



Wilderhoods

Empowering residents to create thriving
neighbourhoods in a changing climate

Wilderhoods

Empowering residents to create thriving
neighbourhoods in a changing climate

Empowering residents to create thriving
neighbourhoods in a changing climate

Dr Cassia Read
Ada Nano

© 2023 Castlemaine Institute

This project was funded through WWF Innovate to Regenerate
Challenge and the ADAPT Loddon Mallee program.



All photos © by Penny Ryan Photography unless otherwise specified.
Illustrations of Yellow-tailed Black Cockatoos © Anna Read.



Castlemaine Institute is a research and learning
hub for regenerative economics, community
and landscapes. We exist to support the ongoing
transformation and development of individuals,
collectives, landscapes, and systems which are
evolving to meet the urgent opportunity of our times.
We do this through applying multidisciplinary depth
to complex problems, drawing on and developing
local wisdom through our work.

Castlemaine Institute
Castlemaine VIC 3450
info@castlemaineinstitute.org

Dr Cassia Read 0432 357 191
cassia.read@castlemaineinstitute.org.au

castlemaineinstitute.org.au

Acknowledgements

We acknowledge and pay our respects to the Traditional Owners of the unceded land on which we live and work, the Dja Dja Wurrung. Wilderhoods aims to support the work of Djaara (Dja Dja Wurrung People) in caring for Djandak (Country).

We are grateful to the many experts working in the fields of restoration, urban greening and caring for Country, who kindly gave their time and expertise to provide feedback on the Wilderhoods Process.

We would like to thank:

- Brian Bainbridge, Biodiversity Officer, Hepburn Shire Council
- Cristina Hernández Santín, PhD Candidate, RMIT University
- Dr Georgia Garrard, Senior Lecturer, University of Melbourne
- Hadley Cole, Landcare Coordinator, Mount Alexander Shire
- Jon Leever, Castlemaine Landcare
- Kath Coff (CEO) Nalderun, Aboriginal Education Corporation
- Kimberly Cook, Community Engagement Officer, Macedon Ranges Shire Council
- Krista Patterson-Majoor, Environment Coordinator, Macedon Ranges Shire Council
- Dr Laura Mumaw, Project Facilitator/Board Member, Gardens for Wildlife Victoria; Research Associate, RMIT University
- Lori Arthur, Director, Connecting Country (not-for-profit community group)
- Professor Marco Amati, RMIT University
- Dr Mark Hall, Biodiversity Officer, City of Great Bendigo Council
- Matt McEachran, Environment Officer, Mount Alexander Shire Council
- Mel Marshall, Climate Change Officer; Mount Alexander Shire Council
- Nicole Barling-Luke, Portfolio Lead from Regen Melbourne
- Stewart Campbell, Coordinator Parks and Gardens; Mount Alexander Shire Council
- Tanya Loos, Biodiversity Projects Officer, Macedon Ranges Shire Council
- Zoe Scoglio, Nalderun, Aboriginal Education Corporation

We take our hats off to the amazing members of our community who turned up and participated in our Wilderhoods workshops, and who continue to get their hands dirty as they transform their neighbourhoods. We wish to thank Marg Ridgeway, Kathy Landvogt, Ilka White and Ingrid Phyland from the West End Wilderhooders and Sherene Clow and Lee Nicholls from the South Side, for their feedback on the Wilderhoods Process and for their incredible support and encouragement of the project.



Introduction

Wilderhoods is an urban greening initiative that empowers neighbours to work together to create thriving neighbourhoods for people and wildlife in a changing climate. Wilderhoods mobilises residents to simultaneously improve climate resilience, biodiversity conservation and human wellbeing in their neighbourhoods by creating networks of urban habitat across existing public and private greenspaces

Wilderhoods is unique because it:

- Works at the neighbourhood scale and the community level;
- Grows positive connections between neighbours and between people and nature;
- Supports neighbours to find place-based solutions;
- Aligns greening efforts so that each small action is strategically working towards a broader neighbourhood vision;
- Enables residents to understand and co-design for urban greening while working within the broader context of council policy, existing land-use and management, future climate predictions, bushfire risk and the neighbourhood palate for change;
- Upskills the community with regenerative tools and know-how about urban cooling, stormwater management, bushfire and flood risk mitigation, wildlife monitoring, plant propagation, planting, soil remediation and designing for biodiversity.

This report provides an overview of the Wilderhoods Process for neighbourhood engagement in habitat creation through a facilitated workshop series. The workshop series has a logic and flow that has been developed over a two-year period, through literature review, expert roundtables, design and testing in two pilots that ran in the West End and South Side neighbourhoods of Castlemaine in 2022 and 2023 respectively.

We have written this report for future participants, partners and supporters of Wilderhoods, to provide a clear understanding of what the Wilderhoods workshop series delivers, in terms of its aims and impact. The report is illustrated with images, reflections and learnings from our two pilots.

The Wilderhoods Process

The Wilderhoods initiative, at its core, is a process for empowering a group of neighbours to work together to create habitat for people and wildlife, leading to improved health and wellbeing of the community and improved ecological function and climate resilience of their neighbourhood.

Residents are empowered through participation in a series of four facilitated workshops and growing a shared understanding and appreciation of their place, and its people and local wildlife.

In the first workshop, facilitators support residents to tune-in to their local landscape, their animal neighbours (i.e. native wildlife) and to each other. In the second workshop, participants are guided to orient their future greening efforts relative to evidence-based ‘know-how’ about urban greening for wildlife and climate resilience, and through developing a shared community vision for their neighbourhood. These collective insights provide a compass for participants that informs their next steps in co-design of neighbourhood habitat over the third and fourth workshops.

Co-design is a structured process that supports participants to identify neighbourhood priorities, brainstorm projects and to identify a best first project for the group.

By the end of the workshop series, participants are mobilised into ‘Doing’ through roles, regular meetings and a plan to realise a refuge or corridor in their neighbourhood for a chosen native animal. Through implementing a first project, neighbours are learning, recognising strengths, sharing knowledge and skills, observing what works, and deciding what comes next.

A total of 15 activities are delivered during the workshops, plus three activities between workshops and one informal gathering after the workshops have finished to assist the group into moving towards doing. Every activity delivered in the workshop series is designed to do one or more of the following:

- Grow community connection through bringing neighbours together, sharing stories, fostering respect and a sense-of-purpose, and providing opportunities to act together for the benefit of their whole neighbourhood;
- Connect people to nature through observing, reflecting on and learning about their place, its history, its indigenous plants and native wildlife;
- Build capacity of the residents to create habitat through providing knowledge, know-how and direction.

Here we describe the logic and flow of the Wilderhoods Process (illustrated in Figure 1). For each activity included in our workshops series we outline aims, rationale, method and impact. We also clarify how the different activities are inter-related and systematically build on each other. Activities are numbered in the following document.

