

THE



GREEN
SQUARE
ATLAS



OF CIVIC



ECOLOGIES



The Green Square Atlas of Civic Ecologies



The Country that is now known as Green Square is nadunga gurad, sand dune Country, known for millennia for its nattai bamalmarray, freshwater wetlands and ephemeral ponds. Country here is an important refuge on the Songlines that traverse this place, providing shelter, food, medicines and resources on the north/south journey between two main areas of garigalo, saltwater Country, and its bays: War'ran (Sydney Cove) and Gamay (Botany Bay).

Today, when we walk this Country, we can experience the unique plants from ancient ecosystems emerging from the gullies in the midst of the urban development. Paperbark trees, casuarina groves, clumps of kangaroo grass and lomandra, as well as regenerated areas of Eastern Suburbs Banksia Scrub remind us that no matter how much we develop and build on the land, Country is still here and is still a vital aspect of life and culture for the local custodians who have been connected to this Country for countless generations.

In honouring Country, we pay our respects to all of the Ancestors and Elders of this place, understanding that this always was, and always will be, unceded, Aboriginal land.

Ngeeyinee bulima nandiritah

(May you always see the beauty of the earth)

Shannon Foster

**D'harawal eora Knowledge Keeper
& registered Sydney Traditional Owner**

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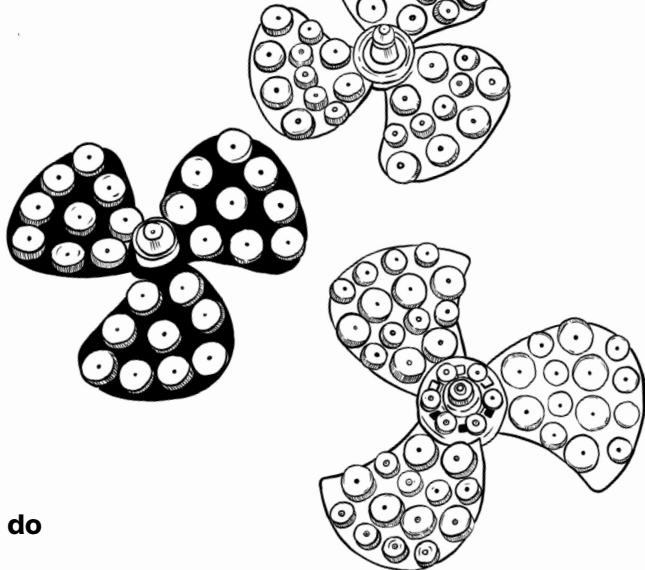
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The Green Square Atlas of Civic Ecologies is a community resource for residents, gardeners, community groups, developers and schools in Sydney's Green Square area. It encourages locals to create community connections and contribute to making a more sustainable neighbourhood.

'Civic ecologies' are stewardship activities that combine care for the environment and care for place. For instance, when people tend to verge gardens, share produce with neighbours, set up community gardens, contribute to habitats for wildlife or become urban beekeepers, they create civic ecologies. Using bore water, harvesting and storing rainwater, and constructing rain gardens also support the flourishing of civic ecologies.

Creating the atlas

In 2021, in partnership with 107 Projects Green Square, Mapping Edges organised three initiatives—a seed saving workshop, a community walk, and a map for self-guided walks during COVID-19 lockdowns—to connect Green Square residents to their local environment. We spoke with residents, visitors and workers in Green Square and conducted our own walks to identify examples of local civic ecologies. *The Green Square Atlas of Civic Ecologies*, then, is a small sample of what is happening on the ground in the Green Square area and a template for local environmental activism—it's an invitation to go, explore and engage with the civic ecologies in your neighbourhood.

Green Square is Australia's largest urban renewal project, spanning Beaconsfield, Rosebery, Zetland, Alexandria and Waterloo. By unearthing these local level environmental practices in the Green Square precinct and sharing them with the community, this project tells the story of an urban neighbourhood that's alive with individuals and groups committed to environmental stewardship. The atlas presents stories, showcasing residents and organisations

as champions of civic ecologies and positioning Green Square itself as a place of community connection and hope for the future.

Why an atlas?

Although maps and atlases have been (and continue to be) tools of colonisation, they also have the potential to critique and even decolonise the design of cities. We believe an atlas can do more than catalogue and archive the status quo; instead, it can generate and reproduce new and necessary orientations that position human beings away from the centre of everything.

At Mapping Edges, we think about both maps and atlases as material forms to bring together diverse knowledges. They are not only visual tools; they can help us pay attention to the world using all our senses in order to reorient, navigate and take action as political bodies in an ecological crisis.

In 2019, we produced *The Planty Atlas of UTS*, a map of the University of Technology Sydney environment, to draw attention to the role of plants in shaping our day-to-day lives. The atlas was a starting point for what eventually became an installation, a catalogue of

learning resources and a series of walks around Ultimo. *The Green Square Atlas of Civic Ecologies* is, in some ways, an extension of this work.

Recreate your neighbourhood

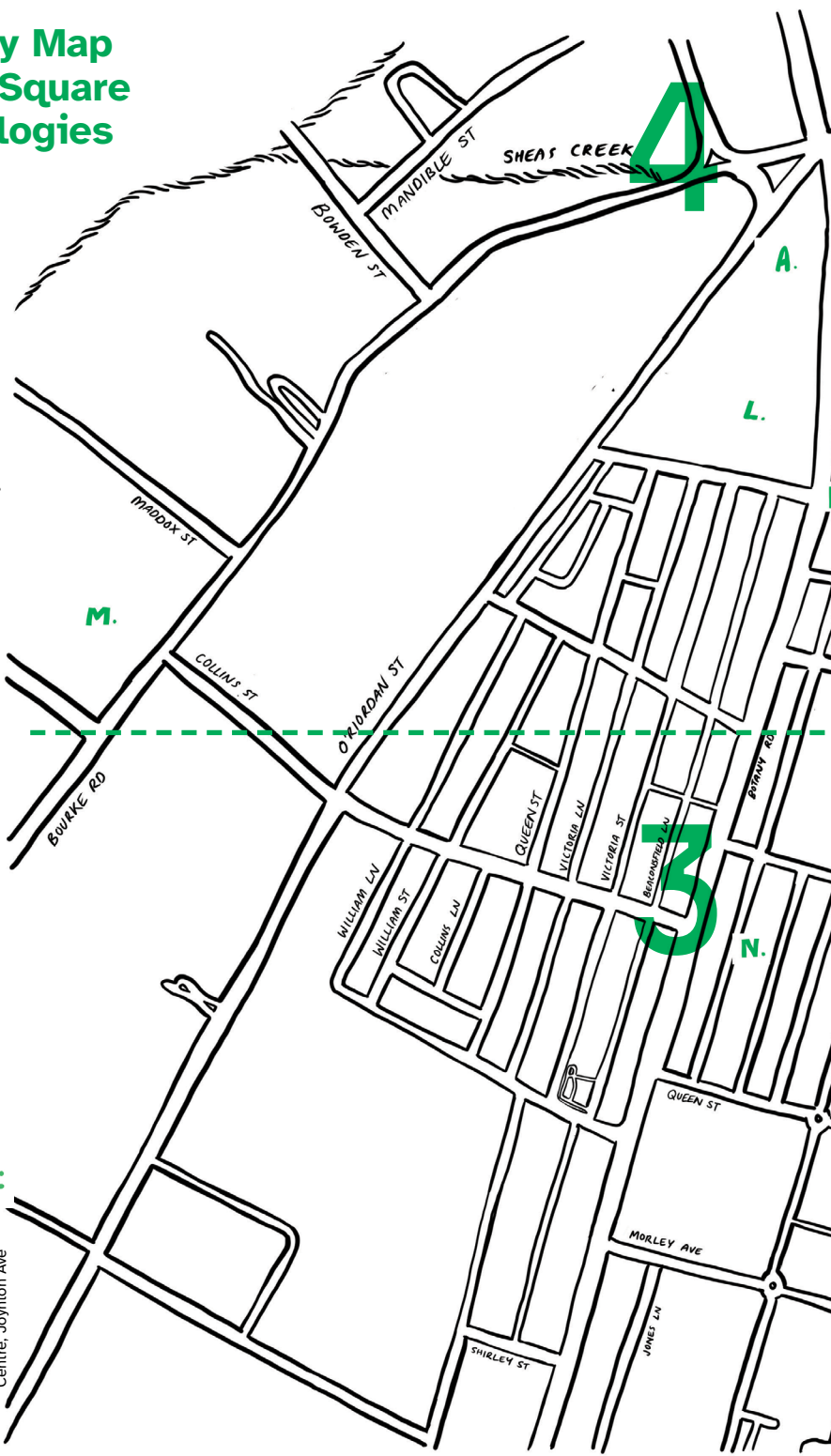
Green Square is just one of many neighbourhoods in Sydney where local sustainable practices can drive small-scale environmental change. As well as shining a light on the challenges and opportunities of the Green Square area, the atlas also details ways you can contribute to civic ecologies wherever you live and work.

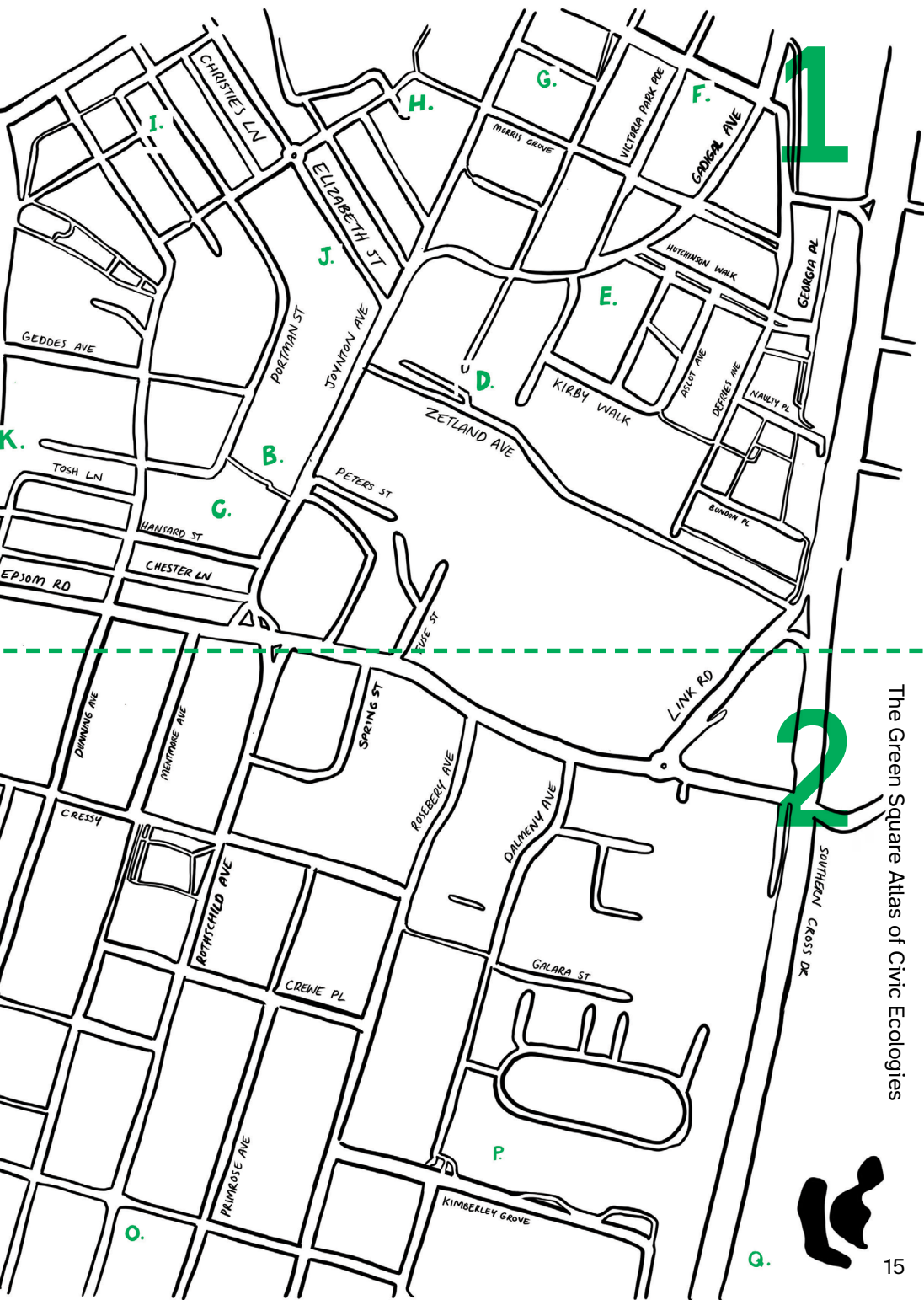
References

Our research draws on the work of many people before us: all resources mentioned in the text are referenced on page 74–75. The concept of civic ecology is explored in the book *Civic Ecology: Adaptation and Transformation From the ground up* by Marianne Krasny and Keith Tidball.

