

FARMERS OF THE URBAN FOOTPATH Ideas for urban food gardeners and local government



Australian City Farms & Community Gardens Network

Russ Grayson

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NEW GARDENS IN PUBLIC PLACES

I SUSPECT it's been going on a long time, however my formal introduction came when a woman in Sydney's southern suburbs showed me how she had colonised a part of her footpath and replaced the lawn with a rich and tasty blend of vegetable, herb and pawpaw.

That must have been around 25 years ago and it made me aware of the potential of the footpath as a place for the cultivation of food and other plants and as a place for civic engagement with public open space... what local government calls the 'public domain'. At the time I didn't think that the idea of gardening your footpath would be something that attracted people, but I was wrong.

In Farmers of the Urban Footpath we're going to explore the opportunities and constraints of gardening the footpath. We will briefly visit footpath gardens and see what lessons we can draw from them... why some are successful and why others would benefit from a little rethinking.

We will look at the ways councils relate to footpath gardeners and investigate ways they can safely accommodate the growing demand to make use of the footpath for gardening.

And we will consider not only growing vegetables, herbs and ornamental or native plants on the footpath, but trees producing edible fruit and nuts too, for there are places in our cities where these have been established for some time. They, too, are a productive type of urban regreening and offer a new opportunity for community interaction with public land.

Origins of a new idea

I came away from the meeting with that southern suburbs footpath gardener inspired by her initiative and at her audacity in assuming management of an area of public land formerly under council control. It was all done unofficially, without asking permission. I realise now that here, in this retired schoolteacher, was an early example of what is called the 'guerrilla gardener' and of a 'spontaneous' or 'pop-up' garden, meaning it was done without local government permission but was done in the spirit of neighbourhood improvement.

Guerrilla gardener? Yes, people whose motivation to regreen the cities leads them to create footpath gardens without seeking council approval. Their actions might not be nefarious but they are of the do-it-yourself variety and they are diverse—from planting edible tree seedlings in public parks, tossing clay balls containing seed into vacant land in the hope the seeds will germinate and grow, grafting fruit-producing branches to ornamental park and street trees, making gardens in public places where there was only bland grey asphalt before, replanting ignored roadside planters to



This footpath garden of herbs and vegetables, olive and citrus tree seedlings, native plants and flowers makes optimal use of a footpath in Sydney's Inner West.

The gardeners have maintained a high visual standard that improved the streetscape, turning the footpath from a thoroughfare into a destination.

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bright displays of flowers, starting community food gardens on vacant lots... and even, as I discovered when I worked in local government, to installing guerrilla compost bins in public places.

In Farmers of the Urban Footpath we are interested less in guerrilla gardening and more in how footpath gardening and edible landscaping in public places other than formal community gardens can be enabled by local government as a legitimate form of urban agriculture, urban beautification and regreening. Where people choose to become guerrilla gardeners they might find the design guidelines in these pages worth considering.

This seaside garden is a spontaneous installation between a car park and a forested slope of native vegetation, and is well maintained.

The garden is off the pedestrian path and makes productive use of a strip of unused urban land, increasing civic engagement in the use of public open space.



The trouble with DIY gardens

Spontaneous gardens were something I encountered on my walks through Sydney's inner urban streets after I started working with a local government to assist people create community food gardens and community-managed footpath gardens.

Do-it-yourself footpath gardens often take the form of structural timber, sometimes bricks, arranged around the base of street trees and planted as a raised garden. These accommodate a sometimes neglected collection of hardy ornamental plants and, sometimes, food species. In the neglect lay a question for people thinking about starting a footpath garden and for local government thinking about policy on footpath gardening—what happens to the garden when those previously managing it move on?

Most of the footpath gardens I encountered were not neglected, though. The footpath garden in Redfern close to busy Cleveland Street, the one made of a few stacked tyres, was obviously being used to grow the pumpkin vine emerging from it. So was the long garden beside a car park at a Sydney beach. It occupies a narrow strip of flat land between the car park and the steep slope behind that the council has planted to native species. Out of the way of pedestrians, it is tolerated by council even though it has no formal approval–another spontaneous garden. Much like that one not so far away that occupies the footpath outside an apartment block, taking the area between concrete walkway and road kerb.

The trouble with DIY footpath gardens...

Left: Built up around the base of the street tree, soil organisms could weaken the trunk, some tree management people say. Little space has been left for people with walking aids or parents with prams to pass unimpeded.

Right: A derelict garden raised around a tree base and built to what some councils would consider trip risk height.







Olives as cultural heritage

Occasionally on those inner urban walks, as well as in the part of Sydney where I live, I encounter olive trees and sometimes loquat, a subtropical/warm temperate climate fruit tree planted on the footpath. Some of those olives were planted by council, including, perhaps, the row of four young trees on an embankment just around the corner from my apartment. In Sydney, however, the loquat is a less desirable street tree as the fruit attracts fruit fly.

Encounter olive trees on the footpath in some parts of the inner city and you might reflect on who may have planted them, and why olives? If you know a little urban history you realise that many of those areas were occupied by immigrants from the Mediterranean countries during the great age of immigration to Australia that started in the 1950s and continued into the 1970s. It was they who started to colonise the footpaths all those decades ago and whose legacy is evidence that fruit trees really do have a place as urban street trees. I guess many of those plantings would qualify as social heritage today, however it is their precedent that is of most interest to advocates of the edible landscaping of urban streets.

The olive grove planted in Pioneer's Memorial Park by Leichhardt Council—the idea of landscape architect and permaculture designer, Birgit Seidlich, who worked for council in the 1990s commemorates those immigrant peoples.



Left: Olives as street trees provide shade and an edible resource for gleaners in Sydney's Eastern Suburbs.

