1. Introduction

Following the successful development and launch of the Northcote Library Food Garden recently, there has been community interest in the extension of this project to incorporate a larger site, capable of growing a wider range of plants and fruit trees. This has led to the possibility of an urban Food Forest as an adjunct to the Food Garden.

This proposal is to establish a food forest, complementing the existing master plan, at All Nations Park, which will be planted and managed using permaculture and sustainable gardening principles. Such a food forest will host a diverse range of useful and edible varieties of trees, shrubs and herbs. The aim of this project is to raise awareness about food security, demonstrate an ecological model of urban agriculture and increase community connections and wellbeing. The local community would once again be involved in planting and caring for this garden, as they have previously done at the Northcote Library Food Garden.

2. Food Forests

Food forests are intensive food production systems that emulate a natural forest in their design, the main difference being that we choose the trees and plants that go into the food forest system, specifically those that are useful to us in providing food and materials that we require. They are one of the most sustainable and productive food growing systems that we can construct.

Unlike many conventional gardening systems, food forests are rich, abundant living ecosystems, and as a result, offer many benefits beyond traditional garden plots. Since they emulate natural forests (which require very little human intervention), they require less effort to maintain. They also provide a habitat which can support a diverse range of living things, from soil biota and plants, through to insects, lizards and birds. By providing a home for these creatures, food forests gain the advantage of natural pest control, as these residents will consume the majority of pests encountered in gardens.

A food forest is unique as a gardening system because it does not consist of a single level of trees such as an orchard, or a single level of vegetables such as in a regular garden bed. It is made up of multiple layers of trees, shrubs, herbs, ground covers, climbers and root crops, each occupying a different level. Using this system, high biodiverse intensive system can be constructed which can produce much higher yields than a regular garden, and a far wider range of produce all year round.

Food forests also extensively utilise 'companion plants' – beneficial plants which increase the health and vigour of other plants, attract beneficial insects and also repel pests. This element of the design provides an excellent opportunity to demonstrate to the community the benefits of companion planting, which creates less reliance on harmful toxic pesticides.

Most importantly, from a community perspective, food forests create a focal point in the local community, a place where people can gather in a public space and interact meaningfully with each other while working towards a common goal maintaining the garden, harvesting food, or simply enjoying the abundant, vibrant natural setting. Food forests are aesthetically pleasing, combining the shapes and colours of nature to create a relaxing atmosphere, where people can observe fruit, flowers and lush plants growing through the cycle of the seasons, watching the vista change from month to month. Food forests are also very children-friendly spaces, wonderful sensory gardens where children can safely interact with the space and harvest fresh fruit.

Furthermore, such a project can serve as a demonstration site, inspiring people to grow their own food at home and try new ideas in respect to sustainable gardening. It can also attract people who are more formally interested in learning about community based sustainable gardening, who wish to create similar productive forests gardens in their own local communities. Such a site would hold great educational potential for the local community.

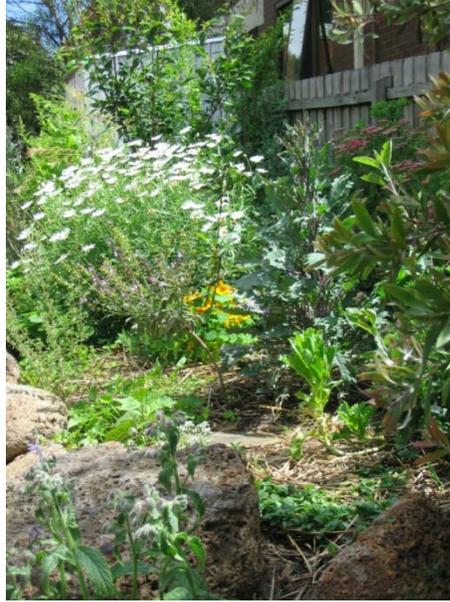Pictured below are examples of local food forests located in Darebin and nearby areas:

Urban Backyard Food Forest by Angelo Eliades, Preston VIC

Dunstan Reserve Community Food Forest, West Brunswick

Northcote Library Food Forest Strip

3. Why Have a Food Forest?

Food Security: Food insecurity will continue to rise as the population grows, and food production and distribution is affected by drought, flooding and rising transport costs. Increasing local food production will help improve local food security. A public food forest is an excellent way to model alternative approaches to achieve food security in urban areas.

