MICROFOREST COLLECTIVE

LANDSCAPE DESIGN - STEP 4

MICROFOREST BLUEPRINT

Engaging professional landscape designers is an investment in the future of your microforest and community

FOLLOW THE BLUEPRINT

After I built the Downer pilot microforest, I realised my journey would have been easier if I had an instruction manual to follow. That's why I've created this Blueprint to help volunteer community leaders build a microforest.

The beauty of the Blueprint is it's not just for making microforests. It can be applied to other regenerative public landscape projects, like a food forest, community garden, a birdscape, pollinator patch or native grassland.

This Blueprint will give you confidence, save time and prevent you from making costly and time consuming errors.

The Blueprint is divided into eight discrete steps. By following each step you'll build a team of like-minded, community-spirited volunteers and together you'll realise your dream of a neighbourhood microforest.

Not only will you build a microforest, you'll make new and meaningful relationships based on shared values and create a more connected community. That's powerful.

8 STEPS

The eight steps build on each other and are best followed in order. The steps are:

Step 1 - Build a leadership team
Step 2 - Raise funds
Step 3 - Community consultation
Step 4 - Design
Step 5 - Approvals
Step 6 - Earthworks
Step 7 - Community planting
Step 8 - Maintenance.

Edwina Robinson
Founder and Landscape Architect
The Climate Factory
Co-Founder and Chair
The Microforest Collective
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LEARN NEW SKILLS

Getting involved in a community-led microforest provides the opportunity to learn new skills.

Here's a list of skills you can develop during a microforest project.

- Community engagement
- Working with government
- Project management
- Event management
- Stakeholder management
- Volunteer coordination
- Grant writing
- Fundraising (including crowdfunding)
- Public speaking
- Team leadership

And it's your chance to learn more about:

- Native plants
- Pollinator plants
- Water harvesting
- Landscape construction techniques.

“Self-sustaining landscapes are essential to our planet. As landscape architects, we act to protect and sustain these landscapes, taking a thoughtful approach to their change. We resolve to restore damaged landscapes to health. We recognise each landscape is best cared for by the community as a whole. We work to reveal the value of each landscape to all people so that they can work in its best interests. We work together with the community and other professionals to reach the best outcomes for each place.”

Australian Institute of Landscape Architects (AILA)
www.aila.org.au

INVEST IN EXPERTS

We regard employing a landscape architect and water harvesting designer* crucial to microforest success. These experts will help set the foundation for your project.

The Landscape Architect will turn your community microforest vision into a scaled coloured plan. This plan will help people understand what to expect from your proposal and can be used by a landscape contractor to quote on the project.

In Australia, landscape architects study at university for at least four years. They will be able to integrate human, plant and cultural needs into one plan.

A landscape architect will consider how your space can be used and how it fits into the neighbourhood. They will think about places to sit and pause, pathways and local government guidelines.

Your landscape architect and water harvesting designer will work together.

*water harvesting designer - we recommend in locations likely to be hotter and drier in the future to invest in someone skilled in designing and building a sub-surface water harvesting system. This is critical to future-proof your microforest from heatwaves and drought. Note: this is not a professional qualification yet, but should be!

WHAT WILL MY CLIMATE BE LIKE IN THE FUTURE?

expect extreme weather

2019 was Australia's hottest and driest year on record and 2023 was the world's hottest year on record.

Expect extremes in the future - drought, floods and storms.

In 2019, Canberra (where we built our first microforest) only received 358mm of rain. Canberra's climate is classified as **cool temperate** but that year the climate was more akin to a **semi-arid** climate.

That's why we included sub-surface water harvesting into our first microforest. We also chose trees likely to thrive in a hotter, drier future rather than the standard practice of selecting native trees that grow locally.

To find out what your future climate may be like in your area – check out the Climate Analogue Explorer Tool.

https://www.climatechangeinaustralia.gov.au/en/projections-tools/climate-analogues/analogues-explorer/

LANDSCAPE ARCHITECT ROLE

Your Landscape Architect can help in the following ways. They can:

- create a rough sketch plan of the microforest and pollinator patches - use this graphic in your crowdfunding campaign
- present at your community consultation - display the rough sketch plan and demonstrate values of the microforest like biodiversity, water harvesting, indigenous engagement, crime prevention through environmental design and nature play
- liaise with the water harvesting designer and incorporate their sub-surface and above ground design into the landscape plan
- refine the landscape plan
- help navigate approvals with local authorities if you are building in a public space
- create a plant list for the microforest to order plants to be grown for the project
- confirm quantities of landscape materials
- recommend a landscape contractor to undertake the water harvesting design and earthworks
- superintend the earthworks.
- assist with plant set-out and planting at working bees

They may also choose to assist with the final step, maintaining the microforest.

