




AQUASCAPE
AUSTRALIA

Recreation Pond Owners Manual



Recreation Pond Owners Manual

This manual is a beginner's guide to maintaining and caring for a recreation pond built using an Aquascape Wetland system. This is also relevant to other systems although the results will also depend on the construction, type and size of the filtration used along with pump flow rates.

If you follow our directions of simple maintenance and care the pond will largely take care of itself. Remember, you are working with a natural, aquatic ecosystem and not a sterilised environment so there is some patience required as one of the trade-offs to a chemical free water feature is time and patience as the natural processes work to stabilise the system.

We have also included an aquatic planting guide in the event that you wish to add new aquatic plants and a terrestrial planting guide for yourself or your landscaper to guide the finishing process.

The Aquascape Australia team and their network of Certified Aquascape Contractors are available to assist you with any questions you may have.

What To Expect

An ecosystem pond can take up to 12-18 months to fully balance itself, so while the pond, filtration and plants are establishing you can expect to see algae issues, with string algae being the main challenge for new pond owners.

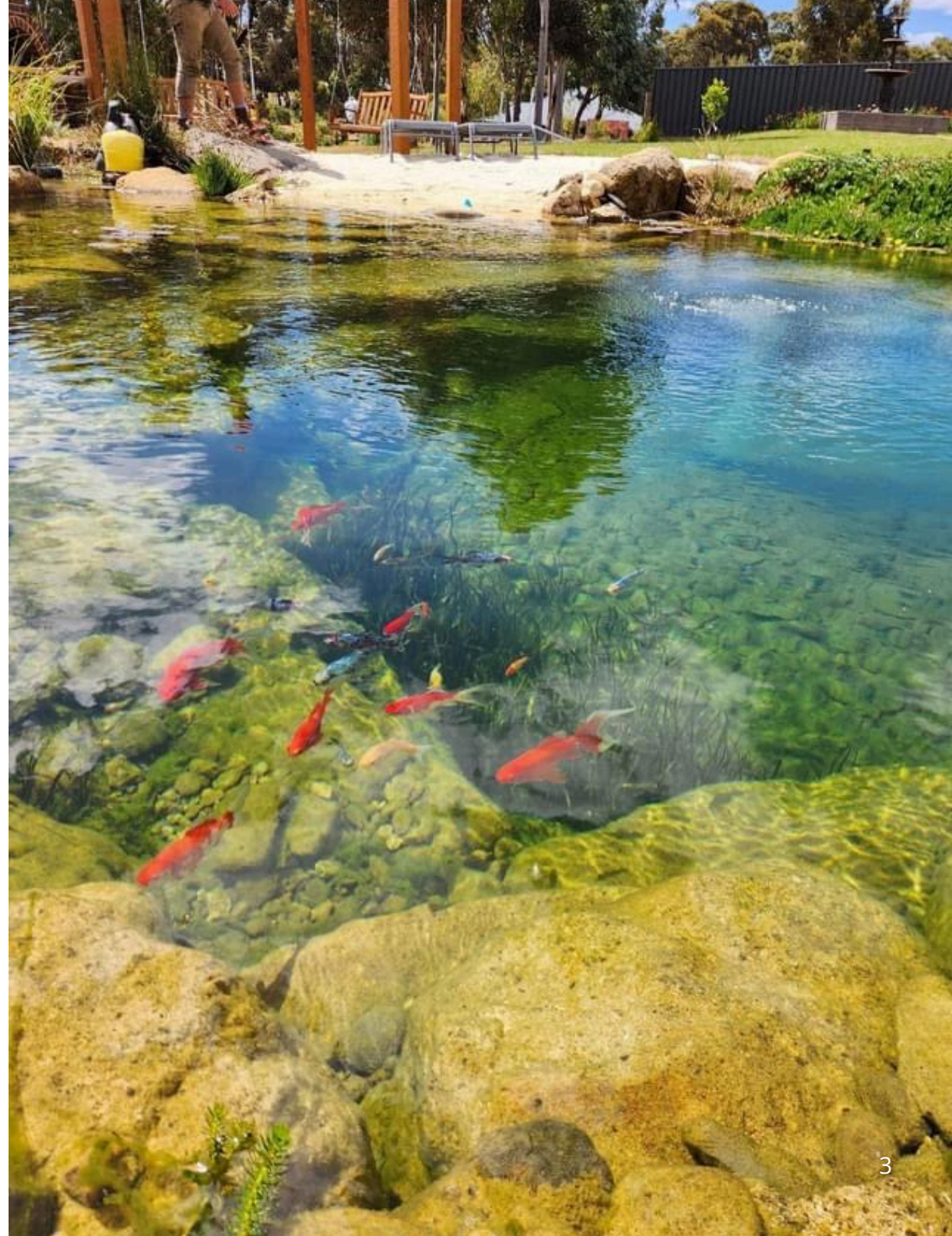
Depending on the severity of the algae, you can either let it go through its cycle and manually remove as much as possible, or treat the pond with Clear for Ponds every 4-5 days to attempt to eliminate the algae from the system.

