

# Botanical Traditions: Spring 2008 Newsletter

Welcome to our Spring Edition 2008 Newsletter. As many of you will be aware the horticultural and landscape industry is undergoing some large changes and challenges. In Melbourne we have been struggling with drought for ten years with water storage levels dropping annually since 1997 due to climate change and decreasing rainfall averages.

Melbourne's current water storage levels are at 34.4%, down 5.4% from last year and a massive 10% below 2006 September levels.



Currently, Victorians have shown increasing acceptance in adopting water wise strategies within their garden. Through developing actions such as adopting drip irrigation systems, alternate water sources, mulching and water saving crystals.

Research shows that the "urban heat island effect" has a direct relation to increase domestic energy use. In fact it is predicted that there will be a 30% load increase from 2001 and 2011 due to the refrigerated air conditioners alone.

## DID YOU KNOW?

- Alignment of trees near roofs or windows can reduce your interior house temperature by 6 - 12 %.

- Clumps of trees can reduce energy consumption as much as 40%, while a single 8m tree alone which is functioned towards wind breaking and shading effects can reduce heating by up to 12 %

- Street trees within urban areas reduce wind speeds and therefore reduce heating costs by as much as 30%.

In addition to these individual benefits, planting trees and developing strong networks of urban forests (our open space and home gardens) has a more expansive role in carbon sequestration, reduction in air emissions and reduction in soil erosion and storm water runoff.

At Botanical Traditions we encourage people to take an integrated approach to their garden design, that reflects their personal life style and needs, reduces not only their water consumption, but also energy. If you would like additional ideas on how to make your homes and gardens more sustainable why not contact us for a sustainability audit. We can help you to develop further strategies to reduce not only excess water consumption, but also energy usage and techniques to maintain a thriving garden that is adaptable to current conditions.

## Water Restrictions

### Stage 3A - Current Restrictions

#### Residential Gardens

- No lawns to be watered at anytime with mains water
- Manual dripper systems, hand-held hoses fitted with trigger nozzles, watering cans and buckets can be used to water gardens as required on specified watering days from 6am - 8am.
- Automatic dripper systems can be used to water gardens as required on specified watering days from midnight - 2am.
- Even numbered properties and properties with no street number can be watered on Saturday and Tuesday.
- Odd numbered properties can be watered on Sunday and Wednesday.
- There is no watering on Monday, Thursday and Friday
- Households with at least one resident aged 70 years or over may water their plants manually on specified watering days between 6am - 8am or 8am - 10am.

### STAGE 4 water restriction:

- Lawns and gardens may

not be watered at any time with mains water.

- A bucket filled from a tap can be used to clean windows, mirrors and lights; and spot remove corrosive substances. This also applies to commercial car washes.

A new pool or spa of any size capacity cannot be filled.



### When will we reach the Stage 4 trigger level?

This depends on seasonal rainfall averages and Melbourne's water consumption.

Keeping your household's water usage as low as possible helps to minimise the chance of going into Stage 4.

On 11 June 2008 the Minister for Water, Tim Holding, announced we will remain in Stage 3a until at least 30 November 2008.

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## Greywater

An average household (4 people) produces 520L of greywater a day. Greywater forms a portion of wastewater and can be light greywater from the shower, bathroom sink and laundry, or dark greywater from the kitchen.

Greywater can be used for different purposes depending on its quality. Greywater treated to a 'Class A' standard can be stored indefinitely and used in all types of irrigation system. In Victoria, 'Class A' water can be used for flushing toilets and to wash clothes.



Greywater systems can be divided into two main groups - simple diverter systems and treatment systems.

Simple diverter systems capture the water and then reuse it without any form of treatment. Treatment systems capture the greywater and divert it through a number of intermediate steps.

The benefit of a greywater treatment system is that it improves the quality of water allowing multiple uses of the water inside and outside the house and allows the treated water to be stored until needed.