The Planty Map of Green Square Civic Ecologies

- A.** Kangaroo grass, Botany Rd
- B.** Maria Fernanda Cardosa, *Where I Live I Will Grow*, Portman St
- C.** Joynton Avenue Creative Centre, Joynton Ave
- D.** Auntie Julie Freeman and Jonathan Jones, *Bangala*, Guniyama
- E.** Green Square Growers Community Garden, Joynton Park
- F.** Joynton Park
- G.** Green Square Growers Community Garden, Tote Park
- H.** Native violets, Elizabeth St
- I.** Verge, Portman St
- J.** Wind energy, Portman St
- K.** Geranium verge, Hansard St
- L.** Pumpkin patch, Victoria St
- M.** OZHarvest Garden, Maddox St
- N.** Verge gardens, Princess Ave and Salisbury Ln
- O.** Olive and mango trees, Morley Ave
- P.** Rosebery Honey
- Q.** Kimberley Grove Reserve frog pond







Champions of civic ecologies

This section of the atlas features profiles of 11 champions of civic ecologies who live or work in the Green Square area or have walked there with Mapping Edges. Their stories document how to attend to environmental stewardship in a high-density area and demonstrate how ecological action can generate a sense of place and build relationships within and between local neighbourhoods. This sort of community-led work is particularly important to connect people to their environment in an area like Green Square, which is undergoing rapid and often disruptive construction.

To find our champions, we spoke with gardeners, beekeepers, business and community leaders, curious residents and artists and asked them about the practices, passions and work that enable them to contribute to a more liveable and lovable neighbourhood. The 11 champions we selected were all engaged with the Mapping Edges project in 2021, either because they responded to social media calls or attended events, or because we noticed their work while walking in the neighbourhood. Some of these stories may resonate with yours. We hope that some will inspire you, too.

We want to hear from you

Share your own story of connecting with and caring for local urban nature by contacting mappededges@gmail.com or connecting with us on Instagram @mappededges.

Jennifer, 107 Projects

Jennifer is the Culture and Pathways Manager at 107 Projects, which is located at Joynton Avenue Creative Centre. She describes Green Square as an evolving and transitional place.

‘Green Square is really forming its community and the connections between what is here, what is happening and what is to come,’ she says.

When Jennifer first started at 107, Green Square was in the early stages of development. Sustainability and community were a big part of the future

‘We [107 Projects] have the same heart across all our sites, but so much is tailored to the local community.’

‘Sustainability is a very important value for us; it underwrites a lot of decision making in our organisation.’

vision: creating green spaces, planting native plants and establishing sustainable practices such as storm water recycling all formed part of the planning process. Jennifer could see the potential that was emerging—she says she often found herself trying to imagine ‘what it would be like between the cranes’—but wanted to help people understand what the precinct had to offer, as well as to identify existing communities and activities within the area and connect them to Green Square’s future.

‘People are putting those pieces of the puzzle together now but for a long time that connection wasn’t there—it was a bit of an overwhelming space for people,’ she says.

Projects at 107 by artists such as Barkindji woman and artist Maddison Gibbs and Gadigal, Wiradjuri and Yuin artist Nadeena Dixon have really helped develop the precinct’s identity and supported local residents to build connections with the area.

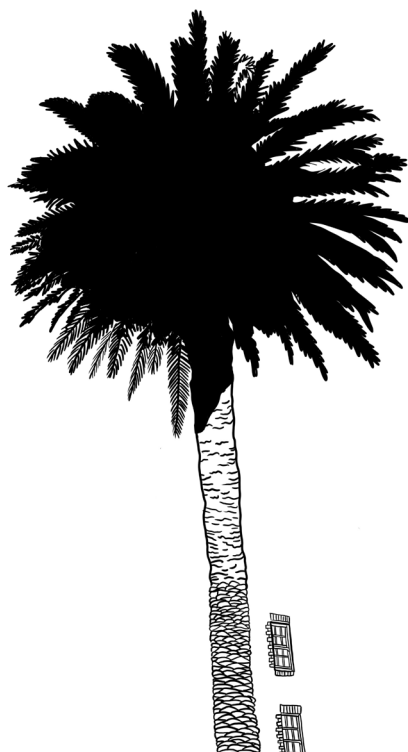
‘The pandemic has made people explore all the small pockets of the neighbourhood—the hyperlocal.’

During the 2021 lockdown, Nadeena created a package that was posted to local residents. The package included instructions for making a guardian owl to watch over people in their homes and a patch of hessian to decorate using natural elements from the local environment. Residents could then return their decorated hessian to Nadeena where it became part of a large-scale installation at 107.

The package also included a Mapping Edges map of Green Square to help residents explore the area.

‘With Nadeena’s project, [locals] were really asked to reflect on their own environment. The responses are so beautiful and thoughtful and show people really interacting with green spaces and expressing feelings of hope,’ Jennifer says.

The interaction that emerged during this process has only been strengthened during the pandemic, which Jennifer believes has forced people to pay more attention to their local areas.





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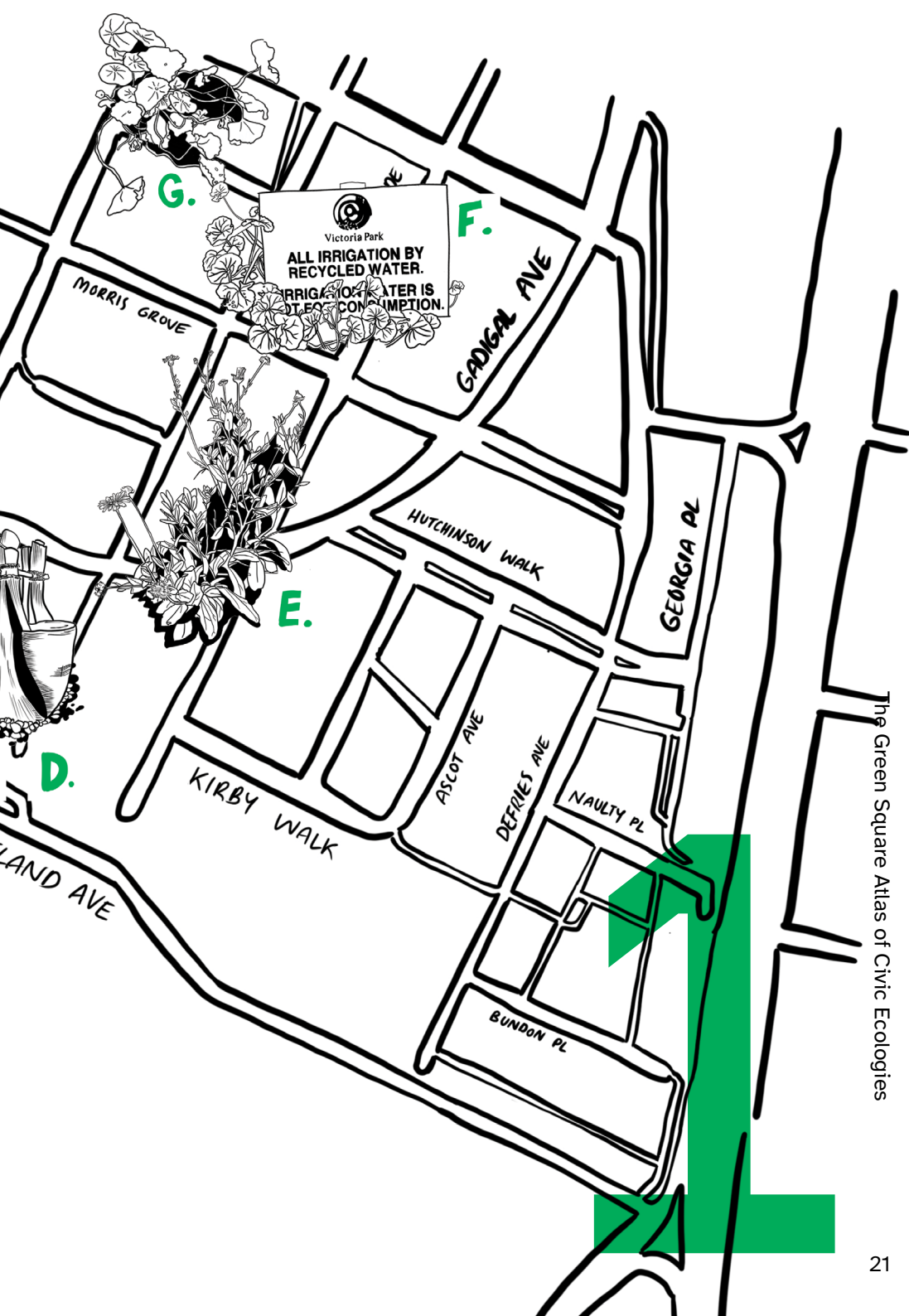
A.

J.

K.

B.

C.



Green Square Growers

Garnet, Tony and Mary are part of Green Square Growers (GSG), a community gardening group that cultivates garden beds at Joynton Avenue and Tote Park.

According to Tony, Green Square is home to a very mixed demographic that includes busy full-time workers and their unemployed or retired counterparts, which means residents have varying amounts of time to dedicate to GSG. As a result, the group takes a flexible approach to community gardening, with no strict membership model; instead, people are invited to plant, water or harvest any time they like.

Garnet: ‘It’s a nice thing to just know [the gardening beds] are there, that something is happening there. There’s a message there, I don’t know what it is.’



For both Mary and Tony, GSG has been a launchpad for collective gardening in their homes. Mary found GSG on Facebook after she moved to the Green Square area and was looking for more gardening space. She has made good friends from GSG and has connected with many members of the local Chinese community.

‘Since the garden was established, I’ve met a lot of people. I have a good sense of community there now—it makes me feel more involved,’ she says.