Benefits of Adding Bacteria

Beneficial bacteria support your pond's nitrogen cycle by effectively reducing fish waste, organic plant material, sludge, and excess nutrients, while promoting a balanced ecosystem.

These microorganisms naturally occur in rivers, lakes, and other bodies of water. While they are also be present in your pond, there might not be enough to sustain a healthy water environment. A healthy balance of good bacteria in your pond helps keep it clean and healthy.

It is imperative that you follow the water treatment guidelines listed in this document to assist in establishing and balancing the ecosystem, and to ultimately provide the best environment for your pond to outcompete any unwanted algae.



Skimmer Pump Vault And Intake Bay Maintenance

Skimmer

Your pumps will be positioned either inside the Skimmer or they may be dry mounted outside of the pond plumbed to the skimmer.

- Check the Skimmer basket regularly and empty the basket as required
- Check the green skimmer mat under the basket monthly and clean as required
- If the pumps are positioned in the skimmer. Periodically check on the pumps by reaching down around the pump or check valve intake to make sure there is no debris build up or pebbles causing the pump to block up. If there is a build-up of debris, turn the pump off and remove the pump cage, strainer or check valve or strainer and hose it out. This is particularly important if bark or heavy mulch pieces are finding their way into your pond.
- Ensure the pump intake or check valve for dry mounted pumps is clear of any debris build up

Pump Vault

Your pumps will be positioned either inside the Pump Vault/s or they may be dry mounted outside of the pond plumbed to the Pump Vault/s. If the pumps are positioned in the pump vault.

- Periodically check on the pumps by reaching down around the pump or check valve intake to make sure there is no debris build up or pebbles causing the pump to block up.
- If there is a build-up of debris, turn the pump off and remove the pump cage, strainer or check valve or strainer and hose it out.
- This is particularly important if bark or heavy mulch pieces are finding their way into your pond.
- Ensure the pump intake or check valve for dry mounted pumps is clear of any debris build up
- After cleaning the pumps or intake, remove any debris build up from the bottom of the Pump Vault

Intake Bays

- Regularly check and clear the debris from the pooling area using a heavy duty pond net such as the Pond Shark.
- If you leave the leaf and stick debris for too long it will begin to absorb water and sink, allowing it to break down and clog the intake reservoir. This will also lead a reduction in the flow of water and can cause the pump to run dry, damaging or disabling the pump.

Check the water level

A drop in the water level can lead to a reduction in the flow of water and can cause the pump to run dry, damaging or disabling the pump.

- Ensure the water level is adequate. Running height is second screw down from top on the skimmer face plate.
- Most installations will have an automatic filling system installed which will set the level of the water. Do not turn off the water source.
- The aquatic plants also rely on this water level, so make sure that the water connection is always on, the water level is correct and that there is no debris interfering with the float valve.

Note: Topping up with bore water in some cases can add unwanted nutrient to the pond which may cause algae blooms.



DIY Maintenance Procedure Annual Maintenance

If the monthly procedures have not been diligently performed there may be a need to perform a full pond clean and water replacement. This can be done with a dirty water pump, a hose, and a gurni. Be prepared for a very big and dirty job! Doing this will essentially remove the decomposed debris, high nutrient dirty water and excess plants and root mass and replace these with clean water after a very serious flush. This is a shock to the aquatic plants, fish and ecology of the pond so we recommend staying on top of the monthly duties so this can be avoided.

