A VISION FOR A GREENER CITY
THE ROLE OF VEGETATION IN URBAN ENVIRONMENTS

October 4, 5 & 6, 1994
Fremantle, Western Australia.

Proceedings
ABSTRACT

Many residents in the South Fremantle area have spoken of the need to enhance their under-utilised vacant land and treeless street verges by having intensive native planting, community gardens and groves of fruit and nut trees. Consequently some 50 residents came together to form Fremantle Inner City Agriculture (FINCA) for the development of a vacant block in South Fremantle into an organic community vegetable garden with appropriate technologies for water management and pest control. It involves close collaboration among community members, Murdoch University and Fremantle City Council (FCC).

Through participation in training workshops FINCA members have been developing skills and have completed the first demonstration plot - the Beaconsfield Out of School Care Centre. The themes implemented here are soft fruits for the children (including quandong), native species for nitrogen fixation, windbreaks and bird attraction, rainwater harvesting, earthworks for erosion control and heavy mulching for water conservation and soil building.

A challenge for this project has been the collaboration of 'permaculture' advocates, unpopular for their use of 'environmental weeds', and 'purist' landscape ecologists who find useful exotic species hard to accept even in urban areas. The Beaconsfield Centre show how the two approaches can be combined in a sustainable manner in certain urban settings.

The 'greening' of increasingly popular older suburbs will not only bring a rural feel to inner city areas but will facilitate sustainable use of land, productive use of stormwater and greywater, an improvement environment for birdlife, meaningful social interaction and an alternative means of complementing their food needs.

1. A NEW APPROACH TO URBAN LANDSCAPES

Community gardens can enhance urban areas with a rural feel as well as providing many of the functions of rural areas. Local residents can grow and harvest produce from them while learning about landcare and gardening at the same time. They become sites of meaningful social interaction in their development, evolution and seasonal changes. Community gardens are self-sustaining, multiple use, public open spaces in the emerging medium to high density Australian city. The new city landscape will have a truly urban feel as opposed to the current, outmoded automobile sprawl.

Conventional parks and gardens can be uninviting, inhospitable places with little creativity. They are characterised by that great Australian icon - the lawn. In fact, this is probably more un-Australian than some of our other European cultural baggage. George Seddon (1994) has noted that the lawn has its origin in the forests of Europe of centuries past where tribes would clear areas to see the enemy as they approached to attack. The traditional owners of Australia may have done the same to provide open grazing areas for kangaroos. The lawn also featured in previous centuries' lavish country estates of the French and English upper classes. The fruit and vegetables were grown elsewhere by the servants. Today many ordinary Australians and local government authorities are preoccupied with emulating these vast, open, green spaces. Growing food is relegated to beyond the city limits. However, for the large part Australia needs oases in the desert with efficient use of water.

Lawns take some 40% of Perth's metropolitan water supply after it has received sophisticated treatment, followed by chlorination and fluoridation, to meet NH&MRC standards. The application of garden fertilisers in residential areas contributes more phosphorus to catchments than sewage disposal, detergents and animal wastes. Residential areas are also only second to orchards in the amount of phosphorus and nitrogen they contribute to catchments (Gerritse, 1993). Lawns are not an environment-friendly option for private gardens or public open space in dryer climates, catchment areas or above aquifers and should perhaps be restricted to sporting venues with careful maintenance.

The community garden also has its origins in the past - but not in that of the aristocracy. The 'commons' was once a feature of urban and rural areas alike where ordinary folk could graze their livestock, grow some crops and pick produce from fruit and nut trees. Community gardens have remained here and there in the cities of Europe and are widespread in 'developing' countries. They have begun to appear in Canberra (Cornhill, 1993), Sydney and Melbourne.

2. VALUES OF COMMUNITY GARDENS

The values of community gardens are manifold. They provide opportunities for the public to garden, grow food, and work with nature, while at the same time living in a medium density urban environment. They provide a space for learning, social activity,
cultural exchange, community art and ‘community science’. They can provide a place of beauty for contemplation, or a pleasant stroll. In short, they are productive, empowering and regenerative of the human spirit.