Mary often puts visitors to Green Square to work in the gardens. For example, if grandparents from overseas are visiting family in the area, she shows them what



Tony: 'I go back to Green Square even though I don't live there. It's definitely more social than productive.'

is growing and which weeds to pull out. She also does a lot of the individual labelling of plants, responding to repeated questions from passers-by about what's being grown in the garden.

Garnet also joined GSG soon after he moved to Green Square. He was living on his own and wanted to get to know his local community. He takes pride in the garden beds and brings friends to visit them. He also passes them on his morning jogs.

The members of GSG take great care in their work, but they see gardening as a social activity rather than a competition. They often meet up to do maintenance work or plant seeds, but they don't harvest much for themselves; instead, they're happy to share their yields with other community members.

GSG is also a way to expand the reach and impact of community gardening more broadly. GSG members take their gardening skills with them wherever they go, sharing them with others and sparking an ever-growing interest in gardening and in more sustainable practices in Sydney and beyond.



Mary: 'It's nice to be part of a social network that extends beyond the garden.'



Rosebery Honey

Fiona and Michael

Rosebery Honey is a home honey business run by Rosebery residents Fiona and Michael. It's a small operation—the couple have beehives in their backyard and sell their honey from a stand out the front of their house. The business was born when a swarm of bees took up residence in their possum box, inspiring them to become urban beekeepers.

'[In the early days,] I would go down and there might be 1000 bees. Wearing no protection whatsoever,

I would scoop a handful of bees off the side. That was the good old days because there was no fear. Then I got stung,' Michael says.

From there, Michael started learning the craft from local beekeepers. According to Michael and Fiona, there are a lot of beekeepers in Rosebery, mainly in the Greek community, who keep bees and produce honey for their own use or to share with their families.

'It's hardly a money-making venture. It's a labour of love [and] a healthy hobby we do together.'

Urban honey has a different character to bush or rural honey. Michael and Fiona call their variety 'polyfloral honey' because bees that make it forage on a diversity of plants—Michael estimates there are up to 10,000 varieties within the bees' 5km

flight radius. Urban bees are also more productive because of this abundance of flora.

Rosebery Honey works on an honesty box system: people take a jar of honey and leave the money in the mailbox. It's a familiar concept for Fiona, who grew up in Tamworth where shopping at roadside stalls with honesty boxes was part of her family's weekly routine. It's a system that builds trust within the community—Michael recounts how one week their box out front was a dollar short and the next week it was a dollar over; someone had come back to put in what they owed.

'You give the opportunity for people to do the right thing and they do,' he says.

Sometimes Michael and Fiona get thank you cards in the letter box—one note reads: 'The honey is incredible with flowers, flowering trees and herbs thanks mainly to the immigrants who have loved their gardens—in the last batch you could taste roses.' Many people have also told them how the honey has helped their allergies.

Michael appreciates that Rosebery Honey connects them with the local community. He and Fiona chat more with neighbours about what is happening in the area. Neighbours also ask their advice on what to plant for the bees.

And the appeal of local honey is growing. Fiona gives presentations at the local primary school and seniors centres. She and Michael have also collaborated with local businesses like Gelato Messina and homeware brand Maison Balzac.



'Bees aren't naturally aggressive, and you have to be pretty unlucky to be stung by one.'

DUNNING AVE

MENTMARE AVE

SPRING ST

ROSEBERY AVE

CRESSY

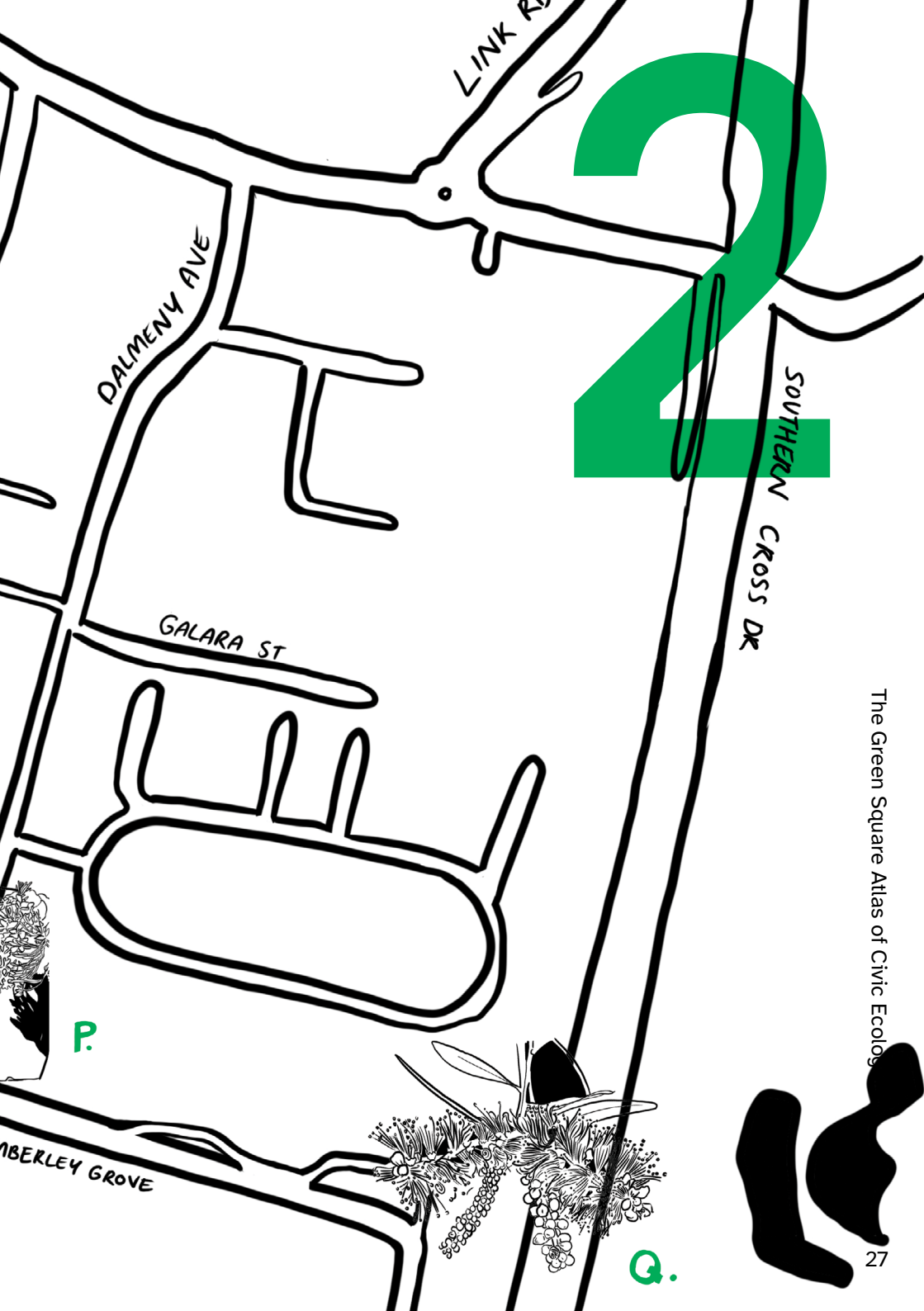
ROTHSCHILD AVE

CREWE PL

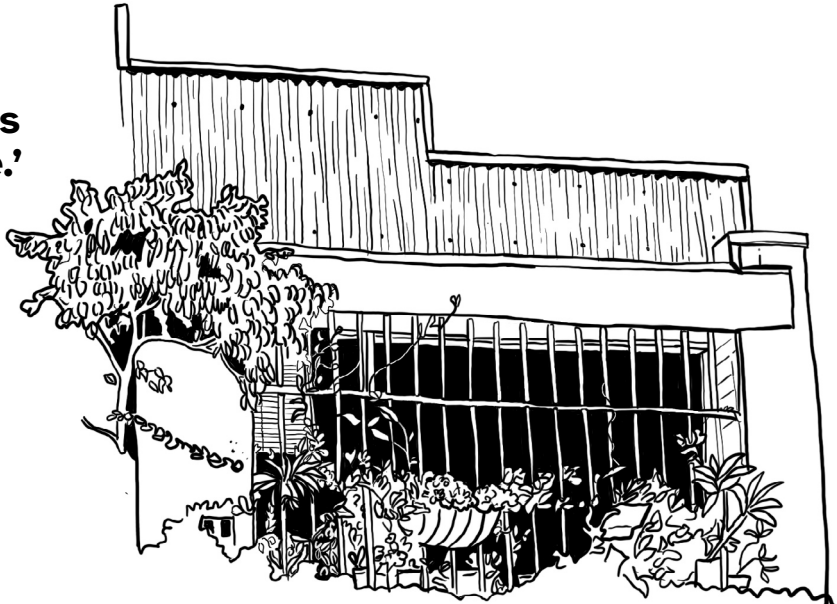
PRIMROSE AVE

KIN





'Some people think it's a jungle.'



David & Masou

One of the most unexpected green spaces in Rosebery is the verge along Princess Avenue. Here, native trees and grasses mix with flowers, edible herbs and succulents, and front gardens vary from the abundant to the minimalist and the manicured to the whimsy. But it wasn't always this way.

David bought his warehouse in the early 1990s when the street was, in his words, 'a dustbowl'.



‘Rosemary is lovely planted in public spaces and parks. It’s sculptural, and people can take a sprig for the lamb roast.’

Having grown up in and with gardens, he started to grow plants both within and beyond his home. Inside the warehouse there’s an abundant indoor garden and a large koi tank. An upstairs balcony is home to frog pond and a fishpond; elsewhere, pots of herbs and plants (mostly from cuttings) create a textured and fragrant oasis. The house is solar-powered, food scraps are composted in worm farms, and the water from the fish tank, full of nutrients, is recycled to water plants.

But it’s the verge garden in front of the warehouse that has really brought the neighbourhood to life. As an artist who has spent years working on large public projects, David brings an understanding of place-making to the verge gardening experience. And his ideas have spread: others on the street have taken inspiration and cuttings from David and Masou’s verge, extending the verge garden far beyond his property line.

‘David started all this!’ neighbours tell us.

Masou, an artist who creates terrazzo objects with recycled and leftover materials like plastic, glass, and marble, believes that sharing cuttings and plants brings goodness and happiness to the neighbourhood.

‘Some people think it’s a jungle,’ he says. But sometimes it also brings lazy gardeners who take established plants, pots included.

