

GREEN INFRASTRUCTURE CASE STUDY: COMMUNITY GARDEN THE JOINERY, FRANKLIN STREET, ADELAIDE

Green infrastructure is a green network - of green spaces, street trees and other vegetation (including wetlands, rain gardens, and green walls and roofs) - strategically planned, designed and managed to support the liveability, sustainability and resilience of an urban area. Green infrastructure is integrated, connected and multifunctional. It is integrated with development and other infrastructure, it links existing and new green assets across the public and private realms, and it provides multiple social, economic and environmental functions. Green infrastructure is essential infrastructure for our cities and towns.

This is one of a suite of case studies demonstrating how various types of green infrastructure were planned, designed and delivered, how they're maintained, and the challenges and lessons along the way.

PROJECT OVERVIEW

Common Ground, a not-for-profit housing cooperative, have created an oasis in Adelaide's west end where the community can come together to share the rewards of gardening. A wide range of vegetables, herbs, fruit and companion plants inhabit garden beds built on top of a disused asphalt bus park at the old Franklin Street bus station.

An asphalt bus park has been replaced with:

- 220 m² of raised garden beds featuring vegetables herbs and companion plants
- 15 fruit trees in barrels and mounds
- living wall.

This project is located at The Joinery, which houses an inspiring mix of environmental, sustainability and community groups, hosted by the Conservation Council SA.

ABOUT THIS SITE

ORGANISATION

Common Ground is a not-for-profit organisation providing real solutions for homelessness.

SETTING

Community garden

GREEN INFRASTRUCTURE FEATURES

220 m² of raised garden beds featuring vegetables herbs and companion plants
fruit trees growing in barrels and mounds
living wall made from a pallet

COST

Donations, grants and in-kind support.



GREEN INFRASTRUCTURE FEATURES

The community garden comprises raised garden beds on top of the asphalt with mulch around them to improve aesthetics, water retention, comfort underfoot and provide a medium for self-sown plants. Recycled materials including wine barrels and packing cases have been used to build additional beds that are filled with productive plants.

Fruit trees have been established in barrels and directly into mounds of soil/compost and mulch on top of the asphalt. There are 45+ productive plants and most of the plants have been donated or propagated on-site in a polycarbonate-covered tunnel over a trough made from recycled iron sheeting. Some are surplus plants from Adelaide City Council's nursery or have been purchased through a council grant. Members of the public also drop off plants as part of a plant rescue program, which has led to an eclectic mix of productive, native and ornamental plants. Every Friday people gather to share lunch, reclaimed by OzHarvest (www.ozharvest.org/) and work in the garden: watering, weeding, raising seedlings and tending the beds.



WICKING GARDEN BEDS

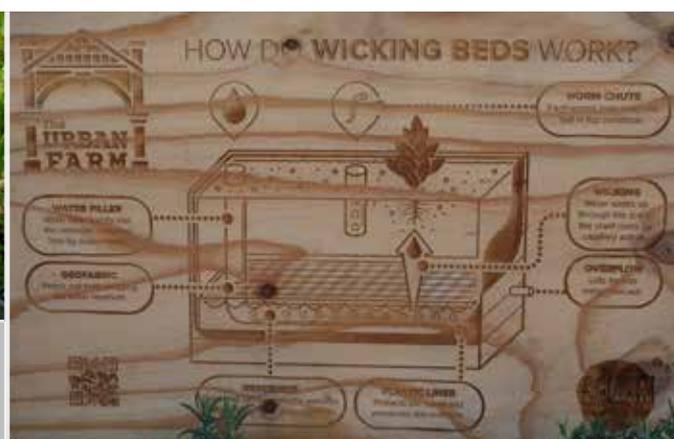
Six of the raised garden beds have been retrofitted as wicking beds. Wicking beds use a bottom reservoir of water separated from the soil via a permeable layer that enables plants to receive optimal watering with little effort. In this case the garden beds have been lined with builders' plastic sheeting, upon which the soil is placed, separated from the wicking medium by a geotextile fabric (permeable fabric) that separates the soil from the reservoir. Water rises via capillary action into the soil which the plant roots take up and enhance the wicking process via transpiration. A PVC pipe enables direct refilling of the water

reservoir while an overflow pipe at the top of the reservoir prevents waterlogging of the soil. Worm feeding stations are also used with organic matter added to feed the worms and increase plant productivity.