Above: Citrus as street trees between mature eucalypts in Adelaide. The citrus form an understorey to the eucalypts, increasing the complexity of the urban canopy and increasing the habitat value of the streetscape. The planting combines large shade trees to reduce the urban heat island effect with lower species of food value. Taking a more sophisticated, ecological approach to street vegetation by thinking in terms of tree canopy, understorey and ground layers of vegetation would improve habitat for small birds and insects increase the environmental amenity of our streets.

Urban food security and council planting policy

The global food crisis of 2007-2008, recent natural disasters in Australia and a resurgence in global food prices during 2012 have highlighted the value of cities retaining a high food production capacity on their rural fringe and within the suburbs.

It's mainly commercial market gardens, orchards and chicken farms that are found on the urbanrural fringe although Sydney has a number of commercial market gardens in its southern and eastern suburbs. Community and home food gardens make up the urban agriculture initiatives of households and of the voluntary community sector. A 1991 survey by the Australian Bureau of Statistics–Home Production of Selected Foodstuffs (http://pacific-edge.info/australian-backyardsproductive-places/)-showed how productive those home gardens were then. They must be even more productive now. Community food gardens receive increasing council support. So too could edible plantings on urban footpaths, although the volume of food that footpaths could produce is limited.

Urban agriculture and food security advocates now propose that those councils that have urban greening plans for the establishment of street trees consider fruit and nut species as part of those plans. Nut and edible fruit species as street and park trees would provide the same environmental services as other street trees, including native species, in terms of shading, biodiversity, air filtration and visual amenity but, unlike commonly planted street and park trees, they also provide an edible yield and civic engagement with public open space.

Advocates of footpath gardening do not suggest councils mass plant edible species all over the city, as councils seldom have horticultural staff to maintain such plantings, management of which would rely on community organisations. They propose that where there is support that edible tree species be established as street trees and shrubs.

Examples of this include the citrus planted between eucalypts on the street verge adjacent to Glandore Community Centre in Adelaide, the Myrtle Street and Wilga Avenue plantings in Sydney's inner urban area and the community nut grove established in Totnes in the UK. In Adelaide as well as in Chippendale in inner urban Sydney, the citrus provide an understorey to the taller eucalypts in a linear mimicry of the canopy and understorey of the natural forest.

The association of both species provides a pleasant and productive streetscape and contributes to a biologically diversified urban canopy at the same time that it reduces the heating of road and footpath surfaces which contributes to the urban heat island effect with its increased energy consumption for building heating and cooling. Planting footpaths as a shady canopy, edible understorey and mixed ground layer mimics the structure of the natural (Podocarpus) and forest and provides habitat for small birds and insects. This is a more ecological approach to street and parkland planting.

Local government as edible landscaper. lillipilly bush foods (Syzygium) planted in a roundabout in Port Macquarie, NSW mid-north coast. Bush foods, such as

the Illawarra plum small leaf lillipilly (Syzygium luehmanii) are to be found planted as street and park trees.



Food security policy is considered by few local governments in Australia at present although South Sydney City Council introduced what is believed to be Australia's first such local government policy in 1997. The City of Maryibyrnong in Victoria has produced a policy as has the City of Unley, in Adelaide, which in 2012 planted around 60 fruit and nut trees in Morrie Harrell Reserve. Unley Council general manager, Steven Faulkner, told the Eastern Courier Messenger that "For a relatively small establishment cost, and given food security and the rising costs of fresh produce are topical, this is considered an innovative trial," (http://www. adelaidenow.com.au/news/south-australia/fruittrees-planted-in-unley-park-as-part-of-unley-counciltrial/story-e6frea83-1226450816952).

Unley residents on streets with dead or dying street trees can apply to council to have them replaced by edible species. Further community orchard sites are being investigated.

Edible plantings in public places are being made on a grander scale in Vancouver BC, Canada. There, as reported by the Vancouver Sun in late 2012, the city's existing 600 fruit and nut trees on city streets, plus another 425 planted in parks, community gardens and pocket orchards are to be supplemented by a further 150,000. These, according to Mayor Gregory Robertson, will also go onto the same city-owned land. Vision Vancouver park commissioner Niki Sharma told council her unit will care for the trees.

Mayor Robertson was quoted as saying that the plantings will help the city adapt to climate change, manage stormwater runoff and provide biodiversity and food.

Although only limited amounts of food could be produced on urban footpaths as part of local government food security policy, the practice has the potential to supplement family diets and to create a new avenue of public responsibility for public land. It is to help with this that online maps have been developed to geolocate fruit and nut trees on public land, such as Fallen Fruit project in Los Angeles. Similar ideas have taken root in Australia but have yet to gain grater public participation.

The idea of cultivating the urban footpath might not be new but recent years have brought an increase in the practice. In places this clashes with public and local government perceptions of the role of the footpath in urban planning.

We might call the part of the urban footpath that can be cultivated the 'long garden'. Add up all the area of that long garden now growing lawn in our cities and you come up with a considerable estate. And that's excluding the pedestrian walkway and counting just the 'nature strip' as it is sometimes called. All too often though, that nature strip is a monoculture of lawn and is ecologically poor and un-biodiverse.

For councils, nature strips of lawn are quick and easy to mow and in some places councils expect householders to mow footpath lawn even though it is pubic land–not within resident's property boundaries. Even though they expect householders to take that responsibility for the footpath they seldom extent the reciprocity to the householder of having a say in what is planted there.