Wetland Filter Maintenance

To ensure the maximum performance of the wetland filter you will need to perform a wetland back flush every 1 to 2 years to remove sediment build up. This is a simple but laborious task. This can be performed using two sump pumps of equal size around 15,000-20,000lph and a minimum 40mm hose on each.

- Using one pump in the snorkel, firstly empty the wetland.
- You will then need to use the second pump situated in the pond and begin hosing the clean water over the wetland area, while the pump in the Snorkel is continually emptying the wetland.
- This clean flushes any sediment build up into the Centipede and Snorkel while the pump in the Snorkel continually removes the dirty water.
- Continue flushing until the water being pumped out is clear.

Watch Waterscapes Australia show you how to backwash a wetland filter on this [video](#)

Plant Maintenance

Prune and tidy up the plants in the wetland and around the pond. Aquatic plants are an essential part of the biologic filtration; however many grow rapidly and if not maintained will grow out of control. Prune off any dead leaves and pull out any over-grown sections, either by cutting the sections away with a good pair of gardening scissors or tearing them out manually. By removing these plants, you are exporting the nutrient which helps to keep the algae at bay. If you do small amounts of maintenance more often, it makes the overall maintenance a lot easier.

Pump Maintenance

This is the ideal time to also remove your pond pumps to inspect and clean as required.

To ensure the maximum lifespan of your pumps you will need to perform an annual service which is essential for retaining the validity of the warranty. For a tutorial on how to do this you can [watch the YouTube video here](#).

Once cleaned, ensure you add your next dose of bacteria directly to the filter or via the Skimmer or Intake Bay.



Adding Water Treatments

Why Water Treatments?

Adding water treatments on a regular basis keeps your pond clean and healthy, and Aquascape's line of products makes the task easy and manageable. While many water treatments are only used as needed, we recommend a few products that should be used weekly throughout the year,

Use only one of the two Bacteria treatments below, along with the Diatomix - weekly treatments.



Adding Water Treatments

Recommended to use 1 of these 2 Bacteria treatments ongoing



Beneficial Bacteria Concentrate Aquascape

Beneficial Bacteria Concentrate Professional Grade helps to provide clean, clear, and healthy water conditions, significantly reducing pond maintenance. Each bottle is 25% more concentrated than the consumer equivalent and is packed full of eight pure strains of concentrated bacteria. Our bacteria will effectively reduce fish waste, organic plant material, sludge, and excess nutrients in ponds and contains a 5 billion CFU per 28 grams potency, ensuring consistently effective treatment. The included marigold and vitamin B help to bring out the natural colours of your fish while maintaining proper fish health. The included measuring cup and dosage guide make application simple and easy. Each 4.08kg container treats up to 2,540,160L of water. Aquascape Beneficial Bacteria Concentrate Professional Grade is completely safe for fish, plants, pets, and wildlife.

Dosage Instructions:

- Weekly dosing as per the included measurement cup. 1 measurement cup treats 180,000 litres.
- We recommend dosing a 1/4 cup weekly for every 50,000 litres of water in your pond.
- Treat 2 times a week for the first 2 weeks



Wetland Pond & Lake Bacteria Aquascape

Wetland Pond and Lake Bacteria helps to provide clean, clear, and healthy water conditions in larger water features, significantly reducing pond maintenance. Each bottle is packed full of eight pure strains of concentrated bacteria and is completely safe for fish, plants, pets, and wildlife. Our bacteria will effectively reduce fish waste, organic plant material, sludge, and excess nutrients in your pond, allowing you to spend more time enjoying your water feature. The included measuring cup and dosage guide makes application simple and easy. Each bottle contains 3.78 Litres of treatment and treats up to 2,903,040 Litres.

Dosage Instructions:

- Weekly dosing as per the included measurement cup. 1 measurement cup treats 180,000 litres.
- We recommend dosing a 1/4 cup weekly for every 50,000 litres of water in your pond.
- Treat 2 times a week for the first 2 weeks.

Adding Water Treatments



ASA Pond & Lake Enzymes Recommended to use ongoing

ASA Pond & Lake Enzymes are protein-based substances that significantly accelerate the breakdown of organic materials and sludge in pond water, making it a key component in maintaining pond health and clarity, and is best used in conjunction with beneficial bacteria. They are not living organisms but rather act as catalysts to help beneficial bacteria efficiently digest waste like decaying leaves, fish waste, and excess nutrients, ultimately contributing to cleaner water and reduced maintenance.