3. THE NEED FOR COMMUNITY GARDENS

As population pressures increase in urban areas the quarter-acre block gives way to infill developments allowing an increase of population density and placing greater demand on public open spaces. Typical parks of lawn studded with a few trees offer certain recreational activities to the public though little protection from strong summer and winter winds. With increasing density a greater number of people become dissatisfied with these spaces and seek alternatives. The peri-urban hobby farm will only add to the urban sprawl. In Australia people on suburban blocks are beginning to adopt approaches to their gardens of water sensitive design and sustainable food production. Moreover, local groups have enhanced their parks with community arts projects including attractive entrances, installation of creative benches, colourful mosaic pathways and unusual sculptures. In addition to these approaches community gardens foster ‘community science’ (Stocker, 1994) wherein members of the public can experiment with food production and regeneration techniques. The community garden offers a solution to the needs of people in Australian cities of increasing densities in the style of earlier ‘urban commons’ while retaining an “unashamedly” urban character (Newman, 1991).

4. ENVIRONMENTAL ADAPTATION

Changes in climate due to the greenhouse effect are expected to be significant over the next 50 years (CSIRO, 1994). These will include an average temperature increase, total rainfall decrease, rainfall event intensity increase, pan evaporation increase. There could be a 50% increase in extremely hot days. It is therefore more important than ever to change some current water management practices across the fields of agriculture, land management, wastewater disposal, etc. Techniques of water harvesting and conservation in gardens, farms and landscapes in general need to be implemented on a much broader basis. Community gardens can provide an excellent opportunity for raising community awareness on these issues and learning experiences in land management techniques.

5. TYPES OF COMMUNITY GARDENS

There are many different possible types of community gardens. They may have a focus on bush tucker, accessible garden beds for the disabled, herbs, annual vegetables, fruit, nuts or bush regeneration. Gardens specially for children can also be created. They can draw on the local culture and heritage for community arts. Community gardens will to a large extent be designed around site conditions but the design will be determined by local residents to meet their needs and desires. Combined with medium density dwellings, urban villages and effective public transport they can inhibit the urban sprawl that we see today eating away the last of the bushland within and at the perimeters of Australia’s cities and wasting valuable petrol and related resources.

The land under community gardens is generally public open space but has sometimes been private or vested in community groups. Community gardens have appeared in the form of individual allotments, city farms, perennial parks or community plantings on small portions of public open space. These are either discrete entities or attached to institutions or larger community groups.

In Perth there are the individual allotments at APACE in North Fremantle which are rented to local residents for a small fee. The allotments are used for the cultivation of annuals by means of a variety of techniques. The land is leased to APACE from the Council and the allotments form only a small part of their many important community activities. Individual allotments are the basis for community gardens in Canberra (Cornhill, 1993) and throughout Europe and North America.

The CERES city farm in Brunswick, Melbourne is well established providing thousands of schoolchildren and many other people a rural educational experience in the heart of the city. In Perth, The Men of the Trees have supported the East Perth City Farm under development with long term unemployed through the DEET - LEAP program. The land has been leased to the group from the WA’s East Perth Redevelopment Authority.

One example of an established and well-maintained perennial park is that developed by the Shenton Park Permaculture Group at 32 Onslow Road. This is situated on a private block of land of some 800 square metres. Courses in permaculture are conducted on site for the general public. Other larger permaculture gardens in the metropolitan area open to the public
include the Environmental Technology Display Centre at Murdoch University, the Fremantle Permaculture Centre at 22 Swan Street, Harmony Farm at the Perth Zoo and another at Bentley College of TAFE.

Community planting projects, particularly using indigenous species, are evident in most parts of Australia and come in the form of ecological restoration, area beautification or agroforestry, although the latter has not been seriously attempted for urban areas in Australia. Throughout Perth many community ecological restoration projects have been undertaken. In Hilton, Perth local residents planted a corner of Grigg Park with a mix of fruit, nut and native trees under thick mulch with a view to having a small orchard for the neighbourhood to harvest. Local government occasionally tries street plantings of hardier species such as olives.