Critics of lawn footpaths point out that:

- mowing lawn footpaths is a contradiction where councils are seeking to reduce their carbon footprint as mowers burn oil fuels, with their carbon emissions
- they conflict with council moves to reduce contamination in public places where the herbicide glyphosate is used to help maintain them
- lawn footpaths offer monoculture when councils might have policy favouring biodiversity (biodiversity is not only the range of native plants; it includes the agricultural biodiversity of plants useful to people, and there is great need to regenerate both types).

Understanding council concerns

I have mentioned that footpath gardens are sometimes spontaneous installations constructed without the approval of local government.

This may be due to people not realising that they need council permission to plant in the public domain or because they know that council has bureaucratic or financial barriers that make getting permission a tedious, drawn-out or expensive process. Councils may have a policy allowing footpath gardening but the practice may be discouraged by staff. Sometimes, people would rather avoid these barriers by not seeking council approval. Despite the barriers to greater civic engagement and the fact that some councils are supportive of gardening the footpath, advocates of the edible planting of public space would do well to understand the concerns of councils, for whom it can come down to a question of public safety, the aesthetics of streetscapes and council liability for accidents. Councils, after all, are responsible for the condition of public places and footpaths.

The danger of falling fruit

Discussing the topic of footpath gardening, a council staffer mentioned the potential issue of fruit falling from edible street trees onto parked cars, or of pedestrians slipping on fruit left lying on the footpath and injuring themselves.

This, of course, is already a risk with the seed pods, ornamental fruit and the heavy, seasonal leaf fall of some ornamental street trees. Pedestrians have slipped on these. The trees lining the street where I live drop long pods that, with a little rain, can soften to become a slip hazard. The deciduous foliage accumulates and blocks the stormwater drain.

Where street trees produce edible fruit or nuts there is potential for gleaners to harvest them and this may reduce the hazard of falling fruit.

Whether that which falls from street trees is edible or not doesn't change the slip risk much at all, however it may be best to avoid planting soft fruits.

On the question of hard nuts as street trees and the risk of slipping, the risk is no greater than that of slipping on the seed pods of established ornamental street trees some of which shed copious

Plums as street trees in Hobart. The number of fallen fruit indicated a lack of local gleaners, although whether this is the usual situation is unknown. Most of the fruit had fallen onto the nature strip although a smaller number had gone into the stormwater drain.



amounts of large seed pods in season. Perhaps it would be wise to plant nut trees only where there is a wide enough nature strip that fruit or nuts fall there rather than on the walkway.

Fruit fall from citrus trees on footpaths is less of a danger as the trees grow only to low or medium height (they can be maintained as low growing by pruning) and most fruit fall—what fruit is not harvested—is likely to be onto the nature strip.

Maintaining and harvesting

Someone working in the parks section of a western Sydney council said that he was not opposed to planting edible street trees, the question is who maintains them?

His suggestion was that councils plant edible trees were they requested to do so by a community group prepared to care for and harvest them. He pointed out that most council staff have no training in the maintenance of fruit and nut trees or skills such as pruning, pest management and harvesting.

The best solution is to glean the fruit and nuts before they fall. Gleaners are already at work in our cities with some harvesting unwanted fruit for exchange at food swaps, such as Melbourne's and Adelaide's Urban Orchard (http://pacific-edge.info/urban_ orchard/).

There is also potential for community organisations such as rare fruit enthusiasts and community permaculture associations to take on the voluntary jobs of maintaining the trees and collecting the harvest. Of course, as plantings on public land, anyone can harvest from edible street trees.

This brings up the hypothetical question of commercial resellers (to differentiate them from, for example, charities or social enterprise) harvesting streetside fruits and nuts to resell. This is unlikely as edible street trees are too-few in number and too widely dispersed to make their harvesting for commercial purposes worthwhile. To prevent it, councils might pass a by-law reserving the harvest of street and park trees for individual, community group or charity gleaning, though it would be difficult to enforce this.

A further consideration for councils is whether fruit falling onto the footpath or road would wash into the stormwater drain. It's hard to see how this would add to the existing load of ornamental fruit and seed pods and the leaf litter that already clogs the drains, especially where there are deciduous street trees with their heavy seasonal leaf fall. It is unlikely we will see fruit trees being planted in sufficient numbers to add significantly to this and it doesn't seem to be a major concern where councils permit edible street tree plantings..

What about abandoned gardens?

The potential for gardeners to abandon their footpath plantings is something that plays on council minds. What happens when the householder moves home, more than one council staffer has asked?

It's a reasonable question because there is no guarantee that the new occupant will be interested in maintaining the footpath garden. One solution would be for the departing resident to return the verge to lawn, and this is a solution favoured by some councils.

The question refers only to gardens established by individual householders on the footpath immediately outside their property boundary. Where the footpath garden is a community garden maintained by a team of local people the question is less relevant because such gardens are maintained collectively.

Underground services

Sewage, water, gas and sometimes energy conduits are found below the surface of some footpaths and at some time or other the utility companies will want to dig these up to do maintenance. What this means for footpath gardens planted directly into the soil is that they will have to be rebuilt after the work is completed and any trees established there could be lost.

According to Sydney's Waverley Council, the fate of such gardens is the responsibility of the footpath gardener (http://www.waverley.nsw. gov.au/__data/assets/pdf_file/0019/11098/ Footpath_Garden_Guidelines09.pdf).

Rather than make a garden directly on the soil, a solution might be to construct a raised garden with a base, a container garden, so that it can be moved aside by a lifting machine when the footpath is excavated to work on underground services.

This is the solution favoured in the City of Sydney's Footpath Gardening Policy passed by council in May 2012 (draft version: http://www.cityofsydney. nsw.gov.au/Council/documents/OnExhibition/ DraftFootpathGardening.pdf). When I worked for the City I collaborated with Waterloo Community Centre and TAFE Outreach to rapid-prototype a planter design while the policy was in draft form, and found it viable (http://pacific-edge.info/waterloogarden/).