KEY FUNCTIONS AND BENEFITS OF POND ENZYMES:

- Accelerate organic waste breakdown
- Support beneficial bacteria
- Improve water clarity
- Minimise sludge buildup
- Reduce odours
- Safe for aquatic life

Dosage Instructions:

PROBLEMATIC SITUATIONS & NEW FILTER SYSTEMS:

- 10ml per 10,000 litres weekly

TO MAINTAIN A HEALTHY ECO-SYSTEM:

- 3-5ml per 10,000 litres weekly



Diatomix IV Recommended to use for new ponds

Diatomix IV is a liquid feed that enhances the growth of the 'good algae' – these are called diatoms and will help to outcompete String Algae. This diatom food contains Silica as well as Iron, Manganese, Zinc, Copper, Magnesium, Boron, Potassium, Molybdenum, Calcium and Cobalt. These are the micro-nutrients required by diatoms that are not always present in water in adequate quantities.

Weekly Maintenance Dosage Instructions:

- Shake the bottle and then mix in a bucket of pond water and spread in different areas of the pond each week.
- Must be dosed weekly to be effective.
- Ponds up to 100m² - 20ml per week
- Ponds 100m² to 200m² - 30ml per week
- Ponds 200m² to 300m² - 40ml per week
- Ponds over 300m² - check the instructions for dosage rates

Adding Water Treatments



Sludge Control - Sludge & Filter Cleaner Professional Grade **Use as required**

Aquascape Sludge and Filter Cleaner Professional Grade helps to maintain a strong biological balance in your pond while quickly cleaning rocks, gravel, and filter pads. Each bottle is packed full of five pure strains of heterotrophic bacteria, marigold and humic acid help to improve the pond environment for fish.. Our Sludge and Filter Cleaner will effectively reduce fish waste and decaying organic plant material in ponds, allowing you to spend more time enjoying your water feature and less time maintaining it.

Dosage Instructions:

- One bottle contains 3.78 Litres of treatment and treats up to 363,400 Litres of water.
- This treatment is safe for fish, plants, pets, and wildlife.

Consult your Contractor to discuss the best time to use Sludge & Filter Cleaner Professional Grade.



Lake Flocculant Clarifier or Rapid Clear Flocculant **Use as required**

Quickly clears stubborn clouding water caused by suspended particles in lakes and large ponds. This specially formulated treatment will effectively reduce maintenance and is optimised to clarify a variety of suspended particles, including clay, mineral material, and sediment. The Lake treatment is for lake and large pond use only and may cause issues, such as gill-stress or fish-loss, in smaller enclosed systems or systems with heavy fish loads. Safe for fish when loading is of natural proportions. Safe for plants and animals when used as directed.

We recommend using either of these products immediately after the final fill to help clear the dirt particles and clarify the water. If using a skimmer, use in combination with the Rapid Clear Fine Filter Pads.

Dosage Instructions: Check with your contractor who may have already dosed this product after building.

- Lake Flocculant - add ½ cup of flocculant mixed in a 20L bucket and distribute around the pond – dose weekly or after a lot of agitation from use
- Rapid Clear Flocculant 3.78L - 1 pump treats treats 2,200 litres / a 3.78L bottle treats 302,400 litres.

Adding Water Treatments



Treating String Algae - Clear for Ponds Use as required

An ecosystem pond can take up to 12-18 months to balance itself, so you can expect to see algae issues in those first 12-18 months, with string algae being the main challenge for new pond owners. Depending on the severity of the algae, you can either let it go through its cycle and manually remove as much as possible, or treat the pond with Clear for Ponds every 4-5 days to eliminate the algae from the system.

Dosage Instructions:

- Clear for Ponds 3.78L - 1 pump treats treats 2,200 litres / a 3.78L bottle treats 302,400 litres. 1 litre treats 80,000 litres.
- Treat to the size of the pond every 4-5 days to eliminate algae

To assist in the process we also recommend to increase the dosage rates of the Diatomix IV by 10ml per week.

Consult your Contractor to discuss the best time to use Clear for Ponds. We generally recommend to wait at least 6 months before using the Clear for Ponds. Physical removal is best, by removing the algae you are removing the nutrient load from the pond. Clear is then a great follow up treatment.