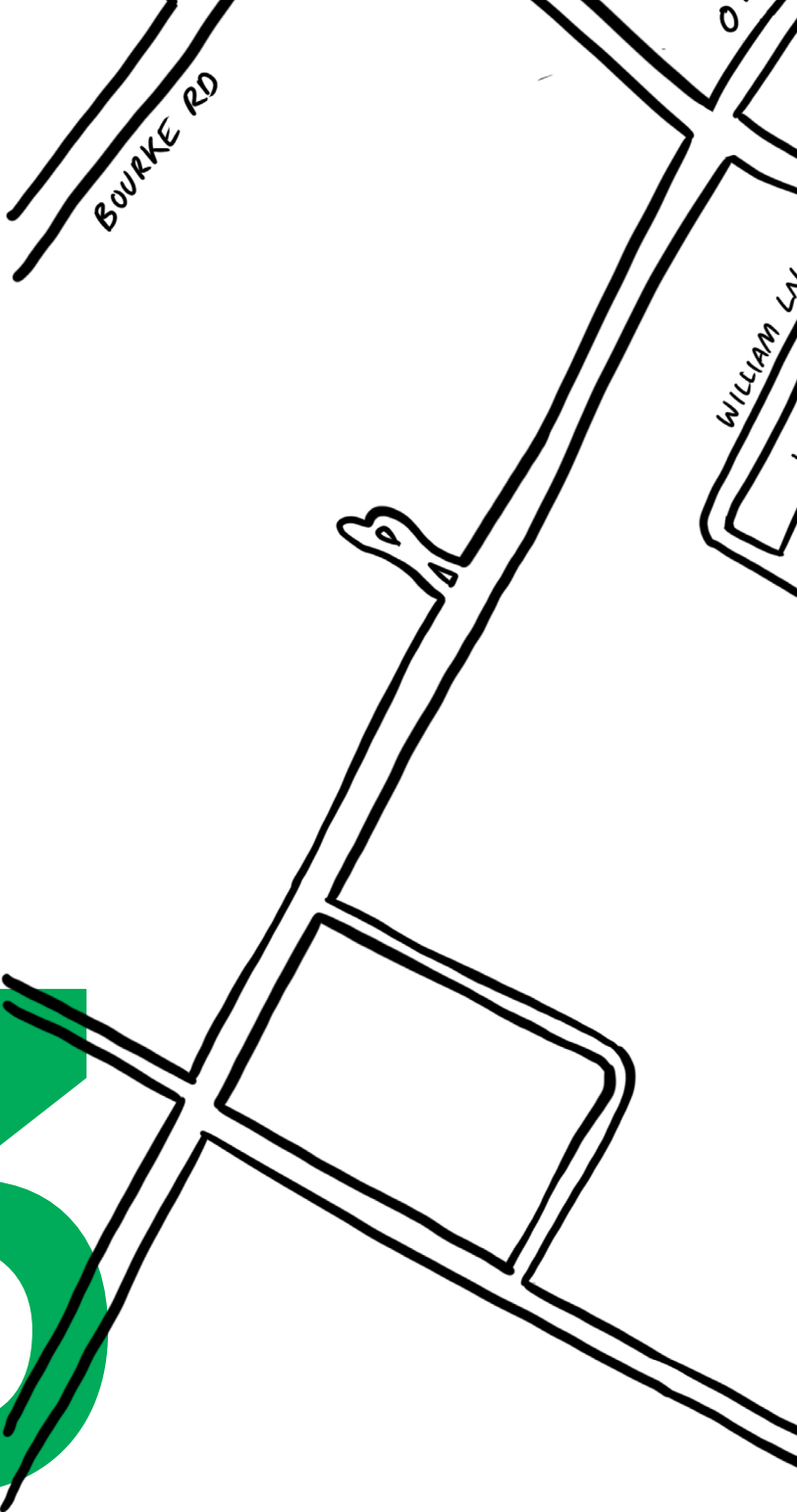
Despite these challenges, both the warehouse and the verge garden have changed Princess Avenue for the better. They’re a living example of David’s belief that communities should design the city and use plants to transform public and private space.

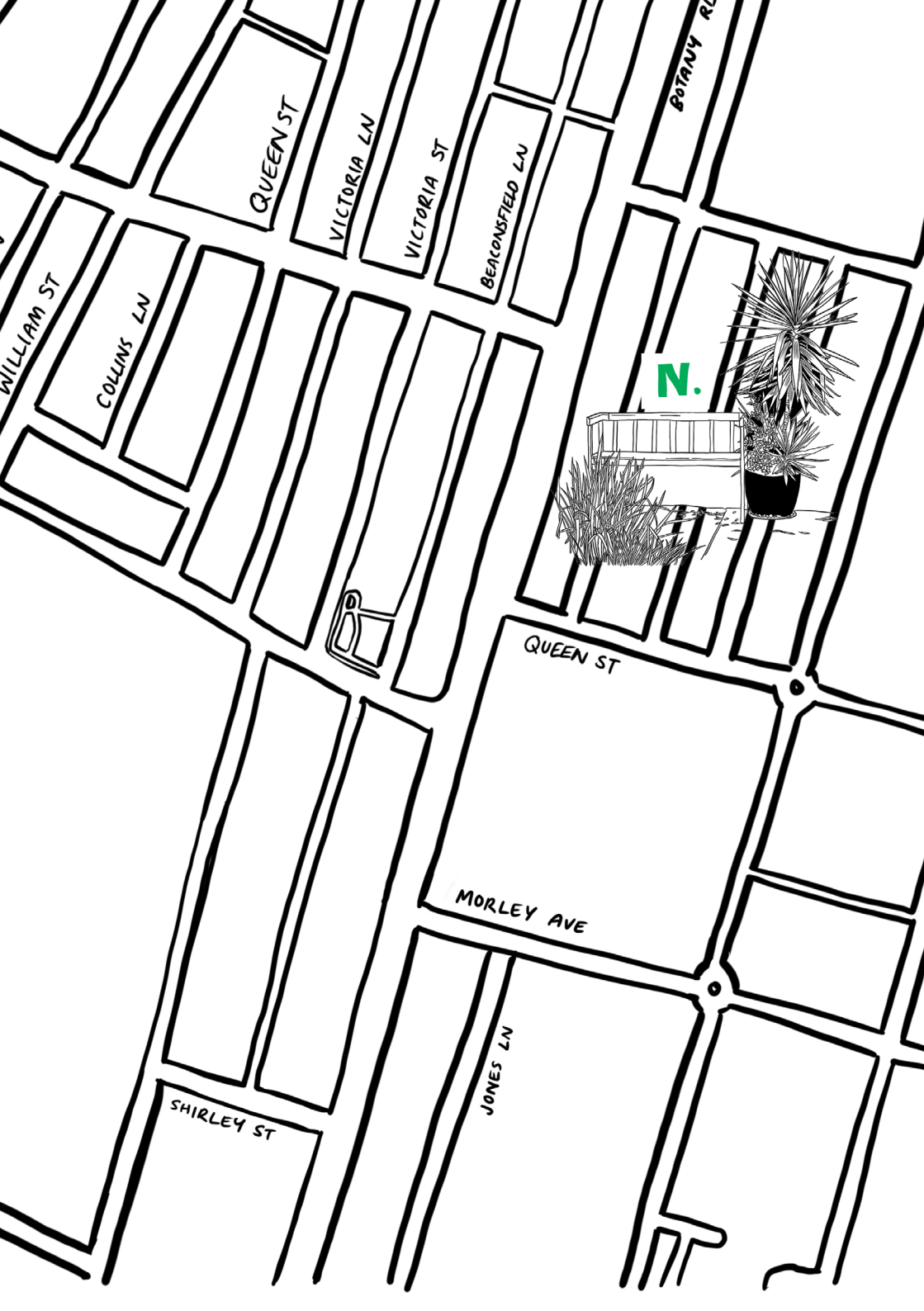
‘Plants connect people,’ he says.

‘Council approves of residents caring for their street and greening the city.’



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QUEEN ST

VICTORIA LN

VICTORIA ST

BEAONSFIELD LN

BOTANY RD

WILLIAM ST

COLLINS LN

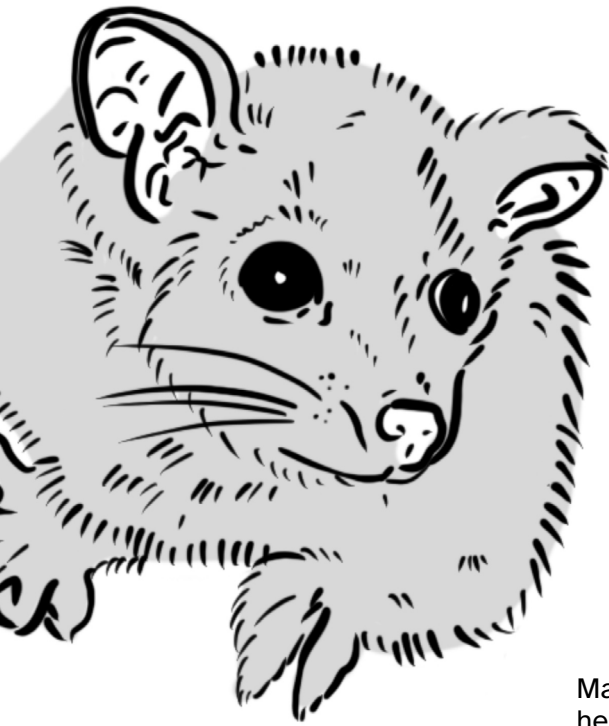
N.

QUEEN ST

MORLEY AVE

SHIRLEY ST

JONES LN



Maquel

Climate scientist Maquel Brandimarti has lived in a cottage on Belmont Street for the past 10 years. An avid gardener, Maquel recently completed a PhD on kangaroo ecologies at the University of Sydney. In her back garden there are chickens in a coop and a resident ringtail possum. The garden is shaded by a big silky oak and a lemon-scented gum tree. The front garden is given over to growing vegetables.

Maquel learnt to garden from her father and her grandfather. She recalls her *nonno's* (grandfather's) abundant vegetable patch with rows of tomatoes, as well as his penchant for concrete and the statues he would make of his grandchildren. Maquel finds a real shared joy in gardening.

'You get pleasure from giving plants away because you're proud of them; you want someone else to grow what you have been growing,' she says.

Maquel gets inspiration for her own garden from the local Green Square area. She looks to her neighbour's gardens and community gardens such as the nearby Sydney City Farm, located at Sydney Park. By paying attention to other gardens, she



can see what might grow well in her own. She aspires to start a roof garden or to make a home for bees.

Maquel's front garden gets a lot of attention from passers-by. When she's gardening, many people pass on words of encouragement—'that's such a good idea' or 'good on ya'—or stop to chat. Even when Maquel is inside the house, she can hear people admiring her garden or showing their children different vegetables. In that sense, she says, the garden is an educational tool that helps build local relationships.

'If I didn't have that garden, I wouldn't know half the neighbours—it's such a talking point,' she says.

'The chickens had galangal in their pen, but they destroyed it. There was one frond left which I rescued. It made an amazing recovery—it's very resilient.'

'Since I have put mine up, a couple of others have done theirs as well. There's lots of community engagement.'

Aside from the plants and chickens, there is plenty of other life in Maquel's garden: mynas, lorikeets, flying foxes and the ringtail possum. Maquel is mindful that it's a shared space with other species—when she wanted to remove a vine from the garden that she knew the possum loved, she did it slowly, piece by piece, over the course of the month. At the same time, she and her partner built a possum box out of found plywood and installed it in the garden. Recently, her partner climbed up and saw that the possums had made it their home.



Maria Fernanda



Maria Fernanda Cardoso is a Sydney-based Colombian artist and gardener. In 2018, she created *While I Live I Grow*, a project referencing the former wetlands in Green Square that sustained the first industry in the area.

The artwork, which is located at multiple sites around Green Square, is a living installation of Australian native bottle trees (*Brachychiton rupestris*) and grass trees (*Xanthorrhoea*) encircled by a spiral of sandstone blocks.

Bottle trees are a reference to the water history on the site: they store water and, in turn, the water gives the bottle tree

its shape. 'Over the next hundred years they will become magnificent gigantic living sculptures. They are an artwork that makes itself,' Maria Fernanda says.