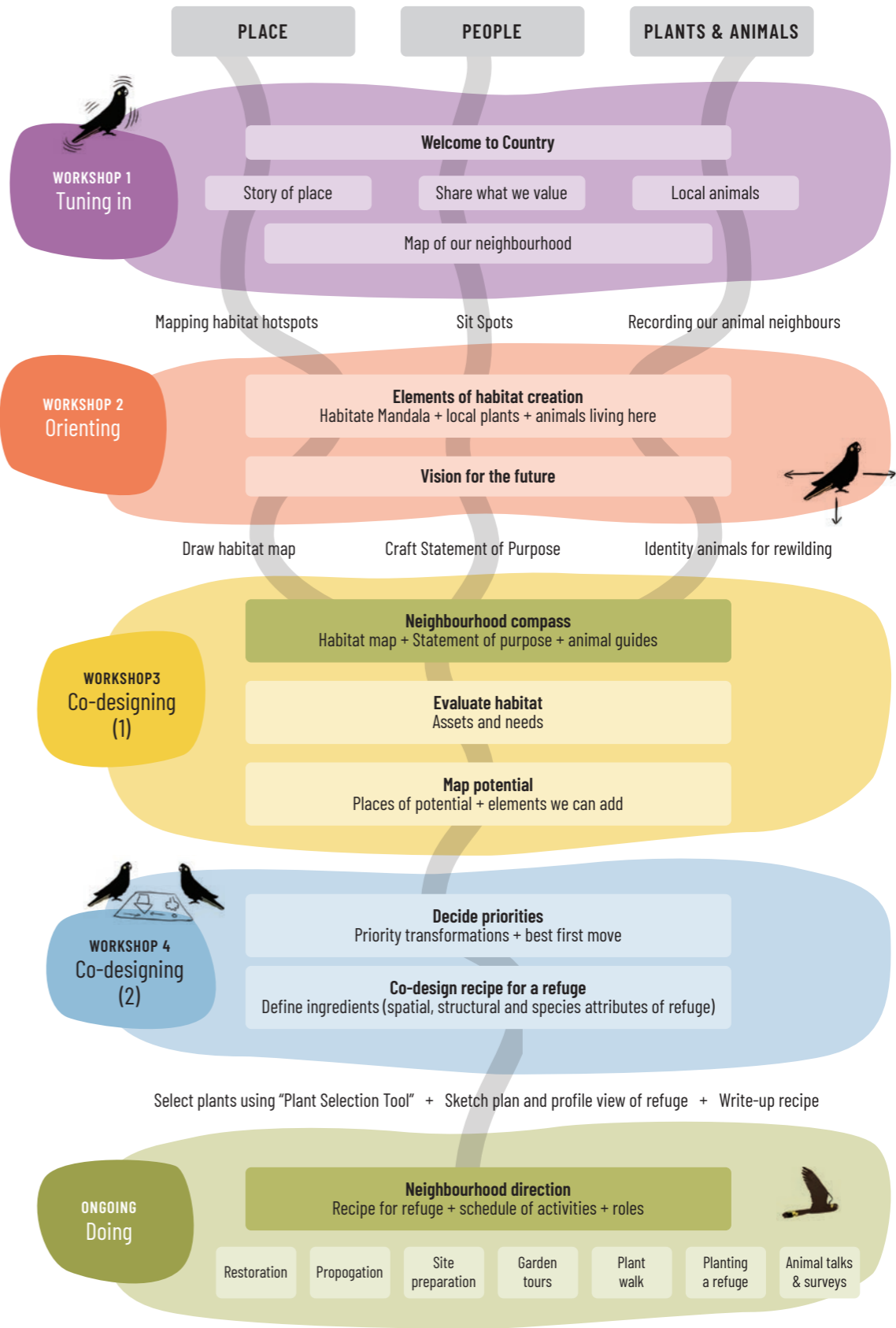


FIGURE 1 Wilderhoods Process for empowering a group of neighbours to create habitat that meets the needs of place, people and wildlife.

Seeding a new Wilderhood

A 'Wilderhood' is a neighbourhood where neighbours are working together towards an ecologically informed and achievable vision for their shared habitat.

Each Wilderhood begins with a group of neighbours who are keen to grow more habitat in their local green spaces, and a Wilderhoods facilitator, who has some expertise in ecology and the capacity to facilitate group conversations and activities. This core group of neighbours and facilitator coordinate the Wilderhoods workshop series, including setting dates, collating information & resources, inviting participants and organising a place to run workshops.

Workshop coordinators must first locate a comfortable and welcoming meeting space where the workshop series can run. If a house or hall is not available in the neighbourhood, residents can either choose to setup a gazebo on the naturestrip or even setup in someone's garage. Alternatively, a local Community House or Neighbourhood Centre can be used.

Local residents are invited to the workshop series through a letterbox drop and/or by tapping into email, social media or phone chat groups that might already be established in the neighbourhood.

The ideal group size is between 10-25 participants, representing at least ten households: small enough to enable collective conversations and large enough to provide sufficient representation, energy and momentum to grow the initiative within the neighbourhood.

If more than 25 participants are interested, the neighbourhood can be broken into smaller 'pocket neighbourhoods.'

PILOTING WILDERHOODS IN CASTLEMAINE

Wilderhoods has evolved and been tested through two pilot workshop series in Castlemaine, Victoria.

WEST END PILOT

Our first pilot ran in 2022 and aimed to test the broad idea of engaging a group of neighbours in habitat creation for people and wildlife through a workshop series. We decided upon a strengths-based approach to the pilot and chose to run our workshops in a neighbourhood that was likely to be receptive to the aims and values of the program. The most obvious choice in the Castlemaine region was the West End neighbourhood where the West End Resilience group was already well-networked and working on community- and resilience-building activities. Funding was received through ADAPT Loddon-Mallee (DELWP) to run the pilot.

A core group of enthusiastic residents in the West End were identified following an initial online neighbourhood briefing about the Wilderhoods idea. This core group became our first point of contact for deciding on workshop dates, reaching out to other residents through an email network and connecting us to a local hall where we could run workshops. Residents of the West End were contacted through their neighbourhood email list with a flyer providing a brief description of the pilot project (Figure 2), dates and a link to an online booking form. 25 participants registered to attend the free workshop series.

Workshops were facilitated by Cassia Read, Ada Nano and Jodi Newcombe (Castlemaine Institute). The last workshop on plant propagation was delivered by Frances Cincotta from Newstead Natives.

SOUTH SIDE PILOT

Our second pilot ran in 2023 and was aimed at building on learnings from the first pilot and improving the outcomes from a Wilderhoods workshop series. We did this through review and development of the 'Wilderhoods Process', via literature research and expert roundtables, and through testing the evolved process in a second workshop series. Funding for this pilot was received through WWF's Innovate to Regenerate Challenge.

We ran the pilot in the South Side neighbourhood of Castlemaine. This neighbourhood already had some established sense of community through an annual Christmas Party and an active WhatsApp Group during COVID lockdowns. Participants for the Wilderhoods workshops were recruited through letter-dropping at 50 households across three adjacent streets and in addition door-knocking half of these houses. We recruited 22 participants from 19 households, nearly all of which were contacted directly through door-knocking. 13 more participants have joined the South Side mailing list and/or participated in ongoing Wilderhoods activities, since the workshop series.

Workshops were facilitated by Cassia Read and Ada Nano. In addition, specialist workshops were delivered by local experts, including plant propagation with Jeremy Neal (Wombat Native Plants), microbats in the neighbourhood with Dr Emmi van Harten, soil rehabilitation with Dr Jess Drake and a bird walk in the bush with junior naturalists Tavish Bloom and Freya Readsmith.

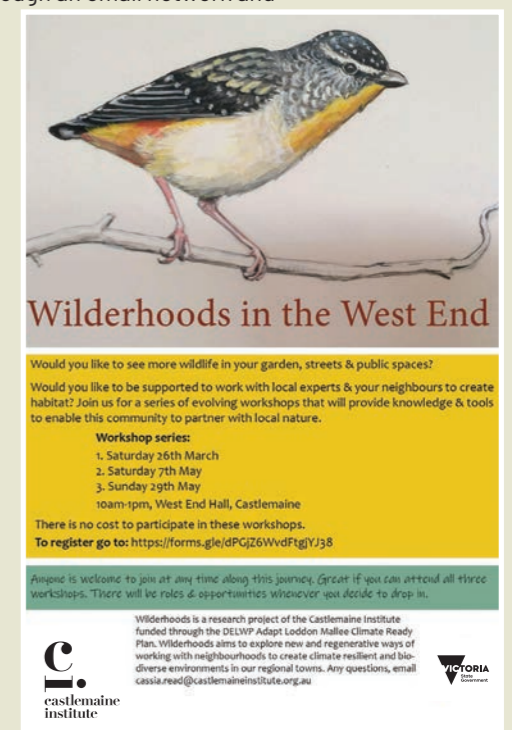


FIGURE 2
Flyer for Wilderhoods workshops in the West End

A welcoming atmosphere



A welcoming atmosphere sets the tone of the workshop series and fosters positive connections between neighbours.

Facilitators prepare the meeting space with friendly, creative and stimulating touches, such as a bunch of garden flowers with a mix of natives, a table spread with local field guides, an urn boiling and tea and biscuits ready to go. If the workshop is run outside or in someone's garage or shed, then participants are invited to bring a chair and a cup, to ensure everyone is comfortable and provided for. On a cold day, a fire burning in a firepit with a billy boiling is an inviting focal point for people to gather around (Figure 3).

A large satellite image of the neighbourhood provides an icebreaker and sparks valuable conversation. As participants arrive they sign in and are directed to the map where they help each other to mark the location of their homes with tiny colour stickers, thus orienting themselves in relation to each other and to features of the natural and built environment.



Hall setup for the West Side workshop

"To see a camp fire burning on our arrival really set the atmosphere for a wonderful morning."



FIGURE 3
Street side setup for the South Side workshop (Photos by Cassia Read)

"A very big thank you for the beautiful and inclusive space. You both put so much work, planning, thought and experience into this morning. We returned home very enriched and we look forward to meeting you and the wonderful people who attended next month."



1. Welcome to Country

Traditional owners are invited to open the workshop series with a Welcome to Country and to contribute their insights about Caring for Country and how this might align with the Wilderhoods approach.

This ceremony promotes recognition of and respect for the deep connection between First Nations peoples and Country, including the neighbourhoods in which we live. Through performing a Welcome to Country, Traditional Owners give consent for Wilderhoods to take place in the neighbourhood.

When Traditional Owners are not available, facilitators provide a personal and reflective Acknowledgement of Country.