6. THE EMERGENCE OF FINCA

In South Fremantle, a number of residents had spoken of the need to enhance their public open spaces (POS) and street verges with more intensive native plantings, groves of fruit and nut trees and spaces for vegetables and herbs. They formed themselves into an alliance known as FINCA (Fremantle Inner City Agriculture) which is also Spanish for 'farm', and set about organising to develop a site into a community garden. The following timeline provides a summary of their events to date:

- **October, 1993**  Public meetings commence at Parmelia Park to discuss possibility of converting one corner into a Community Garden.

- **February, 1994** After numerous meetings and consultation FINCA gave up after concerns were raised by some local residents.

- **March, 1994** Negotiations with Council on use of one of 16 possible sites for the Community Garden. Council instead recommended Education Dept land. Receipt of National Landcare Program grant of $19,483. Training program in bush regeneration and permaculture commences for local residents.

- **April, 1994** FINCA prepares Concept Plan for Education Dept site.

- **May, 1994** Approval of Concept Plan by full Council and forwarding to Education Dept.

- **June, 1994** Receipt of $1,930 from Gordon Reid Foundation for Conservation to prepare a Green Plan for South Fremantle. Education Dept advises it will take 6 months to decide on land use. FINCA requests reconsideration of the 16 Council POS sites. Permaculture garden installed at Beaconsfield Out of School Care Centre as part of FINCA training program.

- **July, 1994** Receipt of second year grant of $17,566 from NLP. NLP freezes funds until access to land is secured. Council negotiates with developers use of POS on the 'Biscuit Factory' site for FINCA. Ten minute documentary video produced promoting FINCA concepts.

- **August, 1994** Councillors recommend use of King William Park which is endorsed by local residents in public meeting. Community-based planning and design of garden commences.

- **October, 1994** FINCA Green Plan completed and presented at Greening Australia conference.

7. UNDERSTANDING THE PROCESS - OPPORTUNITIES AND CONSTRAINTS

FINCA underestimated the time-consuming machinations of Council process. Some Councillors and Council officers were initially uncertain about the form the community garden would take.

Some older residents near the first proposed Parmelia Park site claimed the FINCA concept was incompatible with the original intent of 'Fowler's Bequest' (a piece of land inherited by the council, and to be maintained by them, for the use and benefit of local children) and expected the following problems:

- leaves would block their gutters;
- the trees would be uprooted by vandals and thieves;
- trees would be used as a screen to climb fences and burgle houses;
- vagrants would come to inject drugs, drink alcohol and smash bottles.

While some people proposed designs that could possibly overcome these problems it was finally agreed to take the concept elsewhere.

The second recommendation by Councillors was to gain a lease on Education Department land. This land, now used by the District Offices, was formerly part of a State Primary School. When it became apparent to FINCA that the combined processes of
two large bureaucracies may take too long, the 'Biscuit Factory' urban village site was suggested to FINCA by a Councillor as a possible alternative. The developers hoped FINCA could coordinate community involvement to develop their public open space as required by Council. The Council saw FINCA as an opportunity to show the residents when they arrived that it was indeed a "public open space". Negotiations with the developers are continuing. This site is seen by FINCA as additional to the proposed Community Garden, rather than as an alternative, however. King William Park was finally suggested by Fremantle South Ward Councillors as a Community Garden site on which NLP funds could be spent. Adjacent residents nearby had recently been complaining to the Council about the lack of vegetation in this park. FINCA will be able to improve this situation by developing a Community Garden on the site.

In the meantime, FINCA had been using the NLP funds as well as local voluntary expertise to run training programs for residents in bush regeneration and permaculture. This had resulted in the tranformation of the front yard of a local child care centre into a "food forest" - a grove of fruit trees. This site included rainwater harvesting from an adjacent basketball court into a swale, roofwater harvesting into the other side of the garden, heavy mulching for water conservation and soil building, soft fruits for the children and native species for windbreaks, nitrogen fixing and bird attraction. A 10 minute video documentary was produced, based on this garden development, which promoted the FINCA objectives. A small grant was also received from the Gordon Reid Foundation for Conservation to develop a draft Green Plan for the region. This enabled FINCA to see the proposed community gardens in the context of the larger bio-region as well as developing a broader urban greening vision.