When Maria-Fernanda began the proposal for *Where I Live I Grow*, Green Square was a construction site. She wanted the work to grow with the area and its inhabitants, particularly the local children. The emphasis on the natural world reflects her belief that plants can show people possibilities and resilience by surviving drought and flood.

Maria Fernanda still makes regular visits to the site of *While I Live I Grow*, enjoying the public

interactions the work encourages and sometimes weeding around the base of the trees. She reflects on the changing environment, too, and what it says about the natural world and what's important in the development of urban spaces like Green Square.

'The sandstone is changing; it's becoming green with moss, which I love. Moss is life,' she says.

'We need life and life needs texture. We need texture to see the shadows of things.'

While I Live I Grow is located at Portman St in Green Square.

'The stones are the stage where we can sit and watch the trees perform their growth.'

'Time was a big part of it; it's a 100-year-long performance piece.'



Alice



‘My street is a bit anarchic.’

Alice has been a resident of Alexandria since 2020. She speaks mainly Italian at home. She has a strong sense of community, believing belonging is about the small things: people who are interested in their neighbours, the local coffee place where they pronounce her Italian name correctly, and being one of the many local parents at her children’s school. She considers all the people in her area to be her neighbours, even when she only knows them through their plants or gardens.

Alice feels connected to the community when people take care of public space. In Alexander Street, neighbours look after the common green accompanied by their children. Nearby, in what real estate agents refer to as the ‘golden triangle’ because of prime residential streets, there are many communal practices of care in place. In her time living in the neighbourhood, Alice has noticed, for instance, a shared compost bin, instructions on the use of grey water for gardens and invitations to take cuttings of plants.

Alice believes these local environmental practices are growing: the more people do, the more it encourages other people to get involved.

‘My favourite plant ever is pigface. I like [it] for two reasons. The first is that it’s an indigenous plant. The second is that it reminds me of Liguria, the place where I was born. It is a plant that thrives in the rocks; that’s beautiful but also tough.’

‘Little gestures like this make you feel there is life there, not just inside your little house. [It’s] a meaningful thing that is good for the environment, your neighbourhood and your kids,’ she says.

Alice speaks about connection in the community from her perspective as a migrant. She remembers her grandparent’s house as a child, picking her *nonna*’s (grandmother’s) raspberries. During the pandemic, she found a mulberry tree on a neighbour’s land; the neighbour was happy to share the fruit with her.

‘This made me feel at home somehow,’ she says.

Recently Alice saw a sign made by a child who wanted start a ‘bee protection’ club. She left her number and is waiting to hear from them. She sees community-led initiatives, like collective composting, vegetable gardens on verges, and gardens running on ‘grey’ or recycled water, as signs that people have a desire to disrupt the status quo—to take the future of their small corner of the planet into their own hands.

Alice’s backyard is too shaded for some sun-loving plants, but she does have a huge avocado tree that’s ‘quite happy’. She also has an olive tree (of course), a lemon tree, hibiscus and rosemary as well as a whole host of succulents. She has plans to plant in front of their house in the future, particularly her favourite plant, pigface.

‘I like pigface for two reasons,’ she says.

‘The first is that it’s an indigenous plant. The second is that it reminds me of Liguria, the place where I was born. It is a plant that thrives in the rocks; that’s beautiful but also tough,

Astra

Astra is the Coordinator Local Connections within the Community Programs department at Waverley Council, a role that includes managing gardening initiatives in public spaces across the LGA. There is a community garden hub in Bondi Junction, 15 shared gardens in parks and reserves as well as numerous Council- supported verge gardens.

‘It’s been encouraging to receive so many requests by residents wanting to green the neighbourhood and create opportunities for connection through public gardening initiatives,’ Astra says.

‘Sometimes people just want to plant a few tomatoes in their local community garden patch. If you formalise the process to do this too much, residents feel it’s a disincentive to get involved. Creating user-friendly guidelines keeps gardeners safe and encourages self-initiative.’

This growing interest from residents aligns with Council’s objectives to increase biodiversity, create wildlife corridors, stop water runoff and cool the neighbourhood. Re-wilding with native plants suitable for the eastern suburbs results in habitats for a range of birds, insects and other animals, reminding residents of the shared ecosystem they live in.

Gardening projects can also help combat illegal dumping by enhancing the local aesthetic and transforming tired lawns into flourishing verges. Residents are increasingly looking into sustainable practices, particularly those living in high-rise apartments; however, composting in public spaces remains controversial.

‘Increasing education about how to compost effectively and different ways in which food can be recycled, including worm farms, seed saving and pickling, increases the value people attribute to this resource and food security more generally,’ Astra says.

Astra believes that gardening in public spaces can connect residents with varied interests, backgrounds and experiences with one another. ‘Gardening creates the catalyst for conver-





sation,' she says, describing how neighbours living a few doors away from one another often connect for the first time by joining a local community garden,' she says.

Recently, Astra established a public gardening network for Waverley residents. Members meet each month to share ideas, challenges and aspirations, as well as to receive regular updates about the Council's latest gardening initiatives. Indeed, the last few months have seen gardeners swap lettuce, basil and yacon seedlings; offer each other their oversupply of parsley,

mint or banana harvests; and continue expanding their group by encouraging other locals to get involved. These are small acts of urban kindness, leading to a more inclusive, connected and resilient community.

On the Mapping Edges walk in Green Square, Astra was inspired by the range of verges outside established homes, from native plant gardens, to large scale ornamental plant displays, and Art-Brut-style object arrangements. She hopes that this eclectic mix of garden initiatives will also develop in the newer parts of this urban renewal site, reflecting the diversity of occupants, their cultural knowledge and visioning for a sustainable future neighbourhood.

OzHarvest

Richard

Richard Watson is the NSW State Manager of charity food rescue organisation OzHarvest, which is based in Alexandria. Founded 18 years ago by social entrepreneur Ronnie Kahn, OzHarvest ‘rescues’ food that would otherwise wind up in landfill and redistributes it to 400 charities who make it available to their customers and clients.

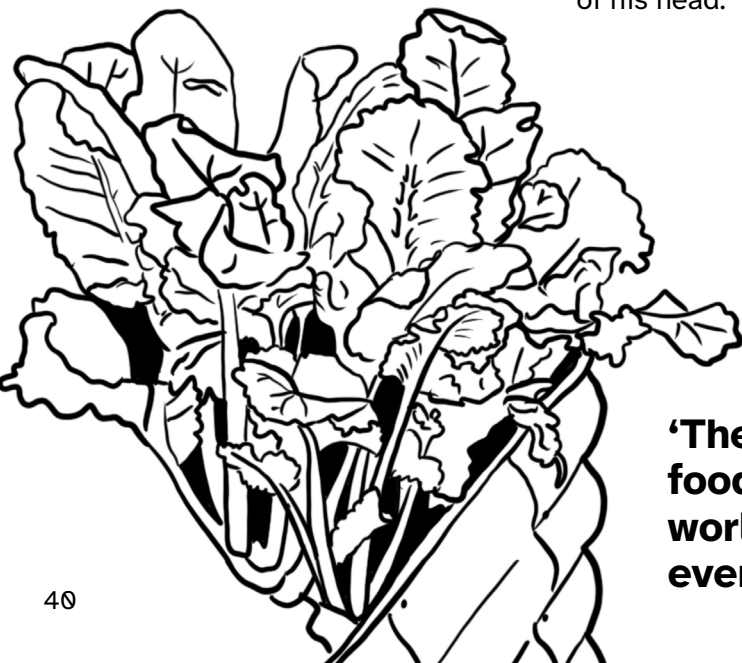
‘There’s enough food in the world to feed everyone,’ Richard says.

As well as food distribution, OzHarvest delivers educational programs such as the Feast

program in primary schools and the Nourish training program, which equips young people aged 16–24 with a formal hospitality qualification. The organisation also runs supermarkets based on a ‘take what you need, give what you can’ philosophy.

Over the past two years, the core remit of OzHarvest’s operations has been food relief in response to the COVID pandemic.

‘We’ve really stepped up and met the demand. Lots of people are not able to afford food; [many are] people who never thought they would need food relief,’ Richard says, rolling the high-volume numbers off the top of his head:



‘There’s enough food in the world to feed everyone.’

‘OzHarvest rescues food that would normally go to landfill. It’s perfectly good food that you would put in your own basket in the store.’

‘Seventeen thousand cooked meals a week, scaling up to 10,000 hampers a week.’

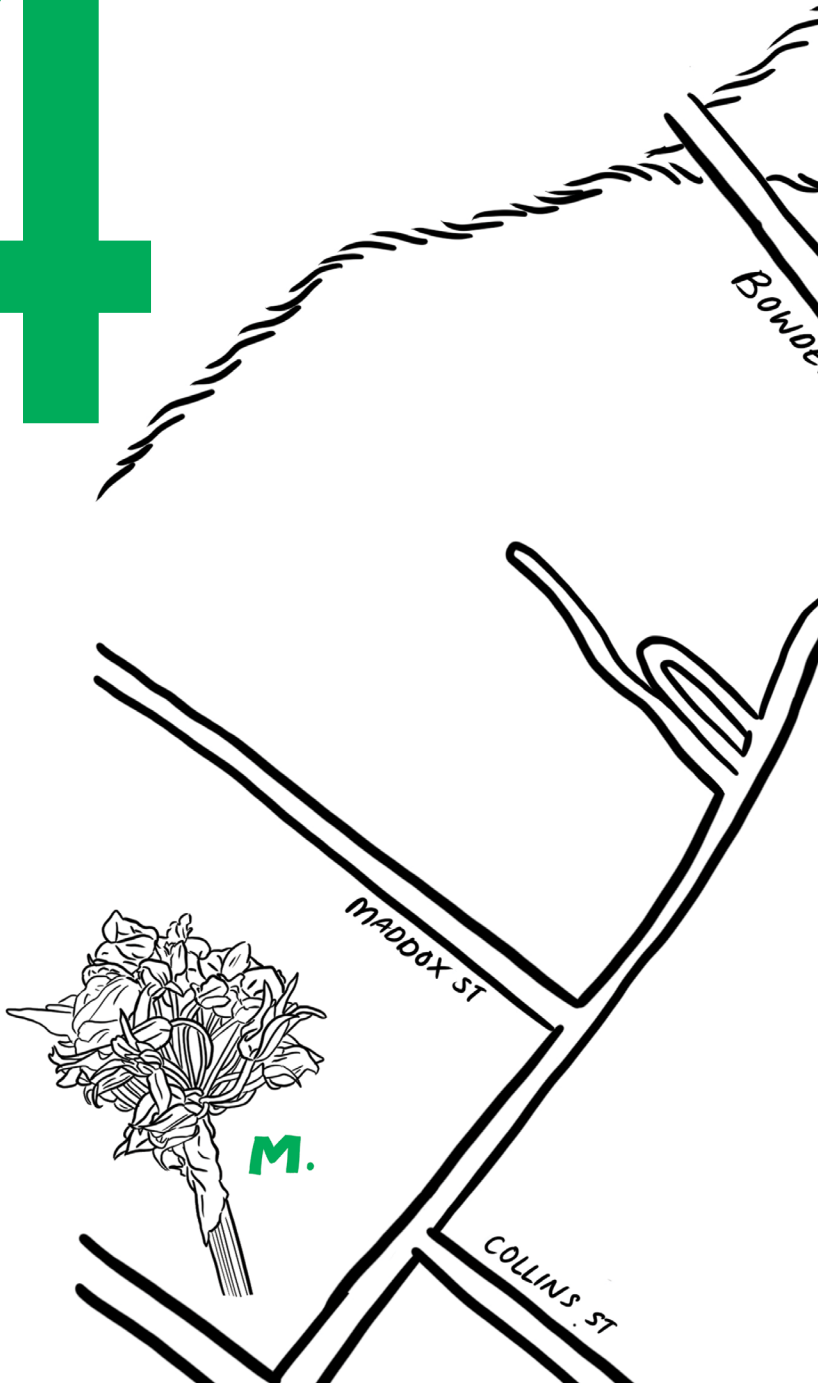
Richard and his teams are leaders in environmental stewardship. In addition to the core activity of redistributing edible food, OzHarvest takes a holistic approach to sustainability: they use bio packaging, run paperless offices and recycle across the whole business.