Check your planning documents

People planning to approach councils for permission to farm their street verge would do well to research council policies, plans and strategies and to make the link to them in their application, pointing out how their footpath plantings would implement aspects of the planning documents. Linkages might include:

- opportunities for neighbourhood beautification
- increasing biodiversity; larger street trees have been said to favour large birds like magpies an currawongs whereas it is the small birds that are in greater need of habitat and larger trees do not provide well for these; footpath gardens attract insect life that forms the basis of the food web and that attracts smaller bird species; smaller trees and flowering shrubs provide habitat
- urban food security
- urban regreening, especially the creation of understorey below street trees and its agricultural biodiversity and food values
- visual amenity
- carbon sequestration in garden soils
- reduction of the urban heat island effect that raises air temperature in cities and increases energy consumption for building heating and cooling
- developing social capital and civic engagement.



The sign at the Barrett House Foragers' Garden invites passers-by to take a little of the produce. Visible at right are the community compost bins that accept local people's food wastes that is turned into fertiliser for the garden.



Footpath garden in Fremantle, Western Australia, with irrigation installed.



Where footpath gardens are part of a community project, providing a small sign explaining what is going on is useful.



A small footpath garden in Sydney's Eastern Suburbs. Although the height of the garden would be considered a trip hazard by some councils, the wide footpath leaves plenty of space for passers-by.

THE REALITIES OF FOOTPATH GARDENS

THERE ARE a few things the would-be street verge cultivator might contemplate before turning the footpath turf. The items that follow are all drawn from experience.

Reality 1: Footpaths are on public land and produce might be taken

A gardener in Sydney's Inner West who has long maintained an edible verge of low-maintenance vegetables, herbs and a solitary, dwarf orange tree watched over the months as the tree's one and only piece of fruit turned from green to bright orange... and then disappeared. That didn't faze her–she had expected it and was prepared to share her abundant verge that otherwise would support only a bland monoculture of lawn.

What the incident demonstrates is the reality that the footpath cultivator has no control over people regarding the produce as public property and has no property rights to what is grown on the footpath. It is accessible to anyone and nothing can be enforced to stop the public helping themselves to what is grown there. The footpath garden might be thought of as an extension of the home garden in planting terms, however it is not an extension of the home garden in legal terms because it is on public land.

Most footpath gardeners are happy to share what they grow and expect that people will take some. Perhaps a little sign suggesting people take edible leaves or fruit when ripe but not pick the entire plant would go some way to minimising damage. And there will be damage because it's true that many people think that you have to harvest an entire lettuce, spinach or silverbeet rather than merely pluck the leaves you want and that more will grow to replace them.

A sign advising people that they could harvest herbs and vegetables, and how to harvest them, was installed at the Randwick City Council Barrett House Foragers' Garden outside its sustainability education centre.

Like the garden outside Barrett House, many footpath gardeners regard their plantings as 'forage gardens' where people are free to take some of what is growing. In cases like this the garden is best regarded as edible landscaping.

Reality 2: Neighbours and passers-by may complain

Not everyone will like your turning footpath lawn into footpath food. They may complain to council about the presence of the garden or about the appearance of it.

Often, this stems from the shock of the new, the unorthodoxy of putting footpaths to productive use. People sometimes react to new ideas by opposing them. Sometimes, opposition can be attributed to NIMBYism (the Not In My Back Yard affliction) and complainants might say they are not opposed to the idea as such, they just don't want it near where they live. Councils are usually quite familiar with NIMBYism as they frequently encounter it whatever the development in question. While some forms of development are out of place in residential areas and opposition to them rests on firmer foundations, NIMBYism often simply displaces a development to another area and can carry an opportunity cost to some in the community. Ideally, councils make decisions with the entire local government area in mind rather than on the basis of a few people making a lot of noise.

One case I know of followed a complaint to a council about the clumping grass, Lomandra, overhanging the edge of a Sydney Inner West footpath. The householder was told by council to remove the plant. Yet, in Manly where I used to live, a householder had planted the verge to the native Melaleuca (tea tree) and some of the branches protruded at head height and blocked access to parked vehicles. It is a wonder that nobody complained about that. What these quite different experiences indicate is that people will complain of quite minor things in one area and not about more substantial things in another.

Then there is the problem of the personal sense of aesthetics. What is a beautiful footpath food garden to some is something inappropriate, messy or out of place to others. Aesthetics, of course, is no basis for local government decisions on footpath gardens because aesthetics allows no objective measure, however councils have to respond to complaints and they can issue directives based only on a staffer's interpretation of some by-law without citizens being given due opportunity to put a counter-argument. Unfortunately, people often lack any formal means by which they can appeal a decision, potentially putting those whose footpath gardens are complained about at a disadvantage and raising the question about the place of due process, equitable treatment and justice in council decision making.

If you plan to retrofit the street verge as a community garden, be sure to consult widely along the street. Expect some opposition as not all will want to see the street verge turned into garden. Avoid gardening the footpath outside the residences of those not interested.

Reality 3: Your garden may be vandalised

This I experienced while living close to Botany Bay in Sydney's southern suburbs. We had planted the area around the melaleuca street tree—it was a council planter that protruded into the roadway with hardy herbs and a pineapple. Later rather than sooner, the pineapple started to fruit and this we watched as it got bigger and bigger... until, that is, a young boy thought the pineapple fruit would make a fine cricket ball.

The theft of young fruit trees is something that occurs in community gardens and it happens in footpath gardens too. Young fruit trees have disappeared from the Myrtle Street gardens in Chippendale and this was a reason that one of the residents planted a thorny species of citrus so as to deter the thieves who had made off with the previous two trees. That worked, although the council discouraged the planting of thorny species on footpaths.