## Greywater on the garden

On average while households in Melbourne use around 26% of their annual water consumption on the garden. Keeping this in mind, recycling household greywater for use in the garden is an excellent way of saving water and your conscience! Unlike rainwater, which is seasonally available, greywater is available every time you shower or wash.

There are two main contaminants to focus on when using greywater in the garden - Salts and detergents. Most of the Salts in greywater come from laundry detergents which are often also alkaline.



In Australia we have a labeling system for laundry detergent, 'NP' means that no phosphorus is added to

product and 'P' means that the level of phosphorus in the product is below the maximum phosphorus level set by an agreed Australian standard. Choosing laundry detergents labeled 'NP' will mean the least amount of phosphorus is in the water to begin with. Another option to consider is to change to a liquid form of detergent. Typically these contain fewer salts and also will not form into sediments which can block below ground irrigation hoses. Continual garden re-use of laundry water containing high levels of sodium and phosphorus can lead to Salt accumulations in re-use areas. Detergents can also destroy soil structure.

If using untreated greywater, care should be taken to only irrigate when it is actually needed and to alternate the areas irrigated to help reduce the chance of Salt build-up in the soil. In addition to choosing washing detergents and bathroom products which are low in Salts, you can also help protect your soil by mulching and adding compost to the soil.

Greywater treatment systems can include mechanical, biological, ultraviolet, bromine, chlorine, carbon, alumina and membrane treatment processes. The benefit of a greywater treatment system is that it improves the quality of water allowing multiple uses of the water inside and out and allows the treated water to be stored until needed.

For further information visit [www.sustainableplumbing.com.au](http://www.sustainableplumbing.com.au) or the EPA Victoria site at [www.epa.vic.gov.au/](http://www.epa.vic.gov.au/)

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## Waterwise gardens

There are many different types of waterwise gardens, but they all aim to use water efficiently. In most cases this means closely matching the plants selected to the site and local environmental conditions, as well as taking full advantage of rainwater, recycled water, and greywater.

A waterwise garden does not mean a garden with few plants, nor does it necessarily mean a lawn free garden. In truth, being water-wise means you can have a lush green lawn and healthy abundant vegetation. A waterwise garden can be achieved on a balcony, suburban block or country estate. As a bonus, water wise gardens are generally low maintenance which means less work and more time for you to sit back and enjoy life.

Any garden, in any style can be a water wise garden by taking into considerations a number of points.

### Local Microclimate and Site Conditions

Divide your Garden into Water Use Zones and choose

activities for each zone that are appropriate. For example, position entertainment areas where they will receive afternoon shade in summer, paved areas where they will be used and garden features where they will be seen and appreciated.

### Carefully Plan your Lawn and Planted Areas

Group plants that have similar requirements together. The plant labels will typically give an indication of the plants preference for soil, shade and water levels. If you group plants accordingly and match them to your site conditions you will have a greater chance of success.

### Lawns

Lawns are great for play and entertainment. However, they can require a lot of water and on-going maintenance. When you are planning a garden think about how much lawn you actually need and place it where you will use it. Grass

planted in median strips, shady areas or on sloping ground is generally not used much, so maintaining turf here doesn't make sense. These areas are more suited to be used as garden beds.

The use of warm season turf grass can reduce water requirements but be aware that in the cooler parts of Australia, warm season grasses may stop growing and turn yellow in winter. Some areas will be more suitable for using lawn alternatives than turf. Lawn alternatives include ornamental tussock forming grasses such as Kangaroo grass and Lomandra sp., ground covers such as Mondo grass, Dichondra repens, and Pigs Face and herbs such as Thyme and Pennyroyal.

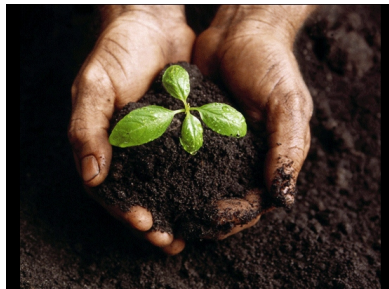


This is a photograph of the Raingarden at Armadale Primary School designed by Ruth Czermak (Botanical Traditions). A Raingarden is a special area which is constructed to filter rainwater and remove nitrogen, phosphorus and suspended solids. It also helps to reduce the velocity and volume of water entering our creeks and rivers in storm events.