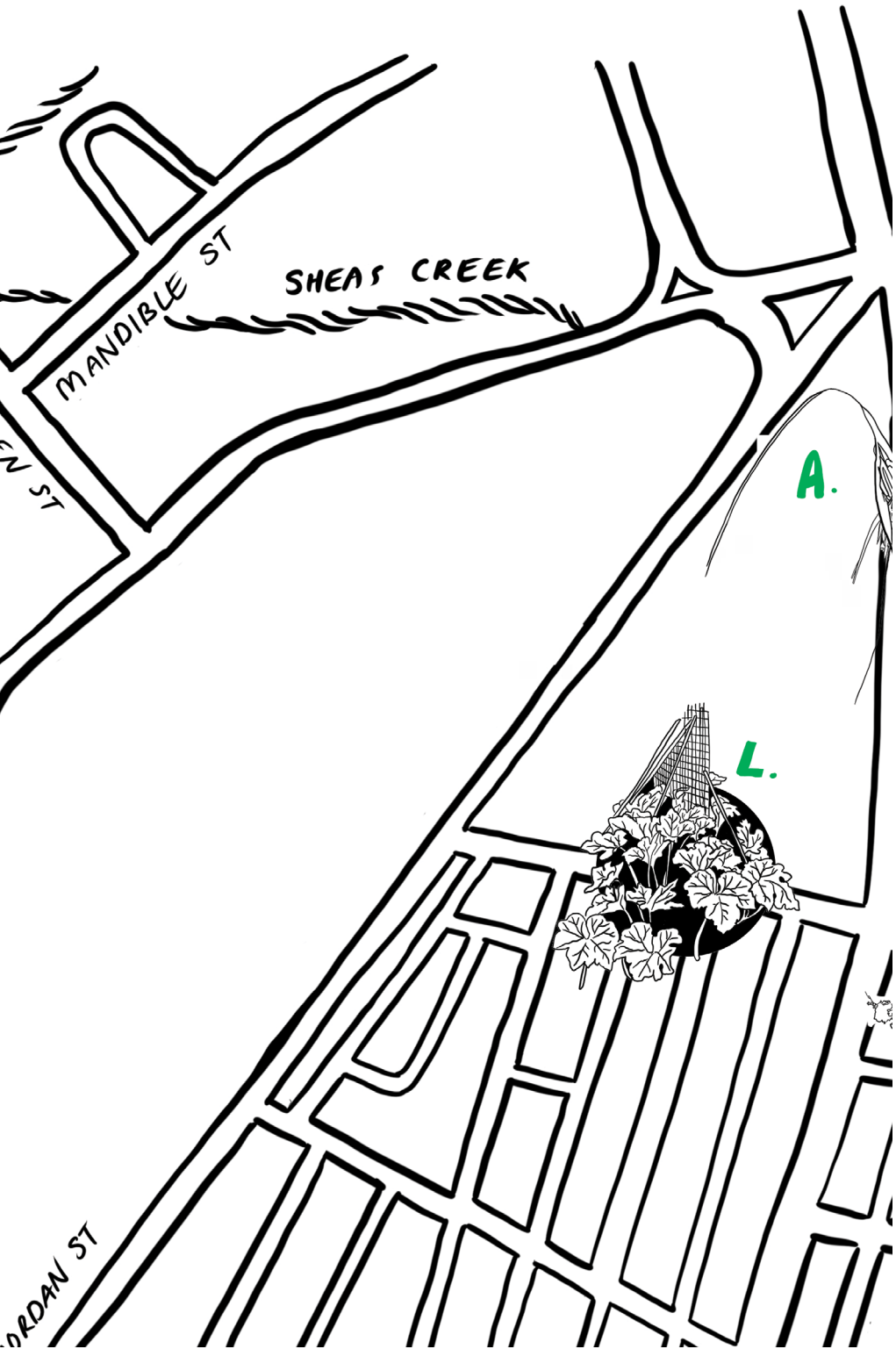
‘We call the kids in the Feast programme changemakers—they’re like sponges.’

The OzHarvest team have also established a community garden at their headquarters; the garden itself was donated by global property group Goodman. It’s home to native bees and produces herbs that are used in the meals prepared on site. It’s also an urban oasis that encourages staff to spend time outside.



4







Jess

Jess Miller is an Alexandria resident and a former councillor with the City of Sydney. The first thing that comes to mind when Jess thinks about Green Square is a place in transition. It's home to a wide variety of civic ecologies activities, from grassroots to city-led initiatives.

The diversity of ecological activity within the precinct reflects the Green Square planning process, as well as the energy of the community. Jess says that public green spaces were key to procurement requirements and designed by landscape architects, and trees went in before people,

a ridiculously uncommon practice in urban renewal. As a result, streets were designed to accommodate tree canopies and underground cabling was installed with enough room for the surrounding roots and soil. Water is managed both in terms of risk mitigation and effective irrigation of green infrastructure.

And there's an obvious difference between these contemporary developments and their more established counterparts—the new builds boast an array of green roofs, along with landscaped spaces between the buildings and along the pedestrian walks.

‘Some people don’t like big trees outside their homes. These are legitimate concerns and it’s important to address that. Many houses in Rosebery have olive trees on the verge, and that’s the compromise that we’ve been able to strike with the residents.’

‘The design excellence process has also yielded some better developments,’ Jess says.

According to Jess, there are three levels of greening in Green Square. First, the City of Sydney is leading the way with green leadership. Second, some of the more prominent developments have nature incorporated into their design, a reflection of the private sector’s understanding that living infrastructure holds value for local and prospective residents. And third, the precinct is home to an abundance of grassroots activations thanks to people with gardens and those looking after the verges.

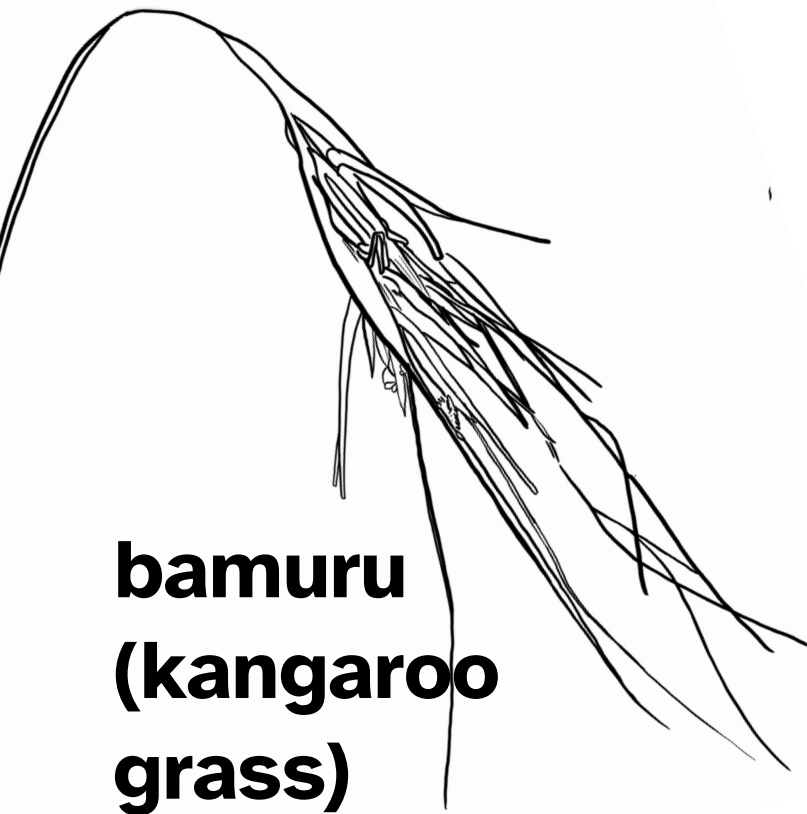
This third level is a reflection of the area’s high density and the diverse typologies of buildings and streets. In some places, residents have taken it upon themselves to incorporate greenery and gardens into the look and feel of their streets,

which often inspires other neighbours to do the same. While this is harder to achieve for people living in apartments, it is definitely possible.

Jess believes the streets with the best verges and gardens are those that people really care for rather than those developed by the Council. The act of engaging with green space can create a sense of community connection; in turn, these streets often have long-term residents. It follows that greater housing security is an important part of creating and maintaining civic ecologies. There are other enabling elements the city can contribute to; for instance, islands that slow down traffic so accessing verges is safe and pleasant, safe parking that doesn’t waste street space and arborists to care for tree canopy.

‘We really love and encourage the community to be adults about things and care for the public realm because they are the public,’ Jess says.





bamuru (kangaroo grass)

One of my earliest memories of learning culture from my D'harawal eora father was about understanding plants and what you could and couldn't eat. I was always amazed to realise that you could actually live off the gardens and earth around you. Looking back though, it's strange to think that I had to specifically learn that and it wasn't just an innate understanding of the

world around me as it is with species other than human.

Today, one of my favourite edible plants is bamuru (kangaroo grass), not just because you can make a delicious, gluten-free, light and tasty bread from it, because it represents the un-forgetting of knowledges and stories that have been silenced and, sometimes, erased from our lives.



There are places across Sydney Country, especially on abandoned and neglected land, that bamuru and other edible crops like bundago (native daisy yam) flourish again. These plants begin to grow in vast fields, echoing their ancient, agricultural past and the careful management of Country by local custodians like my D’harawal eora family. The awakening of these remnant crops is a reminder

that Country is its own archive, holding seeds and stories as evidence that we do indeed exist and that we have long and complex relationships with Country that can never be erased.

Now, as I walk the streets of Green Square, I look for signs of old Country breaking through the centuries of colonial development. I dream of this place as it was, sand dunes and wetlands,



galumban gurad (sacred Country), and I marvel at the fragile seedlings who, against all odds, break through the oppressive concrete and pavers to stand tall, once again, with Country. I also honour the same spirit in my Elders and Ancestors who have raised me to understand that it doesn't matter how much concrete is laid down, Country is still here and is still nurturing and sheltering us, just as it always has been and always will be.

Ngeeyinee dingan
duruwan bata

(May you always taste
the sweetest fruit)

Shannon Foster

**D'harawal eora
Knowledge Keeper**



THINGS

YOU CAN

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DO

The champions of civic ecologies detailed in this atlas shared their stories of environment and place stewardship. In their diversity, those stories have a couple of things in common: they start small—a cutting planted on the verge, a beehive—and grow, they generate a connection to place, and they extend neighbourly relations.

If these stories have inspired you, the following ideas and links can help you start your own urban civic ecologies journey.