2. Share what we value

Wilderhoods begins with roundtable introductions and sharing of why we are all here. This sharing is an informal way to introduce the project as well as to establish a culture of respectful listening and for participants to form connections (Figure 4).

Facilitators welcome participants and reflect on the origins of the initiative in response to the urgent need for deepening our connection with nature, creating wildlife habitat, and growing ecological and community resilience in a changing climate. Facilitators also share their own personal journey. Participants are then invited to share what they love about their neighbourhood and share their journey with their own garden, including challenges they have faced, and inspiration gained from neighbours' gardens. Facilitators take opportunities to explore diversity in values, concerns, knowledge, and confidence, and offer insights on the benefits of this diversity, ensuring all feel valued.

It's worthwhile not rushing these foundational conversations as people are eager to share their concerns and passions, particularly stories about their garden, its current state and their hopes for it, and their anxieties about future climate and biodiversity loss. Many people indicate that they are keen to grow habitat but have done very little because they are not confident about how to begin. It has been evident from these conversations in both pilots that people immediately recognise the potential of Wilderhoods as a positive way to address their anxieties about the future.



FIGURE 4 South Side Neighbours sharing what they value about their neighbourhood (Photo by Alison Whitten)

3. Story of place

The 'Story of Place' is offered as a visual presentation that provides a deep dive into the layers of history in the neighbourhood, reflecting on the forces that have shaped the landscape and waterways in the past and forces that will shape this place into future.

The presentation is delivered either with a PowerPoint presentation or a printed booklet, depending on whether the workshop is indoors or outdoors respectively. The Story is richly illustrated with photos and maps that capture the history of the neighbourhood and surrounding area, from deep-time through to urbanisation, including First Nations creation stories and history, geology, waterways, vegetation, forces of fire and flood, the impact of white colonisation and land-use change and future risks due to climate change. The presentation finishes with an inspiring local story about the transformation of an urban block through habitat creation (Figure 5).

During our pilots we found that participants really enjoy learning about the geology and ecology of where they lived, in a way that really helped them to understand the science. Throughout the presentation, participants are invited to add their own knowledge of the subject. Story of Place provides the group with a shared understanding of what the neighbourhood was and what it could become. This opens the way for people to vision a future.



FIGURE 5 Page from the Story of Place booklet (Top four photos by Steven Wilkinson, photo at bottom by Cassia Read)



FIGURE 7 Visiting a Habitat Hotspot and talking about the natural values in an established native garden (Photo by Alison Whitten).

4. Local animals

The aim of this introductory presentation is to grow participants recognition and understanding of the variety of animals living in their neighbourhood and their confidence in identifying them.



FIGURE 6 "Insectivorous bird," a page from handout on "Observing our wild neighbours" (All images by Geoff Park)

Given as a visual presentation with handouts (Figure 6) facilitators provide an overview of the major animal groups of the region, with a focus on those likely to occur in urban areas. The presentation covers birds, mammals, frogs, reptiles and butterflies, represented by easily recognised species, and includes a brief insight into threatened species and groups of the region. This is also an opportunity to introduce resources such as local fieldguides and ID apps for those who wish to learn more.

This activity always sparks enthusiastic questions and observations from the group and is an enjoyable way to grow participants' knowledge and appreciation of local fauna. It also provides a foundation for the Recording our Animal Neighbours activity that follows and the handouts provide an important reference for participants.

5. Map our neighbourhood

This collaborative mapping activity is an opportunity for neighbours to recognise what is unique about their neighbourhood and what defines their community.

For this activity, participants gather around a large (A1) colour satellite map to decide upon and delineate the bounds of their neighbourhood. Natural assets within the neighbourhood are then mapped (using coloured gel pens and small stickers)

including waterways, old trees and hollows, remnant vegetation, restoration plantings and established native gardens (Figure 8). Facilitators then make a digital copy of the Neighbourhood Map, with all natural values and bounds delineated.

Collaborative map-making is an empowering process that involves negotiation and collective decision-making. This collaborative activity builds connections within the group as people share stories about where they live and decide upon the defining features of their neighbourhood. It also grows participants awareness of existing natural values in their neighbourhood. The Neighbourhood Map becomes the basis for mapping Habitat Hotspots and for co-design activities in future workshops.

Hoodwork?



6. Recording our animal neighbours

Key to understanding the potential of a neighbourhood for habitat creation is recording the animals that live in, or nearby, the neighbourhood.

Participants are given a checklist of animals known to occur in the neighbourhood based on records from the Atlas of Living Australia and supplemented with observations from local experts. Participants are encouraged to tick-off on their list any resident wildlife encountered in their garden, on their walks or any remembered observations or sightings shared in conversation. All levels of identification are welcome: from species up to generic groupings, such as “small brown, native birds” or simply “frogs”. Facilitators encourage participants to refer to the handouts provided in the Local Animals activity, which will enable people to record animals into broad groups, based on their appearance and/or lifestyle, if the species is unknown (e.g. small insectivorous birds feeding in trees or shrubs, Figure 6).

Records of animals observed in the neighbourhood provide a foundational resource for upcoming workshop activities and is particularly important for identifying animals that can be Animal Guides for neighbourhood rewilding. It also serves as a baseline record for monitoring of changes in local wildlife and natural values over time.

7. Mapping Habitat Hotspots

At the same time as participants are recording wildlife observations, they are encouraged to mark on maps any Habitat Hotspots where a diversity or abundance of native animals are encountered in the neighbourhood. Hotspots are important for understanding what qualities make successful urban habitat. They are also nodes in the neighbourhood where potential work can focus to enhance their value to wildlife, including corridor, refuge and stepping-stone plantings to connect them together.

Habitat Hotspots may include a particular tree or patch of vegetation that is alive with the activity of birds or insects, a soak where frogs are heard calling en masse, or a large tree where birds regularly roost during the heat of the day. This activity requires a clear introduction about what to look for and what to record and a valuing of the contribution of all skill levels as participants can feel nervous about their level of knowledge and how to record habitat and wildlife. Observations are compiled and added to the Neighbourhood Map, which provides a picture of the natural assets that exist within the neighbourhood.

People loved seeing the final Neighbourhood Map (Figure 12). For many participants this observing and mapping is a first step in recognising the values of greenspaces and habitat elements for the animals who share their streets and gardens. It is also confidence-boosting and empowering for participants to see their own animal and hotspot records combined to make a meaningful neighbourhood map.



FIGURE 8 Mapping Habitat Hotspots the West End (Photo by Cassia Read)

Native animal species observed by the West End participants included 32 birds, eight mammals, five reptiles and three frogs – an incredible effort for a group of people with varied experience in identifying and recording wildlife.

There was a lot of interest in the species lists which showed how their observations compared with those of a local amateur naturalist and local ALA records. This was exciting because it emphasised not only how well they had done as a group, but also how many other species could potentially be brought into the neighbourhood by growing more habitat.

Many expressed a deep enjoyment in making these observations, with one commenting with great feeling that ‘this is the best.’

8. Sit Spot

Wilderhooders are encouraged to practice tuning-in through a Sit Spot and to share their experience at the next workshop. A consistent practice of tuning in to nature has been found to have multiple benefits, including heightened sensory awareness and perception, improved observation or 'naturalist' skills, and increased opportunities for close encounters with birds, other animals and plants. Practitioners have also reported increases in happiness & overall well-being and a greater appreciation of and care for nature.

"I hadn't noticed how much concrete and how little habitat there was until I looked for a Sit Spot."

of sitting outside (anywhere!) and tuning in to the sounds, movement, colour and scent of the life, lives, and patterns of nature around us. It is one of a number of 'core routines' developed by the Wilderness Awareness School from North America and is reportedly inspired by Apache traditions. The practice counters our contemporary lifestyles, which make it harder to tune in to our senses and engage with the non-human life outside of our built environment.

Participants who practice a Sit Spot find it very worthwhile. During the following reflective conversation, people are often eager to share not only their nature

observations but also what they had experienced in themselves, such as feelings of calmness, and a sense of wonder and delight. Many participants expressed an awareness of having their eyes opened to the nature in their neighbourhood, and even their own backyard!

"I noticed so many different kinds of small birds."

Facilitators provide an instructional handout and verbal guidance about undertaking a Sit Spot practice, before participants leave the first workshop. The practice involves a routine

"This practice reminded me of the profound effect of nature on my wellbeing."



FIGURE 9 A Sit Spot in the local park (Photo by Cassia Read)



9. Elements of habitat creation

Habitat Mandala

Sharing expert knowledge and knowhow about urban habitat creation is a core part of the Wilderhoods workshop series. This sharing aims to empower residents in their own urban greening journey, growing the knowledge, skills and confidence of participants so they are firing to get outside and start making change.