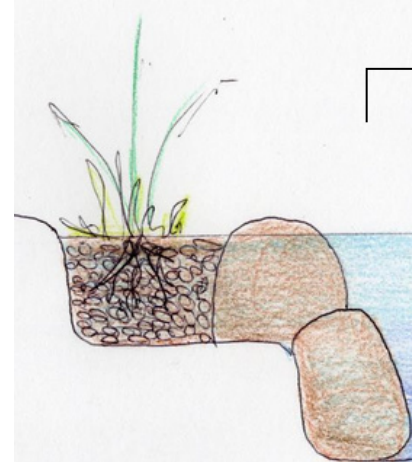
Aquatic Planting Guidelines

This is a list of aquatic plants that is by no means exhaustive, but a starter guide to what can be purchased from a garden centre and planted in the wetland or in and around the pond.

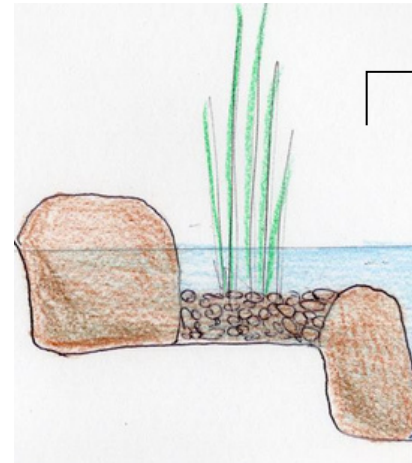
Feel free to get creative and experiment! But make sure check the plant tag or with the nursery to make sure you don't get a highly invasive species as these can be a pain to manage. Another tip is to wash off the plant when you get home – you do not want Azolla or some other invasive surface weed getting in your pond.

How to plant marginal aquatic plants in a recreation pond:

1. Remove the plant base from the pot and using a hose wash most of the potting mud off from the base of the plant. The mud contains fertilisers that are fine in a standard fish pond but can cause issues with the water quality of a recreation pond.
2. Choose a water depth that will suit the aquatic plant that you have chosen. Some aquatic plants prefer to have the root base in water and the stems of the plant above, some prefer 200mm deep water. Check the tag on the plant or ask the nursery staff for assistance.
3. Dig a hole with your hands or a blunt plastic trowel in the gravel (don't pierce the pond liner!) and place the plant directly into the hole and spread the gravel back over the base of the plant.
4. If you are planting in the wetland marginal plants work best tucked in against the boulder edge, particularly in the triangle shaped areas between where two boulders are connecting.



Marginal or bog plants that only like to have their roots submerged and the stem and leaves of the plant above water should be planted in gravel pockets like this.



Certain rushes and other aquatic plants like to have their roots planted in gravel that is in 15cm to 20cm of water, likely on a shelf or near a step.

How To Pot Water Lillies

When to Plant

For best results, plant or re-pot your water lilies during the spring and summer months. These aquatic plants love the warmth, so planting them when the weather is warmer is best.

How to Plant

When it comes to learning how to plant these water plants in a pond, there are a few simple steps to follow for optimal results. For most varieties, you'll want to place your water lilies at least 40cm under the water's surface. This depth can change depending on the type of water lilies you choose to plant, so check what's best for your specific variety before planting.

- To start, trim up any old roots and plant your water lilies out of the water
- Use a fish-safe potting mix such as our Bioganic Earth Podium.
- Water lilies like a heavy soil or clay mix, and growing them in a planter allows for you to easily choose this type of soil. These plants are perfect for growing in [Aquascape Aquatic Planters](#).
- Add Bioganic Earth soil mix, specifically designed for aquatic plants. Place the hardy water lily plants rhizome at a slight angle (about 45-degrees) with the cut end deeper in the soil and placed at the edge of pot, with the growing tip projecting 2cm above the surface of the soil.
- Add [Aquascape Fertilizer](#) or 40g of Hydro Terraplex to the planter when potting, following package instructions. Water lilies have voracious appetites and will perform best if well fed.
- Cover the top of the soil with sand to prevent the soil particles from floating out of the pot. You can also add small pebbles over the top of the sand. The pebbles are required if keeping larger fish such as koi, to prevent them from digging into the sand and soil.
- Once planted, you can slowly lower your lilies into the pond.