These particular wicking beds are made of re-used polystyrene boxes sourced from the nearby Adelaide Central Market. It is expected that the polystyrene boxes will be stable for a long time given they are protected from the sun and damage by the beds and the soil.



Wicking beds use a bottom reservoir of water separated from the soil via a permeable layer that enable plants to receive optimal watering with little effort.



CHALLENGES AND LESSONS

- The Common Ground community garden is a fabulous showcase for, small-scale urban food production. The highly visible location on Franklin Street enables passers by to watch progress and follow the changing seasons in the productive garden.
- Using soil on top of asphalt in an exposed north-facing site has created very tough growing conditions for the plants, especially the annual flowers and vegetables. Watering of standard garden beds built directly onto the asphalt was taking several hours per day in summer which kept the plants alive but did not lead to high levels of productivity.
- The soils in these standard garden beds rapidly became hydrophobic during summer and resisted watering. The soil needed to be dug up, mulched and loosened to get water to penetrate, which led to loss of productive plants and additional work by volunteers.
- There is a high level of community interest in wicking beds for food production. A wicking bed workshop for 30 people run in July 2016 by Steven Hoepfner of Wagtail Urban Farm was fully booked weeks in advance.
- Wicking beds use much less water and enable high levels of productivity year round with maximum food for minimal work by the volunteers. Vegetables grown in the wicking beds (pumpkins, zucchini, corn, tomatoes) have shown high tolerance to summer heat with no wilting, unchecked growth and high levels of productivity. A comparison of tomato plants, planted at the same time in the wicking beds and in the regular above-ground beds, showed that the plants in the regular beds were more stunted, less productive and fruited later than those in the wicking beds, even though the tomato plants in the regular beds were watered daily during summer.
- The highly visible location is excellent for education and raising public awareness but is subject to vandalism and uncontrolled 'raiding' of the garden. More signs and plant labels are being installed to identify the plants and show people which parts of the plants to pick without causing damage.
- Vermin such as rats are a constant problem. Traps and other control measures are being used but there is an acceptance that vermin are part of the city environment and are unavoidable.
- Seedlings are being sold at the café in The Joinery. Sales appear to be dependent on how many seedlings are on display the more seedlings on the racks, the more that are sold!
- A chicken shed and run, housing four chickens, has recently been installed to recycle garden and food waste into eggs and generate manure for the garden beds.



Common Ground has created a productive and educational community garden on a disused asphalt bus park that provides volunteers with free, healthy food and an inspiring connection to nature and the community in the heart of the city.