1. Save and exchange seeds
2. Follow plants while walking
3. Get to know the Eastern Suburbs Banksia Scrub
4. Make and maintain a verge (footpath) garden
5. Start/join a community garden
6. Forage
7. Observe and conserve water/ make water visible/civic ecologies need water
8. Create habitat for urban wildlife
9. Visit the Kimberley Grove Reserve frog pond
10. Reduce waste
11. Look for special trees and find relief from urban heat

Learning about civic ecologies is an important part of understanding how our everyday actions impact local environments in cities. How we interact with one another; how we treat the plants, animals and insects around us; and the choices we make about what we care for do more than we may think to improve city life and the quality and resilience of the urban environment.



‘The City of Sydney’s Greening Sydney Strategy seeks to improve the well-being, liveability, aesthetics and economic value of urban neighbourhoods by:

- * providing shade to reduce urban heat**
- * filtering and improving the air quality**
- * reducing stormwater runoff**
- * providing habitat for native fauna**
- * connecting people to nature in the city.’**





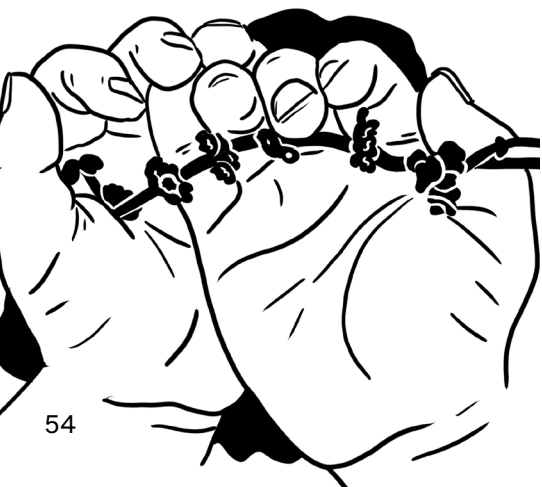
SAVE AND EXCHANGE SEEDS



Saving and planting seeds is easy and can help you maintain biodiversity and promote the health and conservation of your environment. Swapping seeds can help you interact with your neighbourhood and community.

So, what sort of seeds should you collect, save and exchange?

- * Native plants that grow around Green Square like kangaroo grass (*Themeda triandra*), blue flax lily (*Dianella*), and lomandra (*Lomandra longifolia*). These plants support wildlife habitat and ecosystems.
- * Plants that you like the look or smell of.
- * Heirloom seeds exchanged with or gifted by gardeners in your area. These plants will have adapted to this local environment and climate.
- * Seeds from wet fruit like tomatoes or pumpkin. These seeds need to be washed in a strainer, or, in the case of tomatoes, fermented to get rid of bacteria and yeast that can cause seed failure.





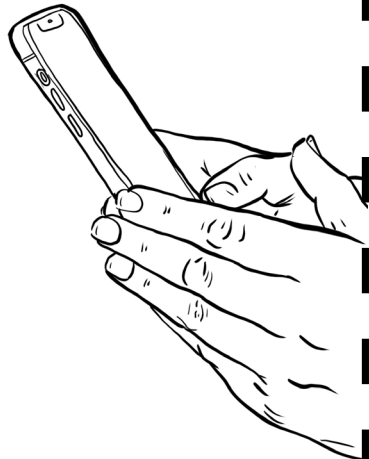
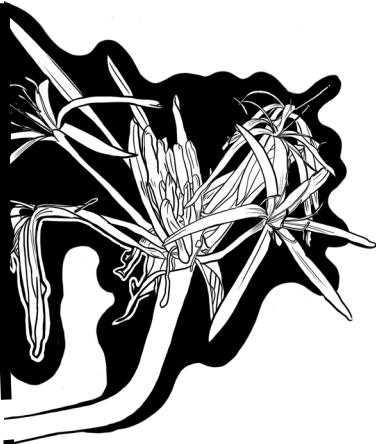
Store your seeds in a cool, dry place with a regular temperature. You can use anything lying around: boxes, envelopes, jars, bags or paper bags. Remember to label and date your seeds and share them with neighbours. You then have a seed collection and you can swap seeds anytime. When it's time for planting (depending on the plant you are trying to grow) your seeds will be easy to find and ready to go.

Check the Seed Savers Foundation for a wealth of resources ([link in references](#)).



FOLLOW PLANTS

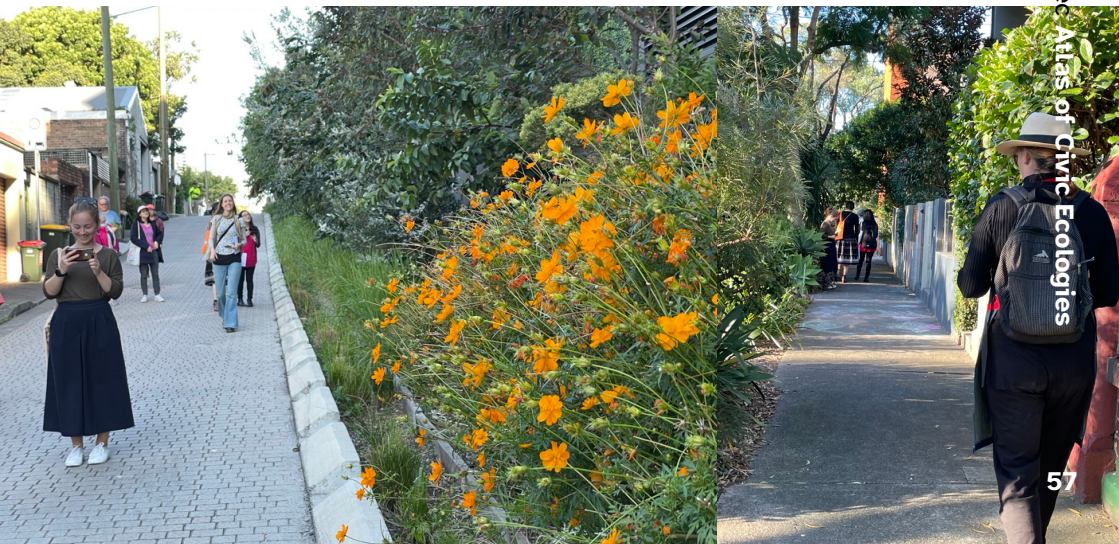
Walking has regenerative effects on our bodies and can help us tune in to civic ecologies in our local neighbourhoods. Following plants is the process of seeing and considering the flora around you.



WHILE WALKING

While you walk, allow some questions into your mind to guide your observations:

- * How do people tend to plants and support wildlife?
- * How do they design for and with plants in their gardens, balconies and verges?
- * How do plants design our city and generate a sense of place?
- * Where have the plants in your neighbourhood come from?
- * Who looks after them?
- * What kind of knowledge circulates among people who care for plants?





GET TO KNOW THE EASTERN SUBURBS BANKSIA SCRUB

The Eastern Suburbs Banksia Scrub (ESBS) is the name of a plant community growing in the eastern and south eastern suburbs of Sydney. ESBS once occupied around 5,300 hectares of land between North Head and Botany Bay in Sydney's eastern suburbs, including the area where Green Square is today. ESBS is now classified by the NSW Office of Environment and Heritage as a critically endangered plant community.

The Aboriginal owned and operated IndigiGrow, a social enterprise that sustains people, land and culture through the propagation of native plants, specialises in ESBS. They provided many of the plants used by the City of Sydney to landscape Green Square and recreate ESBS communities.

Visit the Indigigrow website or visit the nursery to find out more ([link in references](#)).

Start at Gunyama Park Aquatic and Recreation Centre, 17 Zetland Avenue, and see if you can identify the following plants:

- * Heath-leaved banksia (*Banksia ericifolia*)
- * Old man banksia (*Banksia serrata*)
- * Pink wax flower (*Eriostemon australasius*)
- * Variable sword sedge (*Lepidosperma laterale*)
- * Coastal tea-tree (*Leptospermum laevigatum*)
- * Tree broom-heath (*Monotoca elliptica*)
- * Bracken (*Pteridium esculentum*)
- * Grass tree (*Xanthorrhoea resinosa*).





MAKE & MAINTAIN

The City of Sydney supports residents to start gardens on public verges. Footpath or verge gardening is about taking the strip of the city out the front of your house, school or business and directing it towards civic ecologies by making it attractive to wildlife and creating a place for people to connect. Verges can soften the edge between private property and public land and can generate a sense of shared space in the neighbourhood.

Verges are a way to borrow and share space for gardens. They can:

- * harvest rainwater
- * prevent erosion
- * provide alternatives to lawns
- * showcase interesting plant species
- * provide habitat for bees, birds and butterflies
- * grow edibles.

They can also inspire others to get involved in civic ecologies.

- - A VERGE (FOOTPATH) GARDEN



The Green Square Atlas of Civic Ecologies

START/JOIN -



A COMMUNITY GARDEN

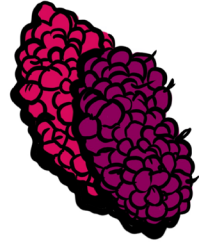
Community gardens come in all shapes and sizes. They bring people together, provide a place to share knowledge about plants and food, and result in green patches of vegetables, plants and flowers across the city.

Green Square Growers is a gardening group focused on social interaction through the growing of vegetables and herbs. People with all levels of gardening experience are welcome.

If you'd like to start your own community garden, view the City of Sydney guidelines ([link in references](#)).

FORAGE





Urban foraging can help us learn about plants, become better environmental stewards, and share knowledge and plants. It can also help us notice changes in season, weather and climate. In Green Square, loquats, mulberries, blue flax lilies and warrigal greens are readily available in public green spaces. Read more in this article in The Conversation ([link in references](#)).

Consider the following when foraging:

- * **Acknowledge country.** Aboriginal peoples have always gathered native plants while caring for Country.
- * **Take care.** Some plants in urban areas are toxic, such as the castor oil plant and many gum trees. Plants can also be contaminated by air, water and soil pollution and by chemical sprays. Consider the past and current uses of the land where you are

foraging. Was the land once industrially zoned? Do dogs urinate there? Make sure you always wash foraged food.

- * **Follow the rules.** Community gardens and even streets with nature strips may have their own harvesting rules. Some groups like Green Square Growers encourage spontaneous harvesting.
- * **Start a conversation.** Plants tell stories. When possible, ask residents about the plants growing on or around their properties. Conversations about what's growing in neighbourhoods build civic ecologies.
- * **Follow the leaders.** Follow foraging celebrities such as The Weedy One and Milkwood Permaculture ([link in references](#)).

OBSERVE AND CONSERVE WATER

Water plays a major role in the sustainability of Green Square. Before it was industrialised, Green Square was wetlands. Water management is key to a sustainable city; good water management is the result of both infrastructures and grassroots initiatives.