Gardeners usually deal with theft with persistent replanting and sometimes by installing a small sign explaining that the garden is a community effort and stealing young fruit trees is stealing from the community. Some gardeners have anchored their



fruit tree seedings with a length of wire to bricks buried in the soil below.

Uncommon it might be, the possibility of vandalism is something footpath gardeners have to live with.

Reality 4: Streets are dangerous places

Managing a footpath garden could involve stepping out onto the street to access your planting. There are clear dangers here, especially if you are working with traffic-unaware children.

This is the sort of thing that arouses the interest of council occupational health and safety officers and although the risk of being hit by a vehicle may be small (most adults are traffic-aware and take care on the street) it is none-the-less a low level risk that should be kept in mind.

More often than not, parked cars will form a barrier to street traffic. For children gardeners, parental supervision is mandatory.

Interestingly, placemaking consultant David Engwicht (https://www.creative-communities.com) says that he finds pedestrian and resident activity on streets has the effect of slowing vehicular traffic and that it is streets without people about that become raceways. This is an argument for streets as destinations and for the encouragement of community activity on footpaths.

Where soil contamination is a possibility, raising the footpath garden in a planter, like this one in Marrickville, may be a precaution. The garden is the minimum height to raise the root systems of most vegetables above the soil level.

Reality 5: Footpath soils might be contaminated

Decades of leaded petrol use and past building materials are just a couple sources of potential soil contaminants that could affect footpath gardens. And although lead contamination has delayed at least one community garden, it has not come up as a deterrent to footpath gardening and no cases of ill-health have emerged from the practice.

Clearly, busy roads are likely to hold greatest potential for contamination by motor vehicle wastes, such as hydrocarbons from oil-based lubricants and fuels. Main roads, though, are not the places that communities want to build footpath gardens. They prefer quieter side streets.

People building spontaneous, pop-up street gardens and planting directly into the soil are unlikely to have their soils tested for contaminants and are therefore at greater risk–whatever that risk might be–of any health effects from soil contamination.

Councils with the funds to test footpath soils might offer that service. Alternatively, they might propose to footpath gardeners that they build planter boxes to raise the root zone of herbs and vegetables above any spot contamination in footpath soils. The container garden, fitted with a base and made to a height of 45cm to 50cm should lift the root zone of most vegetables above contamination in the footpath soil surface.

Different vegetables and fruits have different take-up rates for different soil contaminants. There appears to be some variation in estimates about take-up rates, so footpath gardeners and councils might do well to seek the advice of plant toxicologists or other experts if they suspect heavy contamination may be present in the soil.



The Surry Hills footpath garden soon after first planting.



Outdoor Rooms, an initiative of a local business in Surry Hills, Sydney, turned a car parking space and adjacent street verges into footpath gardens.

Made with council approval, the installation uses sections of concrete pipes as planters. The seating is used by patrons of the adjacent coffee bar.

One of several similar installations along Foster Street, this is a footpath gardening as a type of placemaking.



FOOTPATH GARDENS AS PLACEMAKING

THERE IS SOMETHING NEW AFOOT-local

people are turning the footpath into a destination rather than regarding it merely as a pedestrian thoroughfare.

In Marrickville and Randwick, two quite different areas of Sydney, as well as in suburban Melbourne, colonisers of the urban footpath have installed seating in their footpath gardens to create a social venue and add social value to the footpath for people living along it.

In Fremantle they're taking the idea of footpath as destination—as community place—further. Were you to walk along Hulbert Street you would encounter a succession of footpath gardens growing everything from ornamentals to food. Go at the right time of year and you may encounter the Street Verge Gardening Day readying the gardens for the Hulbert Street Sustainability Festival when the street is closed to vehicular traffic and filled with stall holders and tours of home and footpath gardens, energy and water efficient homes.

All of this is to do with the inclusion of footpaths in something called 'placemaking'—a communityled practice through which local people have substantial input into the design of public places, including what happens along footpaths.

Footpath as destination

In placemaking, the footpath is viewed less as a thoroughfare and more in its potential as a location for people to meet. This adds social value to the footpath. Rather than the footpath as a largely featureless passage, the only vegetation being the lawn nature strip and, possibly, street trees, it might have places for people to sit or provide other features that engage passers-by, including gardens built and maintained by those living adjacent.

An example of what placemakers call 'tactical urbanism'-small, local initiatives that together add up to something of strategic value in making our cities more humane, interesting places of opportunity-was provided by a householder in suburban Melbourne who made a footpath garden that included food plants and who installed an old but serviceable bench seat. The first bench seat was mistaken for hard rubbish and taken away in a council clean-up. The second was stolen. The third survived and is used by aged pedestrians returning from the shopping centre as well as by others. What was an uninteresting footpath—a passageway between houses and road for people to hurry along—became something of vegetative interest and social value.

Something similar has been done in the Wilga Avenue footpath gardens in Marrickville local government area in Sydney's Inner West. There, in what is a well maintained footpath community garden, local people have installed a table and seats and constructed a pergola of flexible irrigation pipe over it, over which climbers will eventually grow to cast shade. Wilga Avenue has a wide footpath where works like this are possible, unlike the narrow footpaths such as those on which the Myrtle and Shepherd street footpath community garden has been created in inner urban Chippendale.

It's not only citizens who engage in tactical urbanism. In 2012, Randwick City Council sustainability staff working with people in the community turned an existing footpath planter outside their sustainability education building—it was planted to a monoculture of agapanthus—into a herb, vegetable and fruit garden. This is now a foragers garden from which passers-by are welcome to pick to add to their evening meal. It's only a small garden, but there is already a fruiting lemon tree for people to pluck from and pawpaw and banana have been established.