Facilitators focus this presentation on the Wilderhoods core principles and elements of habitat creation, illustrated with anecdotes and images to fascinate and inspire participants. Nine habitat elements are outlined in a Habitat Mandala and then discussed in detail. The Mandala is an engaging tool for assessing habitat potential of urban gardens and recording what is present, missing and what could be added. Participants are provided with a copy of the Mandala to make notes on during the presentation and to take home to assess their own gardens.

Facilitators also present inspirational examples of community rewilding initiatives, through a brief slideshow, with examples such as i) Melbourne pollinator corridor; ii) Superb city wrens; iii) Tiny forests; iv) Garden hakeas for Yellow-tail Black Cockatoos; and v) Urban forest canopy for cooling.

This presentation and subsequent questions and sharing of local knowledge is always energising and engaging for participants. The Mandala is an important reference point for co-design activities including Evaluate Habitat, Map Potential and Priority Transformations.

Local plants for local gardens and animals living here

Two shorter presentations conclude this knowledge sharing activity, the first, Local Plants for Local Gardens, aims to deepen people's knowledge and appreciation of the local flora and help to 'get their eye in' for plant identification. Finally, 'Animals Living Here' shares results from the Recording our Animal Neighbours activity, illustrated with photos of key animals discussed.

Both presentations are delivered visually on screen or as handouts. Local Plants for Local Gardens introduces the major plant groups of the region, such as wattles, peas, grasses, lilies and daisies, with a focus on species suitable for urban plantings. It also emphasises the value of adding key 'plants with benefits' to local wildlife to plantings, which in our region are local natives like Hakeas, Banksias, Grevilleas, *Bursaria spinosa*, peas, myrtaceous shrubs and some butterfly larval foodplants.

In Animals Living Here, animals recorded by participants from the neighbourhood species list are presented in groupings of very common through to rare and never seen species, with insights about how to bring them in and support them in the neighbourhood through adding specific habitat elements.

Both presentations are inspiring for participants, providing a much-desired foundation for local plant identification, and the realisation that key local plant species can increase both the diversity and abundance of native animals in their neighbourhood.

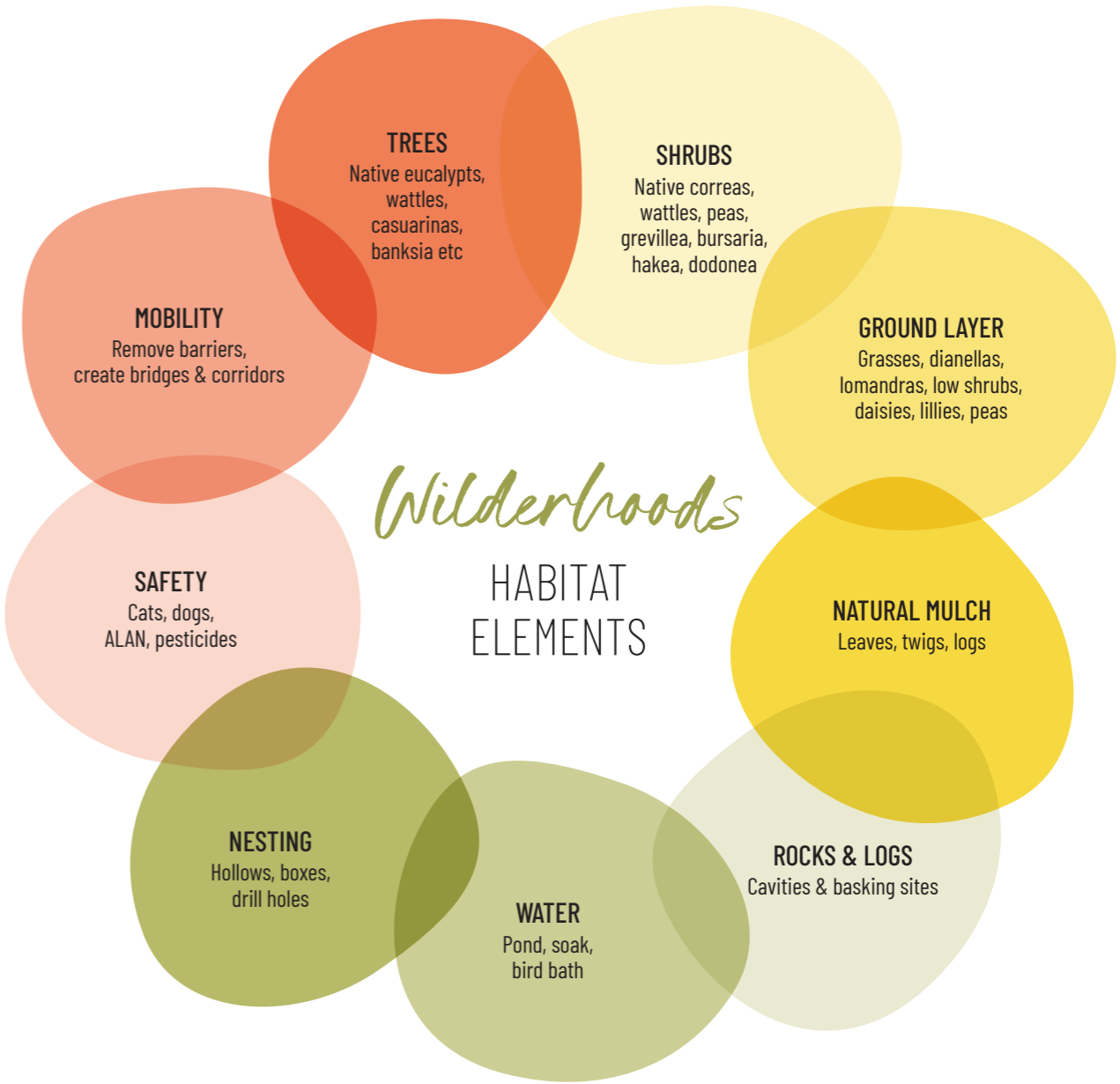


FIGURE 10 The Habitat Mandala presents the key habitat elements for creating urban habitat for wildlife. (Adapted from Bainbridge and Teschendorff, 2021)

Sharing information about habitat creation clearly satisfies a real 'need to know' in the community. Most participants were very engaged throughout the presentation, with many furiously taking notes.

"I've learnt a great deal. Wilderhoods has given me greater understanding of a purpose outside of my own little spot. Before this I didn't think beyond that human-centric self – it never really occurred to me that the animals were getting food (from my garden), that there was something that I could do that would make a difference. This is really practical in terms of how we can create corridors and look beyond ourselves. I feel it's been profound in that way, to connect with animals and the earth and get outside my own fence."

Sharing information about habitat creation clearly satisfies a real 'need to know' in the community. Most participants were very engaged throughout the presentation, with many furiously taking notes.

"The neighbourhood vision needs to be inclusive to all ages. To be inviting and exciting. It needs to make sense to an eight-year old."

10. Vision the future

A Neighbourhood Vision paints a picture, a feeling and an intent. It provides a touchstone, so Wilderhooders can move forward with specific projects, knowing along the way whether they are keeping to the path. It is intended as an orientation, not a goal.

Participants are invited to imagine what their neighbourhood could look and feel like in 10 years' time. Facilitators guide them through a short visualisation and then encourage to them to write down their ideas and dreams on index cards. What would they love to see emerge? Participants are then asked share their responses to this visualisation in small groups. Next, there is a whole group sharing, with facilitators recording key words and phrases on a white board. Can we see a calling for this place? Everyone looks at the word cloud on the board and discusses similarities and overlap between words and ideas. The group identifies key themes and a shortlist of words and phrases to be included in the vision.

A small group of wordsmiths then meet to craft a neighbourhood vision from the resulting whiteboard word-cloud. Feedback from the broader group is invited, before the vision is adopted.

Reading out a Neighbourhood Vision is often moving and galvanising for the group. It helps unite people in their hopes and dreams for the shared life in this place. The vision becomes an important reference point for co-designing activities, including evaluating existing greenspaces for human habitat, and co-designing a Recipe for a Refuge.

"I really enjoyed group brainstorming – seeing our input combined to create a new 'whole' vision."



FIGURE 11 Neighbours brainstorming in the West End



Co-designing

Neighbours collaborate over the last two workshops to co-design habitat that will increase climate resilience of the neighbourhood through creating refuge and corridors for vulnerable animals and through meeting needs of the people living in the neighbourhood. This co-design process in the future will also involve consideration of place-based hazard ratings for fire, flood and urban heat and will examine how to mitigate these threats into the future.

