

CLIENT HANDOUT · WATERING & SOIL

Watering & Mulching Natives

Yes, natives need water! How much, and how often, depends on your soil, your site and how water moves through the ground. Here's how to "read" your garden and water it well.

Five watering myths, busted

MYTH: "Natives don't need watering."

Fact: many young natives die in their first summer because they dry out. Plants in pots, in sandy soil that drains fast, under big trees or against hot walls can need regular water even when they're settled in.

MYTH: "All natives are drought tolerant."

Fact: only some are, and only once they're settled in. Many local plants grow naturally in damp gullies or on deeper clay soils, and rainforest plants like more water still.

MYTH: "A little water every day is best."

Fact: a daily sprinkle wets only the top few centimetres and keeps roots lazy and shallow. A slow, deep soak, less often, coaxes roots down to where the soil stays moist.

MYTH: "The surface is wet, so it's had a drink."

Fact: on water-repellent soil, water can bead up, run off, or vanish down a few cracks while most of the roots stay dry. Always check below the surface.

MYTH: "Wilting means it needs water."

Fact: roots sitting in waterlogged soil can't take up water either, so over-watered plants wilt too. Check the soil before you add more.

Check, don't guess

- Push a finger or trowel **5–10 cm** into the soil beside the plant. Moist? Wait. Dry? Water.
- Plant a mint bush (*Prostanthera*) as an **early-warning plant**: it wilts first when the soil gets dry.
- Look at the rain gauge or forecast before you water.

Sydney Water's Water Wise Guidelines

Hose with a trigger nozzle, sprinkler or watering system: **before 10am or after 4pm**. Drip and smart systems: any time. New gardens: any time for **28 days** after planting, following your installer's or care professional's instructions. No run-off onto paths. Rules can change in drought; check sydneywater.com.au.

"Most watering problems I see in native gardens aren't really about the plant. They're about the soil. Once you understand what's under your feet, how it's layered and how water moves through it, watering gets a lot simpler."

RF Horticulture · Cert III Horticulture (Ryde TAFE)

North Shore soils

Our gardens sit on two very different rocks, sometimes in the same street. Each makes a soil that handles water differently.

	Sandy soil (from sandstone)	Clay soil (from shale)
Where	Slopes, gullies and creek lines (Hawkesbury Sandstone); rock outcrops nearby	The main ridgetops and upper slopes, e.g. along the rail-line ridge from Roseville to Wahroonga
Feels like	Gritty, pale and loose; falls apart when squeezed moist	Sticky when wet, hard when dry; a moist handful can be pressed into a ribbon
Water in	Fast, <i>unless</i> the topsoil has turned water-repellent	Slow; puddles or runs off if watered too fast
Drains	Quickly, straight down	Slowly; can stay wet for days
Holds	Little; dries out fast	A lot, though some is held too tightly for roots to use
Main risk	Drying out; water repellence	Waterlogging and root rot in wet spells

In-betweens and oddballs

Mid-slopes often have **in-between soils**: sandy topsoil sitting on clay. Many gardens also have **trucked-in topsoil, fill or old garden mix** that behaves nothing like the soil below it. That's why it pays to look at all the layers (your **soil profile**), not just the surface (page 2).

Sources: ANPSA FAQ ("All Australian plants are drought resistant?"; first-summer losses); NSW Government (DCCEEW Water), Saving water in the garden (deep, less frequent watering; finger test); Ku-ring-gai Council, Biodiversity and Riparian Lands Study (shale ridges, transitional soils, sandstone gullies); NSW eSPADE soil landscapes; soilquality.org.au, Water Availability fact sheet. Quote: my own words.

How water moves through soil

Every time it rains or you water, three things happen. Good watering just means helping all three along for *your* soil.

1 Getting in

Water has to get past the surface first (experts call this *infiltration*). Crusty or packed-down soil, slopes, clay, fine mulch and water-repellent soil all slow it down or send it running off.

2 Moving down

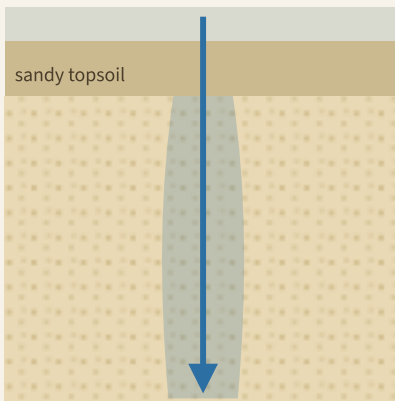
Gravity pulls water down through the bigger gaps in the soil: fast in sand, slow in clay. It can stall wherever the soil changes, like sand sitting on clay.

3 Being held

Tiny gaps hold water like a sponge. Clay and compost hold far more than sand, but clay grips some of it too tightly for roots to use.