Reducing Carbon Pollution: Increasing local food production in an attempt to reduce 'food miles' and the consumption of non-renewable fossil fuel has been a common goal in the quest for more sustainable living. Beyond the concept of 'food miles', food grown sustainably will unequivocally not create carbon pollution, but will result in a 'net carbon positive' activity, which extends beyond the goal of 'carbon neutral' to one where carbon is to actively sequestered in a living ecosystem.

Health: Fresh food available in public spaces will provide people with a taste of naturally grown nutritious and flavoursome organic food, which will encourage people to return to eating healthy food, creating long-term health benefits for the community. (Contrast this to low nutrient, chemically grown, prematurely picked and artificially ripened flavourless supermarket produce which has been in cold storage for months – creating a disincentive for people to eat healthy food).

Community Wellbeing: Making produce available to the whole community and providing a focal point for local meetings, at a recognised and informal place where locals can meet, assists with improving a sense of friendship and community security.

Educational Potential: The food forest would provide opportunities for public education on topics including tree care, food security, permaculture & other sustainable land use approaches, plus help convey the need to transition to reduced carbon practices. This would benefit local schools and community groups. It also would provide a very public reference for food production capabilities in this local area. With demonstrations, advice and encouragement, local people would be assisted and inspired to grow their own food. As a demonstration food production area without chemicals, it would demonstrate the health benefits of chemical-free agriculture.

4. Project Objectives

- Increase food security for the local community.

- Demonstrate the possibilities for food production in Darebin.

- Trial possible species for growth in urban Melbourne.

- Demonstrate local edible and useful indigenous plants.

- Demonstrate less common edible and useful plants, including those used by local ethnic groups, perennial and heirloom varieties

- Demonstrate sustainable and chemical-free urban food production

- Increase local community cohesion and social inclusion

- Address global warming through carbon sequestration and reducing carbon pollution

5. Background

The Northcote Library Food Garden is an initiative of the Darebin City Council supported by local residents and a number of community groups, and follows a trend within the Darebin community to improve social cohesion, reduce energy consumption, develop self-reliance, increase participation in environmental sustainability activities and start new innovative projects.

Other associated Darebin local community initiatives include:

- The formation of a Transition Town group in Darebin

- The participation of Jika Jika Community Centre in the Greener Houses Greener Neighbourhoods Project

- Darebin Council initiatives in promoting composting, backyard food production, rainwater harvesting, etc.

- The Fairfield and Northcote Community Gardens which subscribe to the primary objectives outlined above

- The Urban Harvest initiative, a proposal designed by a subgroup and supported by Transition Darebin

- Food security and distribution initiatives like Second Bite and DIVRS, that operate in the region

- Darebin Backyard Harvest Festival by Darebin Ethnic Communities Council

- Regular garden tours and presentations provided free of charge by Deep Green Permaculture (a community educational enterprise) to the local community, promoting sustainable gardening and food production through Melbourne's first proof-of-concept urban demonstration food forest in Preston/ Thornbury.

6. Management

Food Forests for All Nations – steering committee will collaborate with local residents and community groups to form Friends of Food Forest for All Nations in conjunction with Darebin Council to manage the food forest

It is anticipated that volunteers from within the local community would assist with the management, planting and maintenance of the food forest, with potential involvement from schools, VCAL programs, conservation volunteers/green core programs, friends groups, permaculture/ Transition Town groups, youth groups, scouts and other community groups.

It is anticipated that Darebin Council would maintain interest and involvement via its current interest in All Nations Park in partnership with Friends of Food Forest for All Nations

7. Proposed Location – All Nations Park

Two locations within All Nations Park have been identified as potential sites for this project, acknowledging that there has already been development of the park in line with local government's prior initiatives to create a multi-functional community space, and also bearing in mind that parks are recognised as ever-renewable public capital.