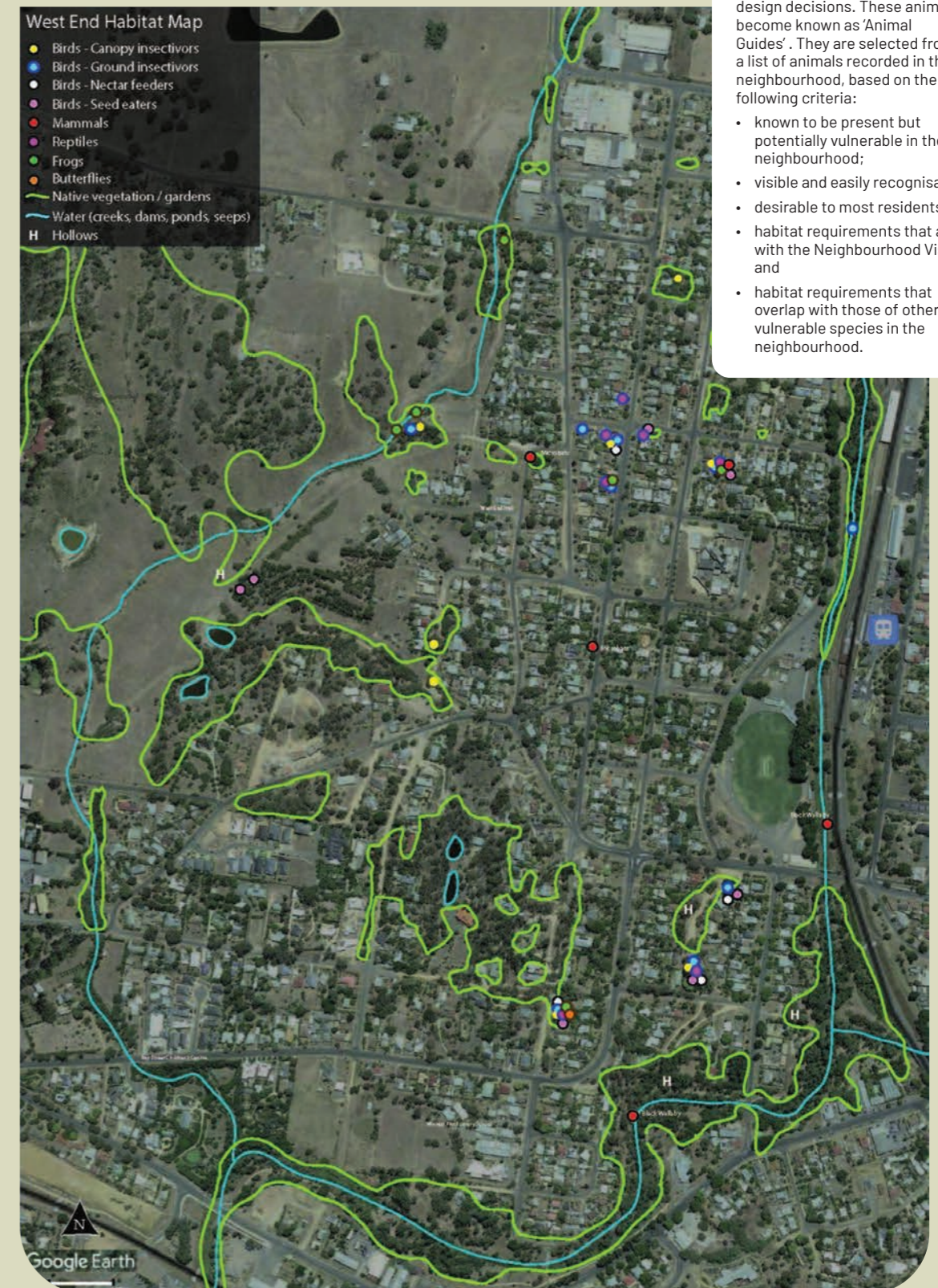
The co-design process enables neighbours to reflect on what they've learned so far from neighbours, observations and from information shared by facilitators, and to use these insights to steer collective action across the neighbourhood.

By the end of the co-design sessions participants leave with clarity about how their individual actions can help to realise the Neighbourhood Vision and where best to direct their greening efforts in order to have an impact at the neighbourhood scale in terms of rewilding, urban greening, cooling and growing community resilience. Participants also leave with a sense of continuity after the series has finished, because they have identified a project that they can all get behind in the "Best First Move". They have also helped to write a Recipe for a Refuge, which describes the ingredients and methods for creating a refuge for a 'Habitat Hero' that will sit comfortably within the neighbourhood.

11. Neighbourhood Compass

Collective insights, learnings and effort from the first two workshops about people, place and wildlife, become a Neighbourhood Compass that guides neighbours in co-designing habitat over the third and fourth workshops. The Neighbourhood Compass is made up of three key neighbourhood resources:

- "Neighbourhood Habitat Map"
- "Neighbourhood Vision"
- Handouts about "Animal Guides" – animals who are present but vulnerable in the neighbourhood and who will help to focus habitat design decisions.



Animal Guides

Facilitators identify 3-4 animal species who are present but vulnerable in the neighbourhood and who will help to focus habitat design decisions. These animals become known as 'Animal Guides'. They are selected from a list of animals recorded in the neighbourhood, based on the following criteria:

- known to be present but potentially vulnerable in the neighbourhood;
- visible and easily recognisable;
- desirable to most residents;
- habitat requirements that align with the Neighbourhood Vision; and
- habitat requirements that overlap with those of other vulnerable species in the neighbourhood.

FIGURE 12 Neighbourhood Habitat Map for the West End (Prepared by Cassia Read, Ada Nano. Records and mapping by West End participants and Margaret Panter. Satellite image: Google Earth, 2022)

NEIGHBOURHOOD VISION FOR THE SOUTH SIDE

In the spirit of the Yellow Gums, our South Side neighbourhood is resilient and thriving.

Staying cool and green through summer and drought, our neighbourhood provides welcoming spaces for community to gather, to connect to nature and each other and to walk their dogs.

There’s a chorus of birds and frogs, wind in the trees and the sounds of children playing.

The line between urban and bushscape is blurred with a variety of indigenous plants in our gardens and public spaces, creating corridors for people and animals.

Nature is protected and people feel safe.

12. Evaluate Habitat

Thinking like an animal

This activity aims to deepen participants’ understanding of how animals live in the urban landscape and the unique habitat requirements of different species. This understanding is important to inform future design decisions and urban greening actions.

Participants are invited to select a reading about one of the 3-4 Animal Guides. Participants are given time to quietly read through their material and are asked to circle any information about habitat requirements for shelter, food, nesting, safety, water and movement. Everyone then gathers outside to view the landscape through the eyes of their chosen animal. Collective sharing of observations and discussion of ‘what’s here’ and ‘what’s missing’ are then facilitated.

Animal species that we have tried and tested with good results, in terms of interest, engagement and insight about neighbourhood habitat, include the Superb Blue Wren, Stumpy-tail Lizard, Brown Tree Frog, Spotted Pardalote and Blue-banded Bee. Creating habitat for any of these 5 species would also benefit a suite of other animals. Some of these guides may occur in your region too, but there would be other suitable options.

Viewing the neighbourhood through the eyes of an animal can be a game changer for many participants, in terms of realising just how vulnerable many local animals are and how much can be done to support them.

What’s needed here?

To structure a conversation about ‘what’s needed here,’ in terms of neighbourhood habitat creation, facilitators lead the group through a Matrix of Needs.

This involves jogging everyone’s memory about habitat elements outlined in the Habitat Mandala (Figure 9), identifying which elements are required by the Animal Guides and which elements are required by people, according to the neighbourhood vision. Finally, everyone discusses what are the unmet needs for people and the guides in this neighbourhood and describes attributes of the missing but necessary habitat elements.

MATRIX OF NEEDS

Identify the essential habitat elements needed by Animal Guides and People in the neighbourhood then evaluate what’s here and what’s missing

Habitat elements Review the elements	Animal guides Identify needs from ‘Thinking like an animal’ activity			People Identify needs from Vision	Unmet needs Habitat Mandala –what elements are present and missing. Describe attributes of unmet needs.
	Guide 1	Guide 2	Guide 3		
Tree					
Shrub					
Ground cover					
Water					
Litter					
Earth					
Rocks					
Infrastructure					
Minimise threats					

FIGURE 13 Matrix of Needs worksheet for people to identify the unmet needs of people and animals in the neighbourhood.

During our Thinking Like an Animal activity one participant shared a story about a pair of Stumpy-tail Lizards living in her backyard and how one of them was recently run over on her driveway. She was distressed to read that this species pairs for life, but felt more positive on learning that by providing a basking site, more understory patches, and some fruiting and flowering shrubs, she is likely to attract a new mate for the remaining skink



FIGURE 14 Residents in the South Side read about the life and needs of native animals in their neighbourhood and evaluate their neighbourhood from the perspective of their chosen Animal Guide (Photo by Cassia Read).