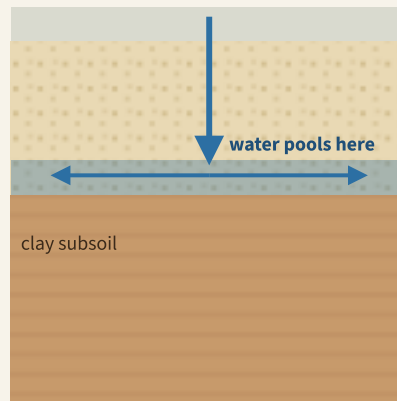
Same watering, three soil profiles

Deep sand



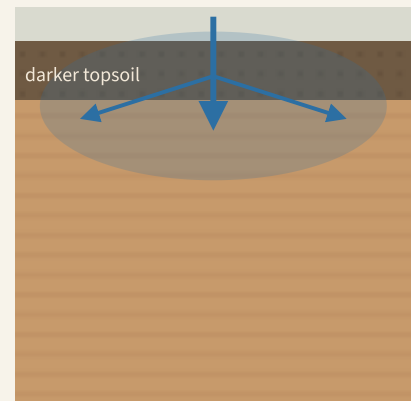
Water drops straight down in a narrow column and drains away.

Sand over clay



Water stalls on the clay. Roots can drown there while the top looks dry.

Clay



Water soaks in slowly, spreads sideways and stays wet longer.

Get to know your soil layers

- **Dig a test hole** 30–40 cm deep with a spade in each part of the garden (check for pipes and cables first). Look for layers: colour, grittiness, stickiness, rock.
- **Fill it with water**, let it drain, then fill it again. Still water in it the next day? Drainage is poor. Choose plants that cope with "wet feet", or plant on a low mound.
- **After watering, dig beside a plant.** Is the soil moist all the way down where the roots are, or just the top few centimetres? This is the most useful check you can do.
- **Drip lines on sand** wet a narrow column, not a wide circle. Use more drippers, or check they actually reach the roots.

Improving what you've got

Sandy soil: dig in compost at planting, treat water repellence early (page 3), and mulch only if the bed needs it.

Clay soil: add organic matter, never dig or walk on it when wet, water slowly, and plant on a low mound where drainage is poor. Gypsum helps some clays, not all.

Pots vs garden beds

In pots	In garden beds
A small, fixed water supply. Pots in sun, wind or against walls can need water daily or every second day in hot weather, even "tough" natives.	Roots can spread wide and deep, so beds can go much longer between drinks once plants are established.
Dry potting mix can repel water, which then runs straight down the gap at the side. Soak the whole pot in a bucket until the bubbles stop.	How often depends on the soil and profile: sand needs smaller, more frequent drinks; clay needs slower watering, less often.
Use a quality mix made to Australian Standard AS 3743 . "Premium" mixes must re-wet faster. Keep drainage holes clear and don't leave pots standing in full saucers.	Compost, good soil structure and, where the site suits it, coarse mulch all help a bed hold water longer (page 3).

Sources: soilquality.org.au, Water Availability and Water Repellency fact sheets; NSW Government (DCCEE Water), Saving water in the garden (drip on sandy soils; pots); ANPSA, "Growing Australian native plants in containers" (daily watering in hot weather; soaking pots); Gardening Australia (ABC), "Soil wetting agents and gels"; Standards Australia AS 3743 Potting mixes (wettability). Test-hole and profile checks: RF Horticulture practice.

Water repellence: the hidden problem

Water-repellent soil (water beads up and runs off instead of soaking in) is the most common watering problem I find in native garden beds. When it dries out, the soil sheds water like a raincoat, so plants go thirsty even though you've watered.

What causes it?

- **Waxy coatings.** As leaves and other plant bits break down, waxy, water-repelling stuff coats the grains of soil.
- **Sandy soil.** Sand grains have little surface area, so a small amount of coating goes a long way. Our sandstone topsoils are often naturally repellent.
- **Fallen leaves from the myrtle family.** Gum trees, angophoras, paperbarks, bottlebrushes, tea-trees and kunzeas have leaves rich in oils and waxes, and they're common in native beds.
- **Not just myrtles.** Research has found banksia and sheoak leaves can do it too, and dry peat-based potting mix is notorious for it.
- **Drying out.** It's worst when soil is dry, so it often shows up in late summer or after a dry spell. Heat makes it worse.

Don't panic and rake! Leaf litter is still good for your garden: it feeds the soil and shelters skinks and insects. The aim is to manage repellence, not to rake everything up.



Tick bush (*Kunzea ambigua*), a local member of the myrtle family · Photo: Caleb Catto, CC BY 4.0, iNaturalist, <https://www.inaturalist.org/observations/268148106> (cropped/resized; licence at creativecommons.org). The photographer and iNaturalist do not endorse RF Horticulture.

The water droplet test

- 1 Choose a spot where the soil surface is **dry**. Scrape the mulch back. Test a few spots, as repellence is often patchy.
- 2 Gently place **3–5 drops** of water on the soil with an eyedropper or teaspoon.
- 3 **Count the seconds** until each drop soaks in.

Drop soaks in...	What it means
Within 5 seconds	Not repellent
5–60 seconds	Slightly repellent: keep an eye on it
Over a minute	Strongly repellent: treat it (below)

Another clue: water beads or runs off, or the soil is still dry a few centimetres down after watering.