Elsewhere in the city, local people gained council support to turn footpaths in inner urban Chippendale into gardens growing food and other plants. In inner urban, low socioeconomic status Waterloo the City of Sydney assisted Waterloo Community Centre establish raised garden beds on the footpath outside the centre.

Local people in inner Sydney's Surry Hills asked council if they could take control of the gardens in a road closure. Council agreed and provided a small grant to enable them to create what is now the Arthur Street footpath garden. What was a plantation of ornamental plants is now a Placemaking on footpaths...

Top: The Barrett House Foragers' Garden in Randwick is a trial by Randwick City Council that includes a lemon as well as pawpaw and banana trees, a garden of vegetables, herbs and flowers, a path of recycled terracotta roof tile aggregrate and a community compost bin.

Below: A table and seat have been installed by local people in their footpath garden to add social value to what was an uninteresting <u>concrete f</u>ootpath.

The garden, in the Marrickville Council local government area, includes citrus and olive trees, herbs, flowers and vegetables.

Taking a break on a seat in a footpath garden planted to vegetables and herbs, flowers and native plants.

The garden in Sydney's Eastern Suburbs is located opposite a house the garden of which is planted to native plants, vegetables and herbs and makes use of a wide footpath that elsewhere supports only lawn.



mulched garden supporting herbs, vegetables and bush foods. People living beside the road closure and others nearby have come together to take responsibility for the small patch of public land and, in so doing, created something of community value.

If there is one thing that these examples show, it is that a growing number of councils consider footpath gardening something worth enabling, that they consider it a safe and desirable way for people to creatively engage with public domain open space.

Councils take a proactive approach

Recognising that citizens want to beautify their neighbourhoods, engage with public space in new ways and to turn poorly used land, such as the grassy strips along the footpath to productive use, a number of councils have written the opportunity for street verge gardening into policy.

The City of Sydney has two policies dealing with footpath gardens. Where a number of households on a street are involved in community managed footpath gardens, the City enables footpath gardening within its Community Garden Policy. This allows both raised and ground-level gardens, however the City's Footpath Gardening Policy-written to guide individual households and businesses that want to install a footpath planter-prefers raised garden planters with a base so that they can be removed to access underground services. The policy provides a self-assessment checklist that includes consultation with neighbours and offsets from the kerb and street corners. If people can comply with this then they can inform the City and go ahead with their garden.

In Sydney's Eastern Suburbs, Waverley Council provides guidelines for footpath gardeners (http:// www.waverley.nsw.gov.au/environment/trees_ plants_and_bushcare/footpath_garden), including a list of native shade plants and a list of edible plants. The footpath garden guidelines advise gardeners to consult Dial-Before-You-Dig to check whether there are underground services, to use low maintenance, drought and hardy ornamental species, to allow space for getting into and out of cars and to avoid installing structures other than those for erosion control. They provide an online footpath garden application form that asks for a sketch plan and proposed plant list.

Both Waverley and City of Sydney stipulate that plants be kept to around a metre in height so as to maintain pedestrian and driver visibility. This, though, does not address the idea of planting fruiting or nut-bearing street trees such as the citrus that the Chippendale footpath gardeners had planted before the City's Footpath Gardening Policy was adopted. The City has a Street Tree Masterplan (http://www.cityofsydney. nsw.gov.au/Environment/TreeManagement/ StreetTreeMasterplan.asp) that lists preferred species but does not allow for citizen participation in plant selection. Proposals to include edible species in the masterplan were turned down after the public comment period ended and this produces a tension with communities such as that in Chippendale.

In Melbourne, the City of Yarra incorporates footpath gardening within its urban agriculture portfolio and employs a community gardens facilitator to work with groups wishing to start urban agriculture initiatives. In regard to footpath gardens, the guidelines require a submission be made to council addressing a range of criteria before council will issue a permit.

The City's definition of urban agriculture includes the planting of productive trees as explained in *Guidelines for Neighbourhood Gardening*— *Productive Trees.* The guidelines state council's position in regard to the establishment of productive trees as: "an effective means of inspiring and enabling community food production in the City of Yarra by generating environmental, social and economic wellbeing from the ground up–created for and by local people. Planting productive trees can be initiated, operated and maintained by the local community with support from Council.".

A helpful set of guidelines is provided, covering:

- underground services
- a maximum height of six metres when planting below power lines
- the possible removal of the trees for utilities to access or maintain their services
- because of possible soil contamination, the use of fresh, well draining and preferably composted soil
- the base level of the planting to be below ground level or level with kerb to prevent organic materials from spilling onto the footpath or road

- awareness of passing cars, bicycles and pedestrians when establishing, maintaining and harvesting productive trees
- height and mass of productive trees should not obstruct sight lines for pedestrians, cyclists and cars
- precautions to be taken during the establishment and maintenance of productive trees to ensure soils and other debris will not leak from the garden into the stormwater drain
- use of sustainable gardening practices and organic products
- assumption by the gardeners of responsibility for their own safety while establishing and harvesting, and mindfulness of potential risks to passers-by; the use of steel pickets is not allowed as they pose a risk to passers by
- in maintenance and harvesting, the use of appropriate clothing, safe use of tools, being sun smart, careful handling of materials and soils, careful placement of ladders to reduce risk of injury through falls.

The City of Yarra has approached citizen-initiated urban forestry intelligently and helpfully. Rather than taking the easy path of denying people the possibility of engaging with public land in this way or of planting anything over a metre in height, council has produced guidelines that are thoughtful and helpful and that should assist groups establishing fruiting and nut-producing trees on the City's footpaths.