### Efficient Irrigation

Much of the water used in the garden is applied through old and leaking irrigation systems. One of the most important steps that you can take to improve your water efficiency within the garden is to fix any leaks and make sure you only turn on the irrigation system when restrictions permit and when the garden requires it.

Zoning your plants with similar water requirements allows for an efficient irrigation system as there is no excess water run off. You might separate your lawn irrigation from garden bed irrigation so it can be turned off during restrictions and you might also separate all the garden beds that are in shady positions from those in sunny locations. An efficient irrigation system applies the right amount of water to the right place at the right time.



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Below ground drip irrigation systems apply water slowly and directly to the plant root zones. They usually require filters and pressure reducing nozzles, and if the garden has a slope should also be pressure compensating so that they water evenly. The use of shrub sprays and pop up sprinklers should be limited.



Soil health and a regular mulching routine are essential in maintaining healthy and vigorous plants in low rainfall areas.

## Get Soil Savvy

Many water wise plants prefer loamy to sandy soils. These soils will typically be free draining. Many areas in Australia have heavy clay soil which can easily get water logged. Clay soils can be improved by adding gypsum and organic matter.

When you go down to your local nursery to choose plants, it is a good idea to take a sample of your garden soil with you so they can assist you in classifying your soil and help you to decide the best way to improve it.

## Maintenance

On-going maintenance is very important in a water wise garden and includes mulching, which minimizes water evaporation and maximises water retention and weeding. Weeding is important as weeds use up valuable water!

## Reducing Reliance on Mains Water

Matching plants to site conditions, mulching and weeding will all help to reduce mains water use in the garden. For people who want to go to the next step consideration could be given to installing a rainwater harvesting system, greywater diverter system or greywater treatment system.

## Rebates

There are many rebates available for items such as drip irrigation, irrigation controllers, rain sensors, mulch, soil wetting agents and water holding crystals. Why not contact your local council, state government or local water retailer to see if any apply to your area?

Remember a water wise garden does not limit the type of garden you have, or the range of plants you use. Your garden can be a cottage or formal garden, contemporary or romantic, bold or subtle. Water wise gardens can be as interesting, green and colourful as you want them to be by considering the simple principles in this article.



Indigenous plants are plants that naturally occur in the local area. Native plants occur anywhere in Australia. Indigenous plants are suited to the natural rainfall in the local environment.

## New Staff Profile

Fiona Hurse recently joined the team at Botanical Traditions. She is currently studying Landscape Architecture at the University of Melbourne, and is in her final year.

Originally growing up in the country Fiona was strongly inspired by her surroundings, which nurtured an interest to combine the natural environment and design. Her strong interests include environmental systems and sustainability. Botanical Traditions specialises in sustainable landscape designs and Fiona enjoys being able to contribute to projects, which offer integrated design solutions to the green and conscientious client.

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## Vegetables!

Spring is a great time to get out and about in the garden and plant some vegetables. Your own homegrown vegetables will taste much better and are fresher than any that you buy in the shops. Fruiting vegetables such as beans, capsicum and sweet corn, have the best flavour if they're eaten as quickly as possible after harvest; leafy vegetables, such as lettuce, lose water and rapidly become limp, and all vegetables are more nutritious if they are consumed when as fresh as possible. By growing your own vegies and cutting out the trip to the supermarket you will ensure fresh and delicious food for your family and reduce your carbon footprint.

Heaps of space and a huge backyard is not always a requirement of the vegetable patch as there are many options for gardens with limited space. Even pots on a balcony are a great place to grow vegetables provided there is enough sunlight and they are watered when



There are a number of key considerations when planning a vegetable garden. The first is to make sure that the vegetable garden receives at least 5 hours of sunlight. The second is to enrich the soil with organic matter. The last consideration is to make sure that you have water available to irrigate with. The more water you can spare, the larger your vegetables will be.