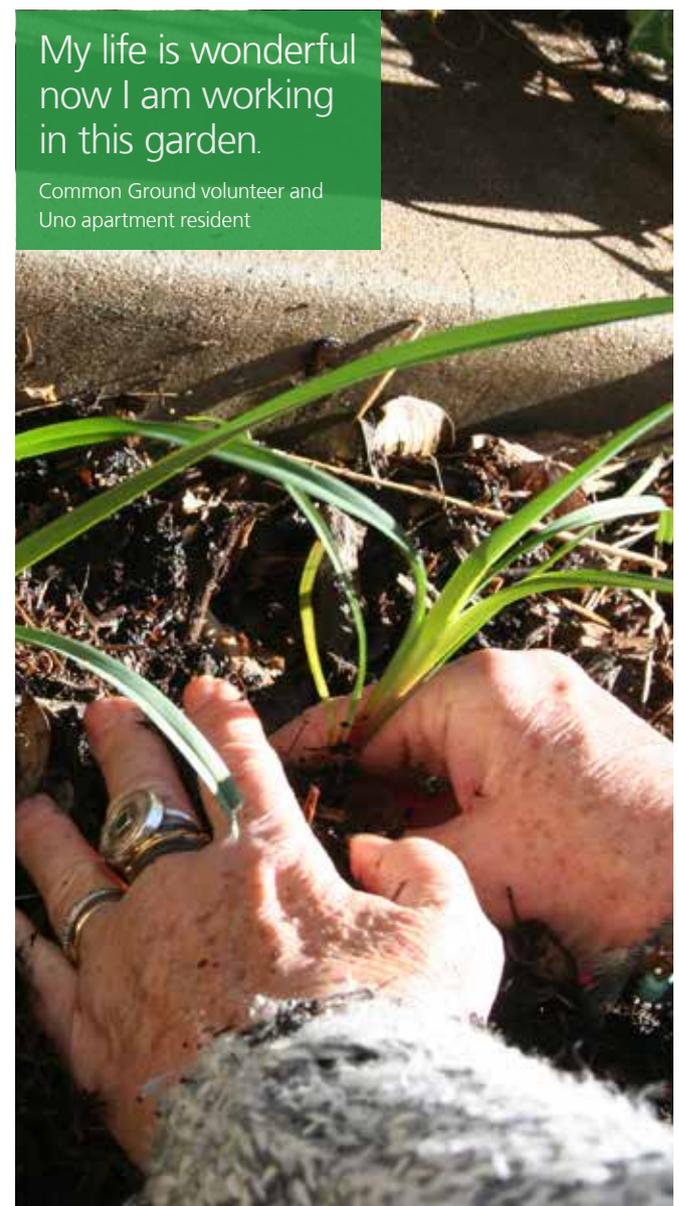
FUTURE OPPORTUNITIES

Volunteers consume most of the produce at the current levels of production. There are plans to expand over time, especially with the labour and water-saving wicking beds and a planned irrigation system. This will increase production and allow volunteers to give away or sell more of the fruits of their labours. A social enterprise system is being developed where seedlings and produce are labelled by the volunteers that grow them so that sales can go back to the garden or directly to the worker.

Opportunities for integrating with the nearby Adelaide Central Market are also being explored. For example, setting up school tours of the market and the community garden with use of The Joinery conference room for lunches and presentations. Another idea is to establish a large-scale worm farm for composting food waste from surrounding businesses.

Installing a frog pond to increase biodiversity and natural pest control, housing silk worms for educational purposes and keeping bees are being considered.

There is an agreement with the Conservation Council SA that the community garden will continue to be housed at the current site. The lease has recently been extended until to 2020.



EDUCATION AND COMMUNITY

- Conservation Council SA hosts the community garden and uses the site as a showcase for urban food production.
- The primary focus of the community garden is to provide therapeutic gardening opportunities for Common Ground tenants who are on low incomes, many of whom have a history of homelessness.
- It is also designed to educate, inspire, involve and connect city dwellers with food and ornamental garden plants. The garden helps people to understand the changing seasons and observe natural cycles and connections in a city environment.
- The volunteers, the majority of which come from Common Ground's nearby social housing, do most of the work in the garden. They have the first pick of produce.
- Some of the volunteers have used the garden to gain experience in gardening and nursery skills that they have used to gain employment or further training.

MAINTENANCE

A part-time Common Ground employee and a changing group of volunteers do all the work on-site. The main tasks of raising seedlings, planting them out, weeding and watering can take several hours per day in summer but it is hoped that the installation of the wicking beds will reduce this markedly.

PROJECT DELIVERY

LANDSCAPE PARTNERS

Steven Hoepfner, Wagtail Urban Farms.

RAISED GARDEN BEDS AND PLANTS

Mostly donated by, or bought with grants from, the Adelaide City Council.

WICKING BEDS

Constructed by volunteers and Common Ground employees.

Supported by the Adelaide Sustainability Centre, Adelaide City Council, Common Ground, Bunnings Warehouse and The Original Green Co.



Disclaimer: While every effort has been made to verify the accuracy of items in the Department for Environment, Water and Natural Resources' case study fact sheets, independent advice should be sought on matters of specific interest.



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Photos: Kelly Muller.

FOR FURTHER INFORMATION

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