WATER HARVESTING DESIGN

When we talk about water harvesting design and microforests - we mean slowing, capturing and releasing the rainwater that falls around your microforest (no roofs involved) into the soil and above ground creek beds.

This provides more water in the soil and at a plants' roots where it's needed most and helps cool the environs of the forest. It also helps the forest grow fast.

The water harvesting system we employ are designed by horticulturalist and earthworks specialist, Paul Totterdell. As our forests are mainly built on clay soils, there's no need to use filter fabric or pipes, reducing cost and construction time.

Over many years of observation and building landscapes Totterdell's system comprises two main parts:

- sub-surface trenches up to 80cm deep (see picture)
- above ground 'dry' creek beds.

The dry creek beds occasionally fill with shallow water (maximum 30cm depth) and provide an immersive play experience for children.

The water harvesting design and its implementation during earthworks adds signficantly to the total project cost. However, we see it as an INVESTMENT in an uncertain future - as it helps future-proof your project.

Note: There is no officially recognised qualification for a water harvesting designer in Australia. So we recommend you ask for referrals to a practitioner in your local area. Ask to visit examples of their work and talk to their clients.

WATER HARVESTING DESIGN

Our 1500 native plant microforests typically include:

- 500m2 of microforest beds (planted at 3 plants per square metre)
- 40 lineal metres of sub-surface water harvesting trench (to 800 mm deep)
- 8 square metres of ‘dry creek bed’.

In times of drought the creek beds, trenches and soil can be filled up by a water cart or fire engine.

RECOMMENDED READING

Brad Lancaster (2020) ‘Rainwater harvesting for drylands and beyond’
Volume 1 (3rd edition): Guiding principles and
Volume 2 (2nd edition): Water harvesting earthworks

www.harvestingrainwater.com

PROFESSIONAL ROLES
Steps 2-7

Landscape architects are creative and practical professionals

The Landscape Architect will be involved Steps 2-7. The water harvesting designer will be engaged in Step 4 and Step 6 (if they construct the earthworks).

Step 2 - Crowdfunding

Landscape Architect to provide a rough coloured concept plan to scale (ie 1:200) that can be used in the crowdfunding campaign and on social media.

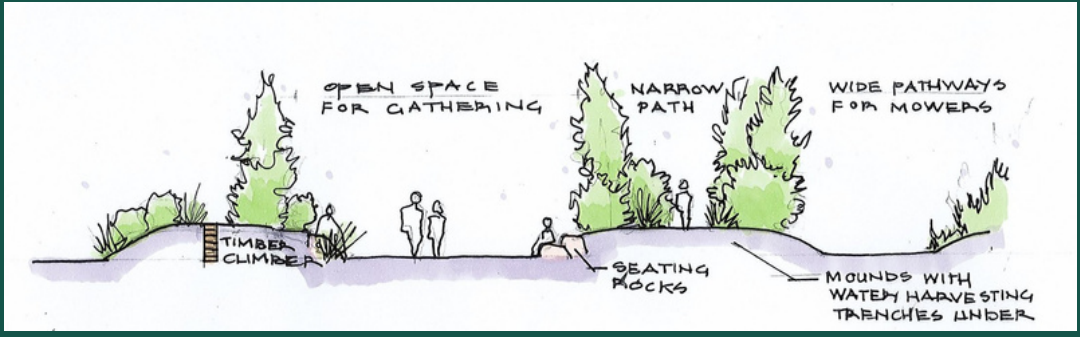
Step 3 - Community consultation

During the community consultation, the Landscape Architect gives short presentation about relevant projects they've designed and key project principles.

PROFESSIONALS ROLE

Step 4 - Design

- Landscape Architect to obtain Before You Dig plans (this is a requirement in Australia to check all services before you start designing – www.byda.com.au).
- Landscape Architect and Water Harvesting expert to meet on site and prepare Landscape Sketch Plan and Water Harvesting Design and relevant cross sections. The Sketch Plans should include the Microforest features listed in the table below. The drawings shall be scaled drawings at a scale of 1:200 and submitted as A3 jpgs.
- Landscape Sketch Plans submitted to the leadership group for feedback.
- Landscape Architect develops plant schedule for plants and order the microforest plants (plants can take up to six months to grow if they are being grown specifically for your project).
- Landscape Sketch Plans and Water harvesting designs finalised.