- An area on the northern side, bordering Dennis St, appears to have not developed as expected. Water run-off has caused scouring of paths, and slopes in places seem too steep. Lack of ground cover has exposed the soil and weed control is onerous. The possibility for controlling water run-off via swales (contour trenches) and extra planting, according to food forest design, present themselves, as methods to stabilise the area. New, exotic trees have been planted, indicating that the Council believes that improvement is required. The existing ornamental Nashi pears appear to be a lost opportunity as the fruit is inedible.

- The plantation of olives on the western slope facing the Northcote Plaza has encountered challenges. Many of the olive trees appear to be experiencing unfavourable conditions, as indicated by their sparse, stunted growth and poor appearance compared to other olive trees several metres away, possibly responding to more favourable conditions which are seeing these trees thriving and fruiting abundantly. As an area representative of Mediterranean plants, we propose to add plants such as figs, citrus, pomegranate and grape – all widely grown in Mediterranean climates, to better reflect the original design which, among other cultures, was to represent the heritage of the post-war migrants that made up a large proportion of Darebin residents in the recent past.

Within the park overall, the local Aboriginal people can be said to be represented by the diverse planting of Australian natives, yet an emphasis on local food plants, e.g. yam daisy, muntries and cumbungi or bullrushes.

There are also opportunities within the park for individual specimen trees, e.g. walnut, macadamia in areas lacking in shade.

With either of the two proposed sites, the implementation can be staged progressively, starting with the development of a small portion of each site. Each site, in response to success, can be expanded over time.

A major disadvantage of All Nations Park is that it is sited on an area used for waste in the recent past. It was used to tip household and commercial waste, so there possibly may be issues of contamination with lead and other heavy metals, which might impact on which edible species may be grown.

Before a final decision is made on the suitability of the area for a food forest, testing should be carried out to determine the presence of heavy metals in the soil and take-up of by existing plants. As well as existing fruits (olive, nashi pear), samples of the leaves and stems of other plants would give a guide as to the extent of current take-up.

8. Examples of Plants for a Food Forest

A food forest is a biologically diverse system that can contain a wide variety of plants that can be utilised for various purposes.

It is proposed that this food forest design incorporate the following elements to further stabilise the developing eco-system and complement the master plan:

- Edible species – such as fruit trees and shrubs
- Beneficial companion plants – species that attract beneficial insects, repel pests, increase plant health/vigour and resistance to disease.
- Native plants
- Fibre, dye and other functional plants

9. Implementation Strategy

Following the successful implementation strategy utilised in the Northcote Library Food Garden, it is envisaged that a similar approach be adopted for this project. The implementation strategy would initially involve the formation of a Steering Committee, to set and maintain the direction of the project. The Initiating Committee will most likely evolve into a Steering Committee after council approval to proceed with the project.

The next step is the formation of an Advisory Group, a group of technical experts in the relevant areas (horticulture, community building, etc), drawn from a representative selection of community groups, to provide technical advice, recommendations, designs and consultancy throughout the life of the project.

If any minor hard landscaping, (such as digging small areas around newly planted trees to direct water flow to the tree and minimise soil surface erosion), is required at any stage of this project, it is understood that this would be carried out by volunteers pending the appropriate council approval, or if local council is willing to assist, or would prefer to carry out any hard landscaping, then the Steering Committee will collaborate to undertake such tasks.

After the initial implementation stage in 2012 the food forest will evolve over time according to an approved plan. Portions of the allocated area will be utilised for community building, hands-on gardening workshops to teach local residents gardening skills, and these areas will be gradually built up from the resulting efforts of workshop participants.

Post implementation- following the model used in the Northcote Library Food Garden - the formation of Gardening Groups will occur. Local residents will be invited to join in and work together to support the food forest collectively, where they will have the opportunity to share in the produce, learn lots about growing natural organic food, and participate in a healthy, vibrant and constructive community.

Project Timeline - As is standard horticultural practice, the time chosen for the implementation of a garden of any scale is driven by the seasonal cycle of the year. The preferred times for planting bare rooted trees are from late autumn (April) through to early Spring (September) at the latest.