Some FINCA members, however, had earlier become despondent about the lack of progress in securing a site and had not participated any further. In addition, the DPIE National Landcare Program funds attracted by FINCA were frozen because of the delay in finding a suitable Community Garden site.

The lessons learnt here by FINCA are that there are many non-technical barriers to the introduction of the community garden concept to urban areas - including the above social and political issues. A policy barrier exists in that the Council does not have a policy on community gardens. There are currently no well known models by which to assess the FINCA proposal as a 'Parks and Gardens' strategy. Other social barriers to community gardens will include a lack of time on the part of local residents to assist in design, development and maintenance. Parmelia Park represented cultural-historical issues. There will be institutional barriers, for example, in obtaining certain land use approvals, reuse of wastes on site, water connections or stormwater harvesting and conditions imposed on the use of grants.

Many of these constraints or problems can become opportunities and these will emerge out of a concerted effort in community consultation between residents, Councillors and Council officers. In fact, out of necessity, the problems for the Council will become FINCA's opportunity. If the various constraints and opportunities can be understood at the outset it will nearly always be possible to negotiate the acceptance of community gardens in the urban planning process.

8. CONCLUSIONS: FINCA COMMUNITY GARDEN PARAMETERS

The time taken by the Parmelia Park meetings and Council process proved advantageous for FINCA in that it was able to develop a clear vision and a set of objectives through community consultation.

The public meetings revealed that individual allotments, fences or a predominance of annual flowers and vegetables were not desired in the community garden. A low maintenance, low water use garden was preferable with stormwater harvesting and greywater reuse. Aquaculture for food production, aesthetics and constructed wetlands could be included. A combination of permaculture and bush regeneration techniques should be used. The garden should be conceived through a community, creative design process as part of training programs for local residents. This would then impart some the knowledge necessary to undertake the works. Community artworks were conceived with the help of local artists. The site should be nearby to most of the residents so that whenever the urge and small amount of time arises, one can quickly 'nip around the corner' to attend to some brief maintenance chores. Close proximity means walking or cycling instead of motor cars. It should preferably be within a large residential area so that pedestrians with babies in prams won't need to cross major roads. There is no limit to size.

An interesting feature of FINCA's formulation of community garden objectives was the nexus of bush regenerators and permaculture advocates. During the process they worked to resolve a number differences in viewpoints. Many local native species were identified.
for their function within the permaculture concept. The issue of environmental weeds was resolved through careful selection and management techniques. Many of the permaculture principles (Mollison, 1991) would be employed in the design.

The principle of energy cycling (through the efficient use of locally available materials, reuse of domestic wastes such as greywater and recycling of industrial wastes for larger site developments) is particularly relevant in our urban areas. Joineries incinerate their sawdust, fish & chicken processors bury their offal, the Water Authority incinerates or anaerobically digests its sludge, pie factories bury their damages and surpluses and so it goes with many urban industries exporting their organic by-products to rural areas. These should all stay with the City to be processed by composting and vermiculture and returned to community gardens. Meanwhile, the rural orchards, pastures and fields are producing the food we eat. But that is not all we import from them for they aren't all that far away in ecological terms. The rural areas are often within the very same catchment areas that result in the contaminated waterbodies alongside Perth, Mandurah and Albany.

Community gardens can be part of the broader greening strategies now being proposed for urban areas. As part of a restructuring of our cities they can help to reduce the urban sprawl, lessen our dependence on rural produce and form part of green corridors through which fauna, cyclists and pedestrians can move. They provide a perennial form of food production and social interaction. Combining them with a total waste management strategy begins to make our cities more sustainable.

Including community gardens in 'A Vision for a Greener City' now will make them a reality of urban landscapes in the future. The FINCA case demonstrates how this approach can be initiated through small, local community groups of people keen to transform their own living environment.

REFERENCES


CSIRO (1994), Regional Impacts Study.


Seddon G (1994), public lecture, University of WA.


N.B. The authors are all active gardening members of FINCA.

ACKNOWLEDGMENT

The support of Fremantle City Council DPIE National Landcare Programme - and the Gordon Reid Foundation for Conservation is gratefully acknowledged.

Proc. 1994 National Greening Australia Conference