How to fix it

- ✓ **Soil wetting agent:** works like a detergent, helping water past the waxy coating. Follow the label, water it in, and re-apply as directed, as it wears off. (Water-storing crystals are different and don't fix repellence.)
- ✓ **Gentle cultivation:** lightly fork or scratch the top few centimetres to break the dry crust. Keep it shallow near native roots and under trees.
- ✓ **Organic matter:** add compost to sandy soil at planting. Keeping soil moist and alive helps microbes break the waxes down.
- ✓ **Water in bursts:** water for a few minutes, let it soak in for 10–15 minutes, and repeat two or three times. Once soil is moist, it's much easier to keep it that way.
- ✓ **Watering basins:** a low ring of soil around new plants holds water where it's needed (on slopes, build up the downhill side). A pot with holes sunk beside the plant does the same job.
- ✓ **Mulch only where it helps:** see below.

Mulch: decided on site, not on a schedule

Whether a bed needs mulch, which kind and how deep is worked out on a visit. That way I don't pile on too much, rob new plants of nitrogen, or leave the soil soggy. No routine top-ups.

Type	Where I use it	Notes
Coarse: leaf litter, chunky chip, chipped prunings	Typically 50–75 mm, set by the site	I use coarse mulch only. Water passes through easily, and it breaks down slowly to feed the soil. Kept clear of stems.
Fine: sawdust, fine eucalyptus, shredded mulch, compost layers	Not used, not even as an under-layer	Can mat down and shed water, and can turn water-repellent itself. Soaks up light rain, and over clay it can keep water sitting at the surface.

Always: weed first, spread mulch onto **moist** soil, keep it at least 4 cm clear of stems and trunks, and leave a few bare sunny patches for ground-nesting native bees.

Sources: CSIRO, water repellent soils research; soilquality.org.au, Water Repellency fact sheet; Soil CRC, Soil water repellence technical fact sheet; DPIRD WA, "Managing water-repellent soils" (droplet test); Dekker et al. (droplet-test classes); Dao et al. 2022, *Plant and Soil* (Murdoch University: eucalypt, banksia and sheoak leaves); Walden et al. 2015, *Soil Research* (eucalypts and repellence); FOKE, Ku-ring-gai Georegion (sandstone topsoils often repellent); Gardening Australia (ABC), wetting agents and hydrophobic soil; ANPSA FAQ (perforated pot); NSW Government (DCCEE Water), mulch types and depths; APS NSW and Sustainable Gardening Australia (coarse vs fine mulch); Aussie Bee. Pulsed-watering timings and basins: RF Horticulture practice.

When to water: it depends on your site

Establishing (first 12 months)

- **Planting day:** fill the hole with water two or three times and let it drain. Plant, then water in well, even if it's rained.
- **Aim for the root ball** (the clump of roots and potting mix from the pot). New roots haven't spread yet, and that mix can dry out even when the soil around it is moist. Water right over it.
- **Check every few days** for the first weeks, and daily in hot, windy weather, but only water when your checks say so.
- **Stretch the gaps** as plants settle in, so roots follow the water down. The first summer is the danger period.

Settled in (after the first year or so)

- Local natives in the right spot often need little or no extra water in an average year.
- **The exceptions:** pots, sandy free-draining beds, plants competing with tree roots, hot walls, and long dry spells or heatwaves.
- When you do water, water **deeply** and slowly, then let the soil dry a little before the next drink.

Too dry or too wet?

Under-watered	Over-watered or poorly drained
Wilts in the heat and is still wilted next morning	Wilts even though the soil is wet
Dull, greyish, curled or folded leaves	Yellowing leaves, often older ones first
Crisp brown tips and edges; new growth droops first	Leaf drop; soft or darkened stems at the base
Soil dry at 10 cm; water beads or runs off	Soggy soil, sour smell, moss or green slime on top
Leaves drop in a hot spell	Sudden collapse after a wet spell (root rot, such as <i>Phytophthora</i> , loves wet soil)

The two can look alike, so always check the soil at root depth before you water.

Every garden is different. Let's look at yours.

A watering routine only works if it suits your soil. On site I can spot the problems and work out an approach for your garden.

Want advice for your site?

A **Native Garden Walk** is about 1 to 2 hours in your garden together: soil layers, a water-repellence test, drainage, pots and problem spots. You get watering advice for your site, plus a shortlist of local natives by email within 48 hours. Details: "Native garden advice" on my website.

Know what needs doing?

Get in touch for a quote on soil improvement, wetting agents, mulching where it's needed, irrigation checks, planting, or Establishment Care for new plants.

Call or text 0481 106 188 · rfhorticulture@outlook.com

Track your site: 8-week watering log

Instead of a fixed timetable, write down what your garden actually does. After eight weeks you'll know how fast your soil dries out. That's your watering rhythm! Bring it along when I visit.

Week	Rain (mm)	Hot or windy days	Soil at 10 cm before watering (dry / moist / wet)	Watered? (how long)	Droplet test (secs)	How the plants look
1						
2						
3						
4						
5						
6						
7						
8						