In Sydney in early 2011, the City of Sydney incorporated the Myrtle Street, Chippendale, street verge gardens into its Sustainable Streets and Sustainable Communities Demonstration Project. It included the existing trial of footpath gardening as well as community composting. Local resident, Michael Mobbs' retrofitted sustainable demonstration house and other local initiatives were incorporated into the project.

When working with the City I assisted with the four community consultation meetings designed to harvest information to go into a whole-of-precinct plan that would later be presented to council. There was considerable support for the existing footpath gardens but council staff knew that not all of the Myrtle Street residents supported the gardens and community composting – it would be rare to get full agreement with a project like this.

The verges of Myrtle Street, which is dominated by two-level Victorian era terrace houses, have been



An interpretive sign provides context for the street gardens on Myrtle Street, Chippendale.

planted to a mix of fruit trees (mainly citrus planted between existing, mature street trees to which they form an understorey), vegetables, natives and ornamentals. Early 2011 saw local people enjoy their first harvest of green pawpaw which they grated into salad.

Parts of adjacent streets have been planted and several espaliered citrus grow along a trellis in Peace Park at the end of Myrtle Street.

The community composting trial in the park, which turned household kitchen waste into compost for the footpath gardens, ran into difficulties and became something of a public health risk and was temporarily removed. The City and local people may restart the community composting but that would depend on the existence of a cohesive community composting team to manage the installation. Compost bins and training workshops would be offered as a package so that local people can manage the system effectively. (see also: http://pacific-edge.info/ comm_composting/). Local people are successfully operating a number of community compost bins located on footpaths in the area.







Top left: Local people have beautified this inner urban lane with the addition of container footpath gardens and by painting rear property walls in bright colours. Done without council permission, the initiative has created a more congenial environment and encourages public use of a laneway that, like so many others, would otherwise be disregarded and disused.

Below top: A herb garden increases urban amenity on a footpath. Below middle: DIY placemaking to improve urban amenity and streetscape with pots and plantings on a Redfern footpath. Below: A corner blister planted to edibles adds interest to a Chippendale streetscape.







THE BENEFICIAL FUNCTIONS OF FOOTPATH GARDENS

LET'S TURN NOW to the functions of footpath gardens. Functions are the indirect benefits of the plantings rather than their direct value to people such as their yield of food or their yield to the city in the form of community engagement.

The critical question here is this: How can we maintain and increase the beneficial functions of our footpath plantings?

Function 1: Provision of environmental services

Footpath gardens provide the environmental services commonly associated with natural ecological systems:

- filtration of air
- shading and cooling of footpaths in summer (and allowing through the warming sun in winter where deciduous species are selected; warming the streetscape in this way can reduce energy consumed for interior heating)
- shading of footpaths and streets to reduce the urban heat island effect that raises neighbourhood air temperature in summer and leads to increased energy consumption for air conditioning
- slowing of rainfall runoff and assisting it infiltrate the soil rather than losing it to the stormwater drain, thus using it to irrigate our plantings as it returns to the water cycle
- provision of habitat for insects, birds and small reptiles, sustaining the wildlife food web in our cities
- carbon sequestration in organically-rich soils.

To do this requires establishing a diversity of plant types that can include food bearing species. An added benefit of using deciduous trees as street trees is that, due to their cooling shade in summer and allowing through the warming sun to the street and footpaths in winter, they create a pleasant environment that encourages walkable and cyclable neighbourhoods.

> Designing for erosion control... Right: Mulch is washed downslope during rain in this footpath garden in Coogee.

Function 2: Making productive use of urban land

Footpath gardening makes productive use of land in the city. It puts to practical and productive use small patches of land that are otherwise neglected or planted to simplified plant communities—such as lawn verges—that are unproductive and that may consume excessive water and fossil fuels in their maintenance—an important point for councils seeking to reduce their carbon footprint.

Edible and other more complex footpath plantings value urban land more than alternative uses because they are multifunctional.

Function 3: Boosting biodiversity

As mixed edible plantings, verge gardens attract insects and other small animal species that interact through food webs. This is the basis of their biodiversity value. Flowering species attract bees, providing habitat and resources for pollinators in the city.

Biodiversity functions can be enhanced where open pollinated, non-hybrid vegetable and herb species or rare varieties of fruit tree are established. These can become a seed and cuttings source for distribution to other gardeners, spreading the availability of species that make up our agricultural biodiversity, a type of biodiversity as threatened as that of native species.

Footpath gardens can contribute to the preservation of the biodiversity of non-edible species such as local native or heritage exotic plants where these are included. They successfully blend edibles, natives and exotics.



Function 4: New ways to engage with public space

A further function of footpath gardens is less to do with plants and more to do with people. It is this: taking responsibility for a footpath garden provides a new means for people to engage with public open space. It is a means of assuming greater responsibility for a neighbourhood and encourages the role of engaged citizen.

Public space is often viewed as the sole responsibility of local government. Citizens make minimal use of the space and often feel no responsibility for its care even though some councils expect people to mow the verge on their property boundary. Thus, local government adopts a managerial attitude as a service provider and leaves little potential for a public role in open space management.

This is what Tim O'Reilly, the noted digital systems thinker and publisher, called 'vending machine government' at the Government 2.0 conference– citizens pay their taxes and charges and government provides services in the same way that putting coins into a vending machine produces a chocolate bar. It does little to engage the interested public and include people as active agents in cities and in urban land management as does their taking responsibility for the management of a small patch of public footpath or community garden land.

A disengaged, disconnected citizenry is the outcome of treating the public as mere customers of council services. Citizens as customers sets up an economic, business relationship implying that the public gets value for money, like any business exchange. It becomes a cause for complaint when council services fail to meet public expectations.