13. Map potential

Awakening participants imagination and motivation about habitat creation follows directly after documenting what's missing and needed in the neighbourhood for people and animals to thrive.

For this activity, participants gather around a large (A1) colour satellite map. Together they identify and map potential greenspaces for transformation, both in their own gardens and on public lands. These 'Places of Potential' are coloured with highlighters as:

- 'Remnants needing care' where indigenous plants are threatened by weeds and traffic or trampling;
- 'Nudge-able gardens' where an established garden could be nudged to include more indigenous plants or habitat elements such as ponds, rocks, mulch or logs;
- 'Gardens-in-waiting' that are either bare ground or lawn, just waiting to be dug and planted with indigenous plants;
- 'Neglected Corners' that are unused and out-of-the-way spaces where habitat could easily be added, including spikey shrubs for nesting small birds; and,
- 'Drainage-lines' that are greenspaces where stormwater run-off could be slowed and retained and where indigenous plants and animals would benefit from creation of cool, moist habitat.

Once the places of potential have been delineated, participants are invited to identify and map 'Habitat elements we can add' to each place of potential. Everyone is reminded of the Habitat Mandala and then given coloured stickers, each colour representing a different habitat element, which they add to the neighbourhood map (Figure 15). Participants are guided to focus on elements that have already been identified as 'needed' during the preceding Habitat Evaluation activity.

This co-mapping exercise really picks up the energy in the group as they talk excitedly about what could happen in places that are currently neglected and dispiriting. The resulting Map of Potential is foundational in next steps of co-designing with deciding on priorities, mapping out future projects and a 'Best Next Move.'

Conversations during the mapping activities were energetic as people shared thoughts about animals they loved, what was missing from their neighbourhood, what they could add and where they could add it.



FIGURE 15
Map of Potential in the South Side neighbourhood.
 Places are identified with coloured highlighters representing different types of greenspaces:
 purple — gardens in waiting
 green — remnants needing care
 pink — nudge-able gardens
 orange — neglected corners
 blue — drainage lines
 Elements we can add are identified with coloured stickers:
 green stickers — trees
 red — shrubs
 yellow — ground covers
 blue — water
 Satellite map reproduced from Google Earth, 2023



FIGURE 16 South Side neighbours mapping Habitat Potential in their 'hood (Photo by Cassia Read)

14. Decide priorities

As participants experience a growing awareness of what needs to and can be done in the neighbourhood, they are raring to start making changes. But first they need to agree on priority projects and have clarity about the most effective way to create habitat in their neighbourhood. The goal now is to distil people's capacity, ideas and interests into a "Best First Move": a first step in 'Doing' that will grow the sense of community and spirit of learning while people act together.

Priority transformations

The Map of Potential is pinned up on the wall and everyone is invited to explore where and what people feel they can transform. Were locations most commonly in private gardens or naturestrips or other public lands? Were the types of greenspaces mostly 'Gardens in waiting,' 'Nudge-able gardens' or some other type of greenspace? What were people most comfortable planting? Were people keen to add non-living elements such as nest-boxes and logs or rocks?

Facilitators summarise priority transformations on a whiteboard, tabling priority places (tenure), priority greenspaces and priority transformations (elements to add). Images are presented that show what different habitat types (grassland gardens, shrubby woodland pockets etc.) might look like in the neighbourhood to help participants visualise the change.

Based on the most common habitat elements people would like to add to their neighbourhood, facilitators identify one of the Animal Guides that would most benefit from these habitat transformations. This animal becomes a 'Habitat Hero' to guide co-design.

Best first move

The group then brainstorms possible projects that could help realise priority transformations.

From these projects people vote on a single project and location that is seen as their 'Best First Move'. This is a starting project that both captures the neighbourhoods priorities, serves the needs of the Habitat Hero and that is the easiest first step to move the group into action. Ideally, the project is:

- In a place that people enjoy visiting or gathering and where people can easily start work in the near future;
- Of a type of greenspace that occurs commonly in the neighbourhood and that the community has a common interest in; and,
- Involves adding Habitat Elements that would benefit both the Habitat Hero and the people in the neighbourhood.
- Considers hazards such as fire, flood and urban heat and ensures the project doesn't increase the risk.

Grassy naturestrips are often identified as community assets where people are keen to work. In the West End people agreed that adding ground covers and shrubs would be the simplest first course of action, in terms of providing valuable habitat for wildlife, being generally appealing to the people, and not likely to conflict with Council policy or other residents.



15. Write a recipe for a refuge

In urban environments it's not always possible or appropriate to aim for recreating habitats that existed prior to colonisation. This means there is no benchmark for people to aim towards in their rewilding work. To address this issue, facilitators work with participants to write a "Recipe for a Refuge" that provides a model of what the community can work towards.

To write the recipe, facilitators first identify ecological requirements of the Habitat Hero, and illustrate these with an annotated sketch on a whiteboard or butchers' paper (Figure 17 overleaf). Specific ingredients (habitat elements) are then listed and their attributes are defined to meet ecological needs of the hero, including optimal distance between refuges and stepping stones, and the physical attributes of a refuge. Options for suitable plant species to include in the refuge are also listed.

Suitable plants species are identified using the 'Wilderhoods Plant Selection Tool' which lists 100 indigenous plant species from the Goldfields region, with information on their attributes. This tool enables participants to filter the list of plant species and to identify species that will provide benefits to desired wildlife, be tolerant of local environmental conditions and meet residents' criteria for garden design. We aim to expand this database for a wider range of regions over time.

Participants are then invited to visualise what a refuge would look like in their chosen place and how they would modify it to meet their own needs, to fit within Council policy and to minimise risks such as fire, snakes and management issues. Notes from participants are made directly onto the sketches. Facilitators then draw-up a final 'Recipe for a Refuge' in an annotated illustration. Because the hero is an animal that has habitat needs that overlap with other vulnerable animals in the neighbourhood, the recipe will also benefit other wildlife. A recipe can be followed in its entirety ('complete') or people can take elements from it to suit their particular circumstances.

Participants were tremendously excited by the potential of the Plant Selection Tool to inform planting in their gardens and naturestrips. West End participants responded to a demonstration about the tool with clapping and cheering.