## Spring Growing Guide

### OCTOBER:

PLANT: Potatoes, globe artichoke and chive Divisions. Also seedlings of cabbage, cauliflower, celery, broccoli, leek, lettuce, salad and spring onion, leeks, tomato, zucchini, pumpkin, and squash.

SOW: Carrot, beetroot, parsnip, silverbeet, cabbage, cauliflower, broccoli, lettuce, spring and salad onion, leeks, late peas, tomato, zucchini, pumpkin, squash and sweetcorn.

### NOVEMBER

PLANT: Potatoes, globe artichokes and seedlings of Brussels sprouts, tomato, capsicum, kale, eggplant, zucchini, cucumber, sweetcorn, cabbage, cauliflower, celery, broccoli, silverbeet, lettuce, and leek.

SOW: Asparagus, bush and climbing beans, beetroot, broccoli, Brussels sprouts, cabbage, Asian brassicas, capsicum, carrot, cauliflower, celery, eggplant, leek, lettuce, salad onion, parsnip, late peas (cold districts only), pumpkin, winter squash, radish, rhubarb, summer spinach, swede, sweetcorn, tomato, turnip and zucchini.

### DECEMBER

PLANT: Late potatoes, globe artichoke suckers and seedlings of Brussels sprouts, tomato, capsicum, kale, eggplant, zucchini, cucumber, sweetcorn, cabbage, cauliflower, celery, broccoli, silverbeet, lettuce, leek, Asian brassicas and roots.

SOW: Asparagus, beans, beetroot, broccoli, Brussels sprouts, cabbage, Asian brassicas, capsicum, carrot, cauliflower, celery, eggplant, kale, kohlrabi, leek, lettuce, salad onion, parsnip, pumpkin, winter squash, radish, rhubarb, summer spinach, swede, sweetcorn, tomato, turnip and zucchini..

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## Recent Featured Projects

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The last 12 months have been very busy. We have been involved in a large range of projects. Two of these are discussed here.

### Raingardens in Schools

This project involved tendering for a number of different projects sponsored by Melbourne Water. It included the design and installation of Raingardens. Raingardens are landscaping features that hold back and filter stormwater. Raingardens are a form of bio-filtration that help prevent stormwater runoff from polluting our rivers, creeks and bays. Soil and plants in the Raingarden act like strainers to naturally filter pollution out of the stormwater before it re-enters our water ways. They are a low cost, simple and effective solution to decreasing stormwater pollution. We have been involved in a number of different Raingarden Projects. These include the design and installation of the Raingardens at Armadale Primary School, Clifton Hill Primary School, St Bedes Primary School and St Johns Primary School (East Melbourne). Currently we are working on Raingardens at Flemington Primary School, Silverton Primary School and Mercey College. We are also working with ESL students from Debney Park Secondary College who are designing their own Raingarden.



Above: Illustration of the Rainwater Garden recently constructed at Flemington Primary School. If you would like a lesson plan for your own Raingarden Project please contact us.

### Solar Systems Bridgewater Test Solar Power Plant

Developing indigenous planting lists for specific areas and purposes etc

Concept plan for total landscape of 30 ha including an extensive swale system that will capture over 60ML of water in an average rainfall year.

An integral part of the project was the development of an Integrated Water Management Plan, which has ensured that all possible sources of water are used and are treated as a valuable resource rather than waste products. The concept takes the approach that some water, for example greywater, isn't wastewater but waste-ed water! The plan aims is to reduce water consumption in a number of ways, broadly, by improving efficiency, reusing/recycling water where suitable, using water of a quality required for its purpose and ongoing education.



Above: Illustration during planting in front of the Accommodation Area, with extensive cover of mulch made up of leaves and twigs from an oil processing plant.



Above: Illustration of direct seedling down the main entrance drive way of the property. Right: Image taken during the construction of the swale showing the rocky areas which are characteristic of the area.