PROFESSIONAL ROLES

Step 5 - Approvals

- Landscape Architect, Water harvesting designer and Volunteer Leadership team may need to meet on site with local authorities to explain the design.
- Landscape Architect to support Leadership Team to submit relevant forms and documentation to authorities (Public Liability Insurance, risk assessment, Safe Work Method Statements) and answer any questions.

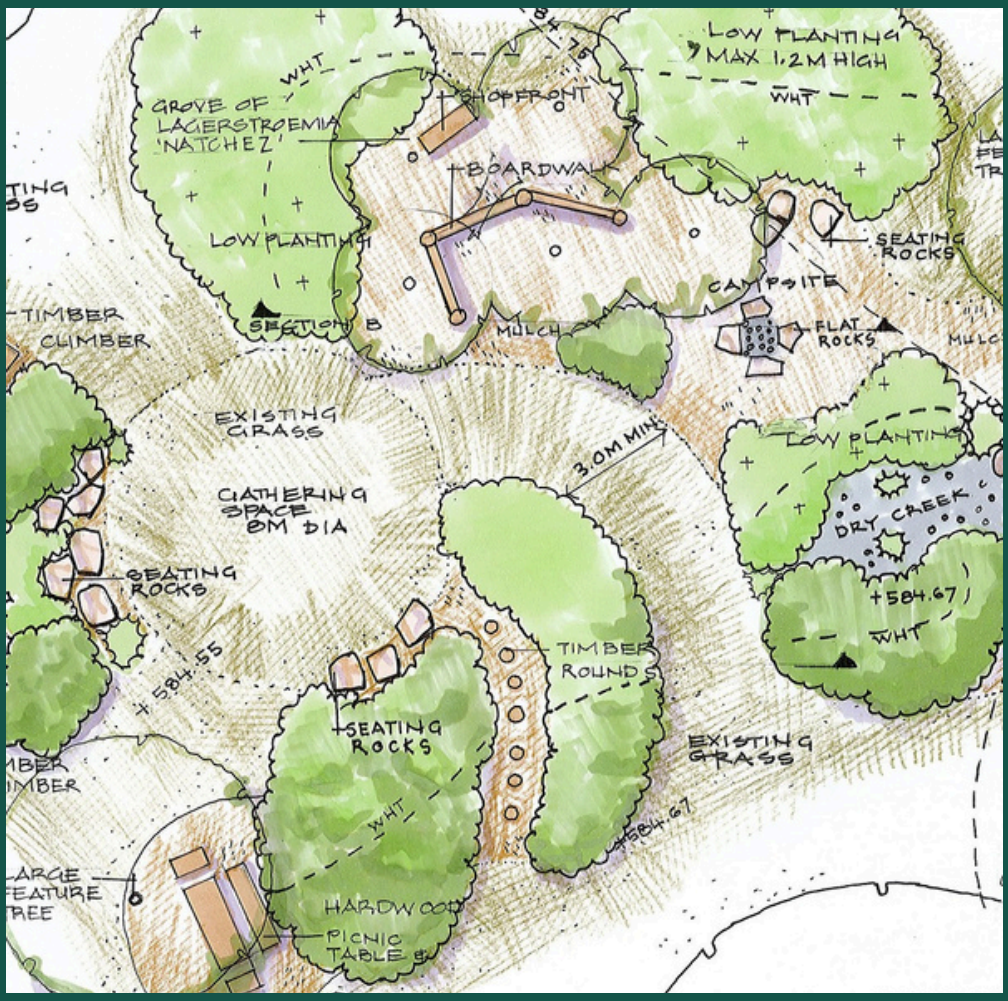
Step 6 - Earthworks

- Landscape Architect to obtain Before You Dig plans (this is a requirement in Australia to check all services before you start construction – www.byda.com.au). Note: this happens twice in the project, first at design stage then at construction stage.
- Landscape Architect/Earthworks Contractor to organize private Services Locator
- Landscape Architect/Earthworks Contractor to organize installation of site fence and toilet and delivery of landscape materials
- Landscape Architect to set out design with water harvesting designer and superintend earthworks.

PROFESSIONAL ROLES

Step 7

- Landscape Architect coordinates plant delivery on day of planting bee.
- Landscape Architect coordinates delivery of additives, tree guards, plant stakes.
- Landscape Architect supports leadership team in setting out plants in position (in particular, the trees) and demonstrating proper planting technique.



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Want to learn more?

Find resources, guides and advice at
www.microforestcollective.com.au