Photo by Geoff Park

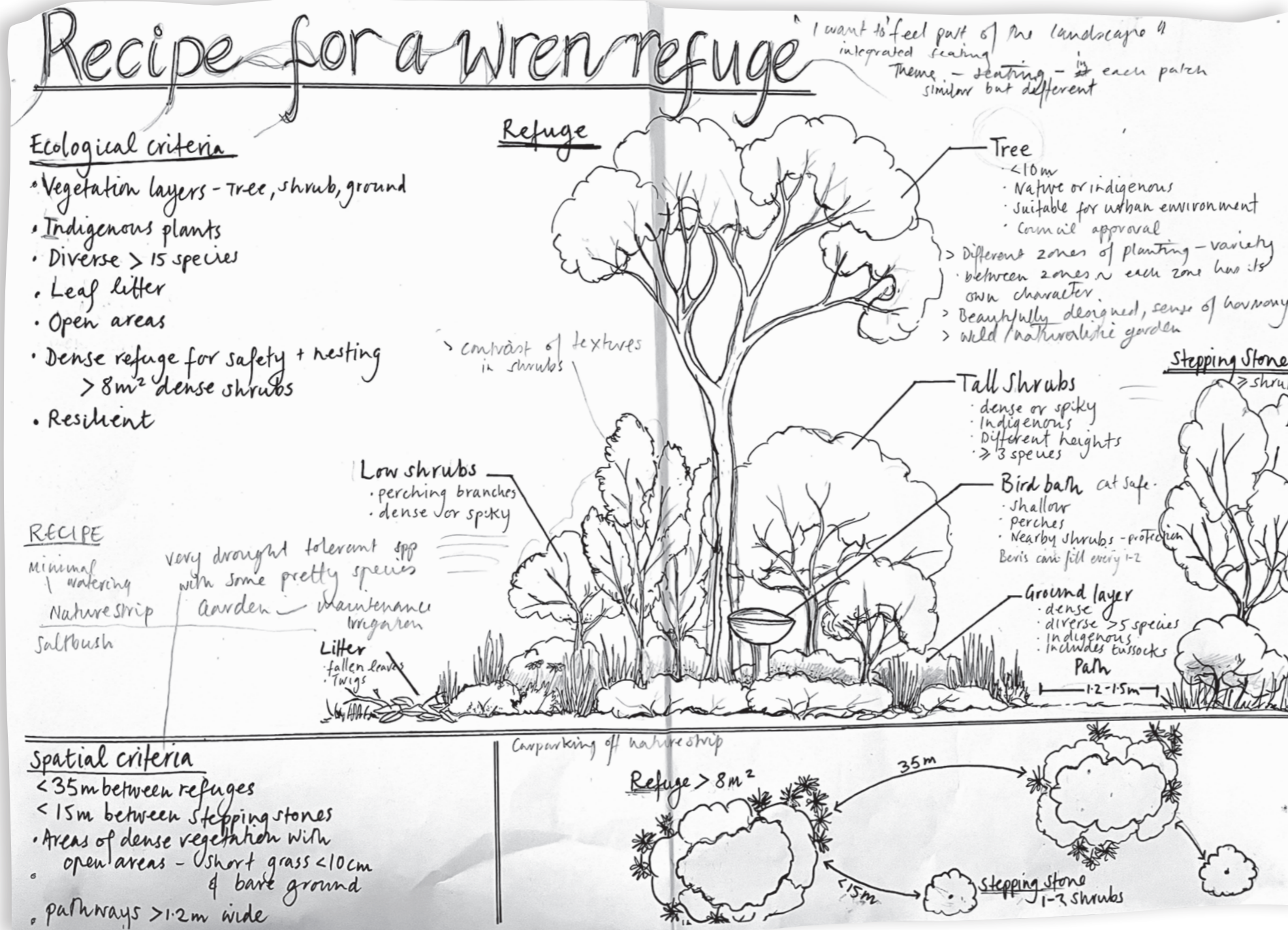


FIGURE 17 Annotated sketch of ecological criteria for Superb Fairywren habitat. Participants then annotate with their own requirements (Sketch by Cassia Read)

Doing



Neighbourhood direction

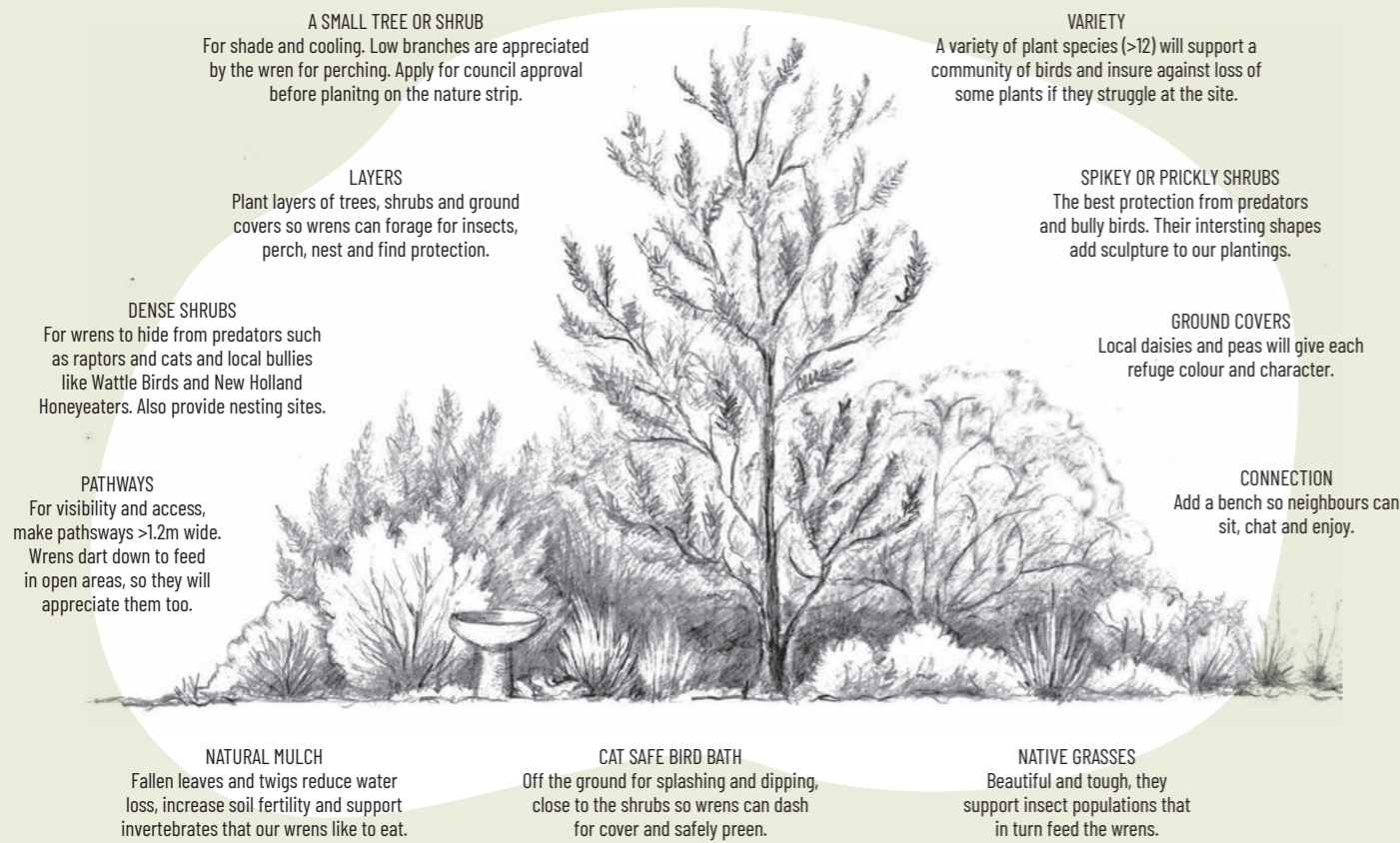
To help a new Wilderhood group move into 'doing', facilitators meet with the group informally to present resources (Recipe for a Refuge and Planting Guide) and to help the group map out a schedule of activities over the coming months.

This meeting is also an important opportunity to encourage an individual or core group to put-up-their hand/s to act as neighbourhood coordinators. The coordinator's role should not be too onerous, just requiring a reminder to be sent out for when activities are organised, answering questions, adding people to the mailing list and organising future activities.

This project is not about meetings and red-tape. For Wilderhoods to stay live within the neighbourhood the focus must be on neighbours getting together and enjoying themselves outside while they make rewarding changes to their neighbourhood.

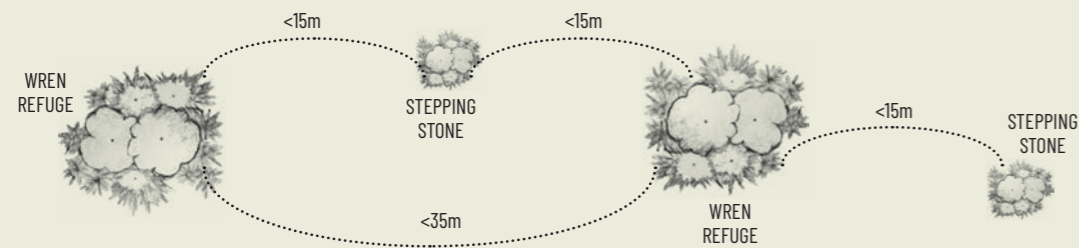
South side recipe for a wren refuge

This recipe is a guide to creating habitat for Fairy-wrens in our south side neighbourhood. You can follow the whole receipe 'completo' or you can take elements from it to suit your garden and needs. The more elements added across our neighbourhood, the more wrens will thrive here and the closer we will be to realising our vision of a beautiful resilient and welcoming neighbourhood that connects us to nature.



Grow a network of refuges and stepping stones

A **wren refuge** provides, food, water, safety and nesting opportunities for the wren, A refuge is an area >8m² of shrubs and low growing plants, adjacent to open areas with short grass or even bare ground where wrens can forage. Small trees can also be included. A **wren stepping stone** is a planting that allows wrens to travel safely through their territory. It includes 1-3 prickly shrubs.



Plants for a Wren Refuge

Tolerance to drought, waterlogging and compaction are listed as 4=very tolerant, 3=tolerant, 2=average, 1=not tolerant, nk=not known.