10. Project Timeline

10.1 Timeline 2012

Stage	When	
1. Preliminary work	May	• Confirm site, agree on boundaries • Develop agreement with council (MOU) • Confirm budget
2. Design	June	• Prepare community food forest design including infrastructure, community spaces and, plantings
3. Call for volunteers	June /July	• Call for volunteers • Establish work group and allocate tasks • Establish Friends of FFAN • Call for donations for plants • Grant application
4. Establishment	July	• Earthworks • Infrastructure, watering taps • Prepare soil for planting bare rooted trees • Source plants and propagation
5. Planting	August	• Purchase bare rooted trees and plants • Planting bare-root food trees and shrubs, herbs, groundcovers etc.
6. Celebration	September	• Community celebration!

10.2 Project Timeline 2013 and beyond

The food forest can develop over time as plant donations and funding allows. Community gardening workshops will contribute to the development of the food forest and community volunteers will be responsible for general weeding and maintenance of the site.

Plants can be stored and propagated off-site until the most favourable time to plant e.g. bare-rooted trees can be grown up at the Fairfield Community Garden plot for a year or potted up for planting in the following spring or autumn. This gives the opportunity to plant more established plants, and to source trees outside of the normal planting schedule.

Watering Requirements

It is suggested that Darebin City Council could install a vandal proof water tap to allow community members to manually water trees weekly in the first month, then monthly as necessary. Slotted PVC AG (Agricultural) pipe can be installed at the base of the trees to facilitate deep watering.

Rainwater can be diverted into swales (water capture ditches) to minimise surface runoff and to concentrate water flow towards planted areas. Swales would be heavily mulched to maximise water retention. Swales capture water and run in straight lines along the contour.

All the plants would be self sufficient for water after the establishment phase

Facilities for Volunteers

It would be desirable to have a drinking fountain and BBQ installed by Darebin Council near the covered area in the Nashi Pear plantation area. Passers-by, dogs and people working in or coming to the community food forest could use this.

Resources

All plants and trees in the Northcote Library Food Garden were provided as donations from a host of local community groups and this can be replicated for this project. Volunteers will provide most of the labour from the local community with collaboration from Council when required.

The initiating group will apply for grants and sponsorship pending council approval to purchase materials such as plants and trees.

11. Notional Budgets

We will seek to gain in-kind support from volunteers and the City of Darebin. Funds will also be sought through grants and sponsorship. The following table lists speculative budget figures for the various requirements.

Note: accurate budget figures are dependent on having a finalised and approved design, which is dependent upon approval being granted and cannot be determined beforehand.

Item	Cost	Source
Soil & plant testing	*tba*	Darebin City Council or Grants
Earthworks / landscaping	*tba*	Darebin City Council or Grants
Fruit trees	*tba*	Donations and grants
Shrubs, Herbs, ground cover	*tba*	Donations and grants
Building materials	*tba*	Donations and grants
Infrastructure (water taps, etc)	*tba*	Volunteers and Grants
Publicity	*tba*	Donations and grants
Other (Irrigation, tools etc)	*tba*	Donations and grants
Mulch and compost	*in-kind*	Darebin City Council
Project worker	*in-kind*	Volunteer FFAN
TOTAL	*tba*	

(*tba – to be announced, pending the approval of a design)

12. Supporting Community Groups

This proposal is supported by following community groups:

Deep Green Permaculture – contact deep_green@optusnet.com.au

Northcote Library Food Garden – contact northcotelibraryfoodgarden@gmail.com

Permaculture Inner North – contact permacultureinnernorth@gmail.com

Transition Darebin – contact transitiondarebin@gmail.com

13. Members of the Initiating Committee

Charlie Si: <personal details removed from public document>

Angelo Eliades: <personal details removed from public document>

John Pinniger: <personal details removed from public document>

Anne Thoday: <personal details removed from public document>

Annette Berryman: <personal details removed from public document>

Kerrie Ludekens: <personal details removed from public document>

Mike Jorgensen: <personal details removed from public document>

14. Contacts

John Pinniger & Angelo Eliades

John Pinniger

Angelo Eliades

15. Links to Urban Food Forest Projects:

- [Chadstone Community Food Forest](#)

Seattle, US - 7 Acres Food Forest

- [Nation's largest public Food Forest takes root on Beacon Hill](#)
- [Into the woods: Seattle Planting a public food forest](#)