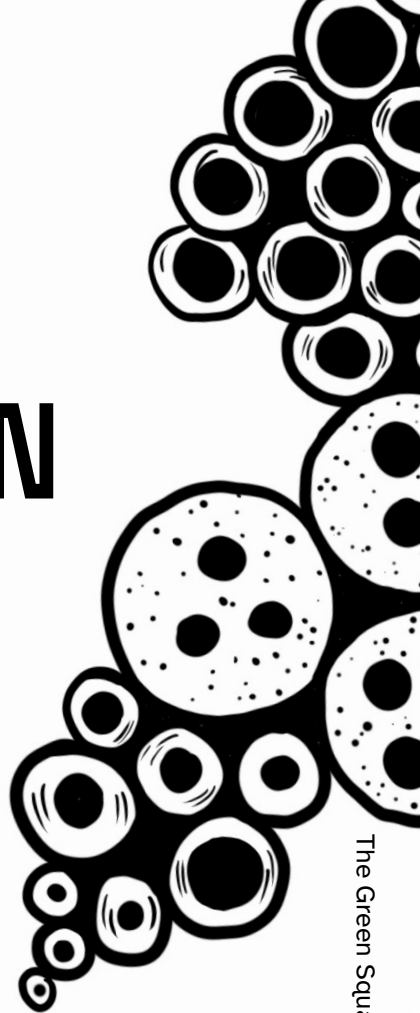
Here are some ways to connect civic ecologies to water:

- * Keep a frog pond.
- * Use rainwater tanks to divert, store and reuse water.
- * If you live in an apartment, consider keeping a bucket in the shower and reusing the water you collect for house cleaning.
- * In cities, lots of water goes to waste in runoff from the built environment (roads, footpaths, roofs). Gardens decelerate this runoff and save water. Consider converting hard surfaces around your home to gardens that can save, store and redirect water.
- * In the garden and on verges, locate plants according to where water flows. Species that can handle a lot of moisture need drains and low points in the landscape.
- * Visit Woolwash Park, 102-112 Joynton Ave, Zetland, for a great example of plants that thrive in or near water. Replicate this planting in your own garden.
- * Care for shared rain gardens. These systems collect water from hard surfaces, filtering it ready for reuse or release. Rain gardens in Green Square prevent soil erosion and stormwater overflow. They are usually planted with layers of materials including sandy soil, stones and recycled crushed glass to filter rubbish and nutrients. Because the gardens are lowered and layered, they reduce the risk of flooding by slowing the entry of stormwater into the underground drainage system when there is heavy rain.
- * Observe the way water flows in Green Square when it rains and floods. Pay attention to infrastructure like underground stormwater channels, canals and drains. The more you know about how the city is designed, the better placed you are to care for it.
- * Share stories about water: talk to your neighbours about what they have observed and experienced so you can better understand and respect the role of water in the city over time.

CREATE HABITAT FOR URBAN WILDLIFE

Like much of Sydney, Green Square has all the makings of a biodiversity hotspot. It has fresh water and relatively rich soil to sustain and nourish life. It's also home to a variety of native plants and has extensive tree canopies. Green Square can support a range of animals and insects if we keep civic ecologies in mind when designing and maintaining the neighbourhood.

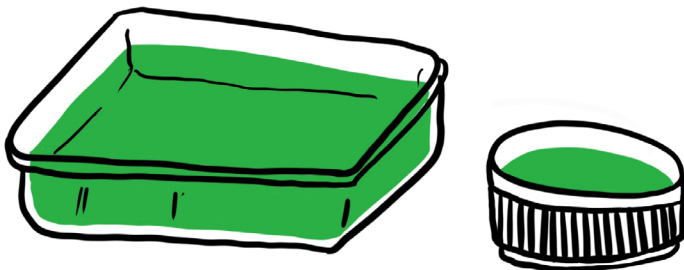
You can contribute to the development of urban wildlife habitat in your own garden, on the verge or in community spaces. Build sanctuaries for wildlife by choosing pollinating



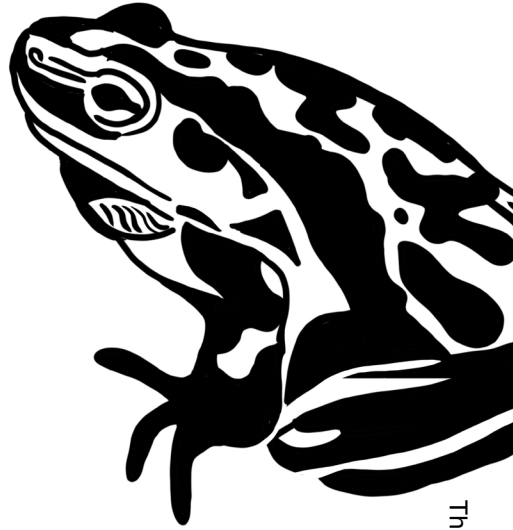
plants, providing water, and building shelters such as beehives and nesting boxes.

The City of Sydney has published a very helpful guide, *Creating Habitat for Urban Life*, to help you get started (link in references):

‘Each habitat garden helps create a network that increases opportunities for wildlife to move across the city. Picture them as stepping stones, such as a potted plant on your balcony helping native bees to travel across the city.’



VISIT THE KIMBERLEY GROVE RESERVE FROG POND



The frog pond in the eastern end of Kimberley Grove Reserve is an excellent example of habitat restoration. The City of Sydney *Urban Ecology Strategic Action Plan* aims to 'protect and enhance sites that provide habitat for priority fauna species', including frogs, by 2023.

The frog pond provides habitat to four species of local frogs. When this area was wetlands, frogs were widespread; now, only a few populations survive in Sydney. This pond has been designed to attract the Green and Golden Bell Frogs that may still live in Rosebery. The site was chosen because

it does not interfere with public use of the park and because there are other frog ponds in the area, including in the nearby golf course. The habitat includes deep water, shallow water, a shelter and a foraging area and is planted with 18 different native grasses. Although you may not be able to see the frogs, you can hear them over the traffic noise of the M1.

REDUCE



The more waste we produce, the bigger our carbon footprint and the more pressure we put on city services and the planet. According to the City of Sydney, during the 2021 lockdowns in Green Square, houses participating in the Council's food scraps recycling trial generated approximately 28% more food scraps than before the lockdown. The Council also saw RecycleSmart, their doorstep recycling service, experience a 50% increase in demand during the recent lockdown.

Dealing with waste effectively makes households and communities less reliant on services and builds civic ecologies.

Here are some ways to reduce waste, even if you live in an apartment:

- * **Reduce hard rubbish:** City of Sydney has some great programs where you can drop off good-quality clothes, old electronics, polystyrene, X-ray scans and more. Visit [Recycle It Saturday](#) (link in references).
- * **Go online:** Facebook hosts several community groups where you can gift your unwanted stuff or find stuff you need for free, including [Buy](#)



Nothing (Zetland/
Waterloo and Alexandria/
Beaconsfield Rosebery)
and Street Bounty.

- * **Repair:** Repairing appliances, clothing, furniture, and tools is a great way to divert waste from landfill and interrupt the cycle of overconsumption. If you're not sure how to repair something, try asking your neighbours.
- * **Visit The Bower:** Green Square residents are lucky to have access to The Bower at The Banga Community Shed at 3 Joynton Avenue, a hub for skill sharing and electronic repairs. You can bring your items for repair and donation.

- * **Compost:** ShareWaste connects people who wish to recycle their food scraps and other organics with their neighbours who are already composting and worm farming.

- * **Start a worm farm:** If you have some outdoor space at home, consider starting your own worm farm. Milkwood Permaculture has excellent resources to help you get started ([link in references](#)).



WASTE

LOOK FOR SPECIAL TREES



Look around Green Square at all the concrete, asphalt, tiles and roofs that absorb and retain heat. Now look around at all the available shade. On a hot day, hang out under some of the beautiful tree canopies and feel the temperature difference.

You can find the following shady giants, all of which are listed in the City of Sydney's Significant Tree Register (link in references).

- * Queensland lacebark (*Brachychiton discolor*)
- * Hills weeping fig (*Ficus macrocarpa hillii*)
- * Port Jackson fig (*Ficus rubiginosa*)
- * Moreton Bay fig (*Ficus macrophylla*)
- * American cottonwood (*Populus deltoides*).

The street trees in Joynton Avenue between O'Dea Avenue and Gadigal Avenue

are listed on the NSW State Heritage Inventory for their aesthetic significance. Their enclosed canopy arch over Joynton Avenue is one of the most striking landscape images in Green Square.

The trees include the *Ficus rubiginosa* on the western side of the street as well as the *Ficus macrocarpa hillii* on the eastern side.

The beauty of the streetscape is amplified by two parks at diagonal intersections with Joynton Avenue and also by a secondary row of lemon-scented gums (*Eucalyptus citroidora*) on the eastern side of the street. There are also paperbark trees (*Melaleuca quinquenervia*), which are always a sign of wetlands. A *Ficus macrophylla* grows further south in the Crete Reserve. Several other trees in Zetland, Alexandria and Rosebery are also recorded in the Significant Tree Register.



AND FIND RELIEF FROM URBAN HEAT

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Mapping Edges Research Studio

www.mappingedges.org

The Planty Atlas of UTS

www.mappingedges.org/projects/the-planty-atlas-of-uts

Alexandra Crosby and Ilaria Vanni, 'Rosemary in roundabouts, lemons over the fence: how to go urban foraging safely, respectfully and cleverly', *The Conversation*, 5 October 2021, <http://theconversation.com/rosemary-in-roundabouts-lemons-over-the-fence-how-to-go-urban-foraging-safely-respectfully-and-cleverly-167883>

City of Sydney

Community gardens

<https://www.cityofsydney.nsw.gov.au/community-gardens>

Green Square Growers Community Garden

<https://www.cityofsydney.nsw.gov.au/community-gardens/green-square-growers>

Drop off household items

<https://www.cityofsydney.nsw.gov.au/waste-recycling-services/drop-off-household-items-for-recycling>

Footpath gardens

<https://www.cityofsydney.nsw.gov.au/community-activities-initiatives/footpath-gardening>

Greening Sydney Strategy

<https://www.cityofsydney.nsw.gov.au/strategies-action-plans/greening-sydney-strategy>

Reducing waste and recycling

<https://news.cityofsydney.nsw.gov.au/articles/recyclesmart-doorstep-recycling-trial-picks-up-pace-lockdown>

Significant Trees Register

<https://trees.cityofsydney.nsw.gov.au/map>

Urban wildlife habitat

<https://www.cityofsydney.nsw.gov.au/guides/urban-habitat-creation-guide>

Affiliate organisations

The Bower

<https://bower.org.au>

IndigiGrow

<https://www.indigigrow.com.au>

<https://www.indigigrow.com.au/eastern-suburbs-banksia-scrub>

Milkwood

<https://www.milkwood.net>

<https://www.milkwood.net/2021/03/01/beginners-guide-to-worm-farms>

ShareWaste

<https://sharewaste.com>

The Seed Savers Foundation

<https://seedsavers.net>

The Weedy One

<https://www.diebobonetto.com>





Mapping Edges

Mapping Edges is a transdisciplinary research studio that explores the relationship between plants, people, and the urban environment. Our work is informed by plant-based ecologies, what we call ‘the planty universe’. The edges in our name refer to the idea of edge or ecotone as a transition zone between different ecosystems. As researchers we work at the ‘edges’ of disciplines—design research, ethnography and city studies—and methodologies to cross-pollinate new ideas. We have a particular interest in civic ecologies and their role in how we design cities to respond to the growing challenges of climate breakdown.

Credits

The Green Square Atlas of Civic Ecologies was produced by the Mapping Edges research studio: Alexandra Crosby and Iliara Vanni, University of Technology Sydney in partnership with 107 Projects Green Square. It was funded by the Council of the City of Sydney and supported by the University of Technology Sydney Climate, Society and Environment Research Centre (C-SERC).

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