley, Inc
53 Arum Crescent
Ringwood North, VIC 3134
Tel: 9870 2541

Friends of Harris Gully Reserve
13 Mopoke Hill Road
Warrandyte, VIC 3113
Tel: 9844 1056

Friends of Yarra Valley Park
6 Manningham Road West
Bulleen, VIC 3105
Tel: 9850 5155

Friends of Warrandyte State Park
PO Box 220
Warrandyte, VIC 3113
Tel: 9844 1650

Hillcrest Association, Inc
27 Chippewa Avenue
Donvale, VIC 3111
Tel: 9874 1227

Wonga Park Environment Group
Lot 8 Styles Court
Wonga Park, VIC 3115
Tel: 9722 1776

Manningham Conservation Society, Inc
4 Pinewood Drive
Templestowe, VIC 3106
Tel: 9846 2651

Friends of Tunnel Street Roadside
104 Webb Street
Warrandyte, VIC 3113
Tel: 9844 3906

Friends of 100 Acres Reserve
81 Arundel Road
Park Orchards, VIC 3114
Tel: 9876 5350

Friends of Tuscany Rise
57 O'Briens Lane
Templestowe, VIC 3106
Tel: 9846 4895

Friends of the Island
328 Warrandyte-Ringwood Road
Warrandyte, VIC 3113
Tel: 9722 1117

Josh Revell at Warrandyte State Park Nursery. The nursery is run by the local community and provides low-cost indigenous native plants grown from local provenance seed.



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