Aquatic Planting Guidelines



Baumea Rubignosa

Native perennial, cylindrical green leaves and stems. Inflorescence is reddish brown, will tolerate brackish water, good soaker of nutrients up to 7cm in depth.

Planting: Great in the deep-water section of wetlands and in pond shelves.



Isolepis Alice River

Small fine stiff green grass with orange pin-head flower stems.

Planting: Good for planting around the pond edge where the stems are above water.



Bacopa Monieri Water Hyssop (Brahmi) Memory Herb

The native bacopa is a smaller plant than the exotic species. It has small white flowers in Summer and Autumn and will withstand light frosts. Depth 3 – 4 cm above the rim of the pot.

Planting: Good for planting in shallow waters around pond edge and in the wetland.



Lilaeopsis Palustris Australian Lilaeopsis

A herb which forms like a grass mat. Can be submerged or depth to 3 cm over the rim of the pot.

Planting: Grass-like aquatic plant for planting in streams and shallow pond shelves for an aquatic 'lawn' effect.

Aquatic Planting Guidelines



Ludwigia Arculata **Needle Primrose**

Small needle-like reddish/green leaves creeping along the surface. Bright yellow flowers. Depth 3 – 4cm above the rim of the pot.

Planting: Planting in streams and shallow pond shelves, great for blurring the line between the pond and the land.



Mazus Pumilio Blue

A native ground cover with oak-like leaves. Lilac/Blue flowers appear in Spring & Summer.

Planting: Plant in gravel nooks between boulders where roots are wet but plant itself is above water.



Mazus Pumilio White

A native ground cover with oak-like leaves. Brilliant white flowers appear in Spring & Summer.

Planting: Plant in gravel nooks between boulders where roots are wet but plant itself is above water.



Myriophyllum Papillosum **Water Milfoil**

Small green pine-needle like leaves carried on ascending stems. Depth 20 – 25cm. Australian Native.

Planting: Great for planting in shelf areas, fantastic fish breeding habitat. Can get out of control if left too long but is easily cut back.

Aquatic Planting Examples



Bacopa Monieri planted between junction of boulders.

Acorus Sedge planted in shallow stream.



Rushes planted with their roots under water and stems above.



Alocasia grow well in the shade but will get out of control in wetlands.

Bacopa makes for great growth between the junction of boulders.

"The key is to blur the aquatic and the terrestrial... It should be difficult to determine where the edge begins".

Landscape Planting Guidelines

Rockery plants are some of the best plants that you can plant besides the pond. Plants such as native daisies, silver falls dichondra, alternanthera little ruby and convolvulus. Native violets and plain dichondra are also very lush when planted in a shady area beside the boulders of the pond edge and they love water.

In a general sense, think in terms of low growing plants that spread close to the pond edge, then larger shrubs behind these and large again behind these for the best sense of depth and perspective.



Fish for your pond

There are a variety of fish options available to you depending on your location and personal preference. Choose from a range of native fish, gold fish or Koi. Turtles are also an option.

Your pond will have adequate filtration to keep plenty of fish. We recommend waiting 4-6 weeks before adding fish to your pond.

Suitable native fish, dependent on location:

- Rainbow fish
- Pacific Blue Eyes
- Gudgeons
- Bass
- Silver Perch
- Jade Perch
- Agassiz's Perchlet

Ensure you only feed the fish as much as they can consume in 5 minutes and remove any uneaten food to avoid any excess nutrient build up feeding unwanted algae growth.



Sunscreen Use

Your pond is a living ecosystem, so you will need to ensure that you do not introduce any unwanted chemicals that could harm the biological balance or your fish.

We recommend using reef friendly sunscreens when swimming in your Recreation Ponds. Products like the Surf Mud range that use non-nano Zinc Oxide as it's singular active ingredient. will prevent destabilising the natural bacteria filtration system.

In fact most sunscreens contain antibacterial preservatives, which in a closed system Recreation Pond, can build up and destroy the beneficial bacteria that these bodies of water depend on to stay clear and clean. Oil is generally used as a carrier in most lotions and these are also detrimental to aquatic ecologies

You can find the Surf Mud range of products available on our website





As always, Aquascape Australia and our network of Certified Aquascape Contractors are available for any support or advice you may need.

21 Progress Place Yandina QLD 4561
PH: 07 5446 7963
Email: office@aquascapesupplies.com.au
www.aquascapesupplies.com.au