	Common name	Species name	Height (m)	Width (m)	Light	Cold (min °C)	Drought	Water-logging	Compac-tion
Grasses	Common Wallaby Grass	<i>Rytidosperma racemosa</i>	0.6	0.3	Full sun	nk	4	nk	nk
	Kneed Wallaby Grass	<i>Rytidosperma geniculatum</i>	0.3	0.3	Semishade to full sun	-5	4	3	nk
	Small Tussock Grass	<i>Poa sieberiana</i>	0.5	0.3	Semishade to full sun	nk	4	3	3
	Soft Spear-grass	<i>Auistrostipa mollis</i>	1.2	0.5	Semishade to full sun	nk	4	3	nk
Perennial flowers	Black-anther Flax-lily	<i>Dianella revoluta</i>	0.7	0.6	Semishade to full sun	-5	3	3	3
	Clustered Everlasting	<i>Chrysocephalum semipapposum</i>	0.8	0.4	Full sun	-4	4	2	2
	Common Everlasting	<i>Chrysocephalum apiculatum</i>	0.6	0.4	Full sun	-5	4	1.5	3
	Diggers' Speedwell	<i>Veronica perfoliata</i>	1	1	Semishade to full sun	-10	2	2	nk
	Hoary Sunray	<i>Leucochrysum albicans</i>	0.3	0.4	Full sun	-4	4	1	nk
	Late-flowered Flax-lily	<i>Dianella tarda</i>	0.7	0.6	Semishade	nk	2.5	2	nk
	Lemon Beauty-heads	<i>Calocephalus citreus</i>	0.5	0.3	Semishade to full sun	-4	4	3	2
	Sticky Everlasting	<i>Xerochrysium viscosum</i>	0.8	0.4	Semishade to full sun	-2	3	1.5	nk
Dense shrubs	Gold-dust Wattle	<i>Acacia acinacea</i>	2	4	Semishade to full sun	-5	4	2	3
	Common Correa	<i>Correa reflexa</i>	2	3	Semishade to full sun	-5	2	2	2
	Common Eutaxia	<i>Eutaxia microphylla</i>	0.4		Full sun	nk	4	nk	nk
	Rock Correa	<i>Correa glabra</i>	3	3	Semishade to full sun	-5	3	2	2
	Rosemary Grevillea	<i>Grevillea rosmarinifolia</i>	2	2	Semishade to full sun	-5	4	1.5	3
	Rough Wattle	<i>Acacia aspera</i>	2	2	Semishade to full sun	nk	4	nk	3
	Sticky Hop Bush	<i>Dodonaea viscosa</i>	3	3	Semishade to full sun	-5	4	2	3
	Varnish Wattle	<i>Acacia verniciflua</i>	4	3	Semishade to full sun	-10	4	4	4
Prickly shrubs	Bushy Needlewood	<i>Hakea decurrens</i>	5	4	Semishade to full sun	-10	4	2	nk
	Hedge Wattle	<i>Acacia paradoxa</i>	4	5	Semishade to full sun	-10	3	3	4
	Spreading Wattle	<i>Acacia genistifolia</i>	3	1.5	Semishade to full sun	nk	4	nk	nk
	Sweet Bursaria	<i>Bursaria spinosa</i>	3	2	Semishade to full sun	-5	4	3	3
	Tree Violet	<i>Melycitus dentatus</i>	4	4	Semishade to full sun	-5	4	3	nk
Ground covers	Creeping Saltbush	<i>Atriplex semibaccata</i>	0.5	3	Semishade to full sun	-10	4	2	3
	Matted Bush-pea	<i>Pultenaea pedunculata</i>	0.3	1	Semishade to full sun	-4	3	1	nk
	Nodding Saltbush	<i>Einadia nutans</i>	1	3	Semishade to full sun	-4	4	3	3
	Saloop Saltbush	<i>Einadia hastata</i>	0.3	1	Full sun	nk	4	3	nk
Small trees (local)	Buloke	<i>Allocasuarina luehmannii</i>	15	8	Full sun	-10	4	3	3
	Golden Wattle	<i>Acacia pycnantha</i>	6	3	Semishade to full sun	-10	4	4	4
	Lightwood	<i>Acacia implexa</i>	10	5	Semishade to full sun	-10	4	3	3
	Silver Banksia	<i>Banksia marginata</i>	6	5	Semishade to full sun	-10	4	3	2
	Wirilda	<i>Acacia provincialis</i>	6	6	Full sun	-10	4	4	4
Small trees (non-local, drought tolerant natives)	Cup Gum	<i>Eucalyptus cosmophylla</i>	5	5	Full sun	-5	4	nk	nk
	Round-leaved Moort	<i>Eucalyptus platypus</i>	9	10	Full sun	-5	4	2	2
	Wilga	<i>Geijera parviflora</i>	9	10	Full sun	-7	4	1.5	nk
	Willow Wattle	<i>Acacia salicina</i>	10	6	Semishade to full sun	-5	3	2	nk

Expert workshops

Over time a Wilderhoods group may wish to engage local experts who can teach skills and provide information necessary for projects to succeed. Possible workshops include: soil rehabilitation and site preparation, plant propagation, a bird walk, plant identification, a talk about local microbats, pollinating insects, lizards or frogs, and information sessions on wildlife monitoring, planting methods, building of nest boxes and useful apps for species identification.



FIGURE 19 Dr Jess Drake teaching the South Side neighbourhood about how to rehabilitate their compacted soils (Photo by Cassia Read).



FIGURE 20 Plant propagation workshop with Frances Cincotta from Newstead Natives



FIGURE 21 Dusk workshop about microbats with Dr Emmi van Harten (Photo by Cassia Read)



FIGURE 23 Weeding the naturestrip to create Grassland Gardens for Pollinators in the West End (Photos by Allie Hanley)

Neighbourhood Action

The Wilderhoods workshop series leaves participants feeling more connected to the people in their neighbourhood and to where they live. Most participants express a wish to continue working together. Both the West End and the South Side neighbourhoods have continued to meet monthly since the workshop series finished, with volunteer coordinators who have put up their hands to organise the groups.

The West End has been working across their neighbourhood to create 'Grassland gardens for pollinators,' and the South Side neighbourhood has been rehabilitating a highly compacted ground on a naturestrip to create a Superb Fairy-wren refuge that will also become a showcase of a beautiful indigenous garden for the neighbourhood. Both Wilderhoods groups continue to attract new members as neighbours chat about the project and people want to join in the action.



FIGURE 22 South Side neighbours working to rehabilitate compacted soils before they grow a Wren Refuge. (Photos by Ada Nano (top) and Cassia Read (middle & bottom))



"Loved the whole experience"

WILDERHOODS EVALUATION

Name (optional) _____

Workshops attended (circle):

I (26th Mar)

II (25th Apr)

III (7th May)

Please score the following questions as follows: Score 1 – 5 (1=very poor, 2=poor)

How would you rate your sense of connection, level of knowledge, motivation following, both **before** and **after** the Wilderhoods workshop series?

Connection to place (the West End)

Connection to neighbours

Connection to wildlife

Connection to the West End neighbourhood

Connection to the West End for habitat creation

"Wilderhoods has increased my enthusiasm and knowledge in growing native plants and improving habitat. I'm inspired to get to work along with neighbours and hopefully inspire other neighbours to join in"

"The greatest impact I experienced as a result of participating in the Wilderhoods series is increased 'connectedness' with West End as a place and with neighbours – human and non-human".

"I love the way I feel after the workshops. They make me feel so positive and optimistic. It's not like anything I've ever done before."

"I have loved the Wilderhoods sessions. I have learnt so much. The concept of Global Warming is huge and it is easy to feel overwhelmed. But here we are, working away, doing our little bit and every time I see a new bird in the area, or bees or ladybirds, or I recognise a native plant I didn't know the name of before, I do feel more empowered."

"Being involved in this Wilderhoods pilot has created the groundswell, and the most valuable, well thought out and essential resources that give this project the building blocks to make the West End an even better place for humans, animals and insects to live together."

Participant feedback

Response to Wilderhoods has been overwhelmingly positive, with participants reporting significant positive change to their wellbeing, connection to nature, neighbours and the place where they live. A summary of our post-workshop survey from the West End is included below.

At the end of the workshop series, ten participants rated their sense of connection, level of knowledge, motivation and skills in a range of questions, both before and after the Wilderhoods workshop series. Questions were rated on a scale of 1-5, where 1=low and 5=high. The ‘average change’ in participants response is presented.

Rate yourself in terms of your sense of connection, knowledge, motivation and skills, in the following areas on a scale of 1-5 (where 1=low and 5=high)	Average change in score
Connection to place (the West End)	1.2
Connection to neighbours	1.2
Connection to wildlife	1.6
Knowledge of wildlife in the West End neighbourhood	1.8
Understanding the potential of the West End neighbourhood for habitat creation	2.4
Motivation to create habitat	2.2
Skills and confidence to create habitat in the West End	1.7

Key References

Garrard, G.E., Nicholas, S.G., Mata, L., Bekessy, S.A. (2018). Biodiversity Sensitive Urban Design. *Conservation Letters*, 11: 1-10.

Hernandez-Santin, C., Amati, M., Bekessy, S. and Desha, C. (2022). A review of existing ecological design frameworks enabling biodiversity inclusive design. *Urban Science*, 6, 95.

Regenesis (2020). *Course notes for the Regenerative Practitioner*. Regenesis Group Inc. Arlington.

Sanford, C. (2020). *The regenerative life: transform any organization, our society, and your destiny*. Nicholas Brealey Publishing, Boston.

Williams, B. K. (2011). Adaptive management of natural resources: framework and issues. *Journal of Environmental Management*, 92: 1346-1353.

Yunkaporta, T. (2019). *Sand Talk: How indigenous thinking can save the world*. Text Publishing Company, Melbourne.