It is in this sense that footpath and community gardens can enhance citizen engagement with public land by sharing responsibility for it—a partnership arrangement with councils rather than a market, customer-based type.

Local government might choose to see this in the context of community development as people develop the capacity to take a more proactive role in public space management and pioneer new arrangements with councils.









Designing for erosion control...

Bricks have been laid in an attempt to keep mulch and sail from being washed into the stormwater drain. Myrtle Street community footpath garden, Chippendale.

A narrow paved path has been informally widened to around 1.5m, a width suitable for accessing parked vehicles and moving wheelie waste bins to and from the street.

The lemongrass planted along the edge of this footpath garden in Sydney's Eastern Suburbs will grow into large clumps that will form a living barrier blocking straw mulch from being washed onto the footpath during rain.

Lemongrass, lomandra (an Australian native clumping grass), thyme and other resilient, low growing plants would be suitable for edging.

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Function 5: Enhancing urban amenity

Urban amenity is the deriving of sometimes intangible benefits from the built environment.

Footpath food production and gardening increases the amenity of urban areas through making:

- streets into more pleasant environments
- improved visual aesthetics of streetscapes
- streets as destinations rather than a thoroughfares along which people hurry, thus enhancing their social value
- opportunity for greater personal interaction
- foods to supplement a household's diet
- improved food security for households and, if adopted on a larger scale, of the city.



Local government needs

The needs of councils and other landholders in granting communities access to public land for footpath or community gardening can be summed up in a few points. Council staff could use these points in assessing the repurposing of land, and footpath and community gardening groups could address them in approaching councils for access to land.

Public safety – will the plantings be made in such a way that they constitute no hazard to pedestrians or passers-by? This might include maintaining passive surveillance of the footpath for pedestrian safety, keeping the walkway clear of overhanging or protruding vegetation and avoiding toxic, irritant or thorny plants.

Maintenance – who and how will the planting be maintained by irrigation, pest management, pruning and other tasks as needed?

Appearance – appearance is a subjective consideration around which consensus is unlikely to be achieved. It can best be thought of as keeping the plantings in good condition.

Equity of access – as the plantings could be on public or council 'operational' land (that set aside for council use), the public land should remain accessible to the public.

Relation to planning and policy – proposals to utilise public land for footpath gardens or park plantings than in some way enact city plans, strategies of other plans are more likely to gain council support. Plans might include food security policy, strategic city plans, community greening plans, community development and street tree plans and community garden policy.



Adelaide turned this poorly maintained garden fronting a government facility into a colourful and diverse garden of vegetables and herbs.

Perhaps there are cost savings and improved civic engagement to be gained by government handing over such spaces to community groups.

DESIGN CONSIDERATIONS

IN ONE OF HIS BOOKS, Bill Mollison, the codeveloper of the permaculture design system, offers sage advice. What he tells would-be designers is this: use "protracted and thoughtful observation rather than protracted and thoughtless action". In other words, look and think before you act.

Bill's advice applies well to footpath gardeners because observing where the garden would go, understanding its environmental and social context, whether it will receive sufficient sunlight and how rainwater runoff would affect it are as important as they are for home or community gardens. These considerations are as important to local government staff facilitating footpath gardening as they are to community groups and individuals planning their footpath gardens.

But because they are in public places and because the footpath is a spacially constrained environment, footpath gardens have additional design and construction considerations to home and community gardens, and it is these that we consider here.

1. Not all footpaths may be suitable

Sometimes in our older, inner urban areas you encounter footpath gardens, usually built up around tree bases, that protrude out into the footpath so far that you have to dodge them to get past. Imagine what it's like for a person in a wheelchair or with a walking aid, or pushing a pram with child to negotiate that footpath. Some inner urban footpaths are too narrow to have gardens built on them (see photos on page 6).

Like any garden, construction of a footpath garden requires an initial site analysis to check that the plants would receive sufficient sunlight and whether soils would require improving by loosening and the addition of compost.

A necessary part of site analysis for footpath gardens is to assess drainage from the street and whether this would affect the garden by bringing in excessive loads of hydrocarbon or other contamination from spilled oil and other sources.





Top: Young citrus trees, vegetables, ornamentals and flowers can be seen in the footpath garden along Myrtle Sreet, Chippendale

Edible species commonly regarded as garden weeds are cultivated and form the focus for guided, edible weed workshops.

The footpath garden maintains an unimpeded pedestrian footway, making use of the narrow strip between established street trees.

Sugar cane mulch is spread on the garden as, unlike straw mulches, its short length has less potential to block stormwater drains were it to be washed or blown into the gutter.

Below: Espaliered citrus trees in Peace Park, Chippendale. Agricultural pipe resurfaces to drain excess water to the stormwater drain after it passes through the garden in the Wilga Avenue footpath gardens.

Household downpipes are connected to the agricultural pipe to make best use of rainfall.

A raingarden installed to filter rainwater washed off the road.

The rain garden design principle adapted to production of vegetables and herbs at Randwick's Permaculture Interpretive Garden at Randwick Community Centre.







Testing for lead levels in the soil could be a good idea, as decades of leaded petrol use may have left excessive loads in the soil of older suburbs although lead has long ceased to be used in petrol in Australia. Lead accumulates in the body and can affect mental functioning.

Where contaminants would present a difficulty for footpath gardening, a container garden at least 45cm in height might be a solution for vegetable and herb cultivation and the growing of dwarf fruit trees as this would isolate the roots of most from the contaminated soil.

2. Design for pedestrian safety

One of the challenges that even supportive councils can be presented with is where footpath gardeners erect a low edge around their gardens. This can be a trip risk and a potential source of injury claims against council. This type of low edging is commonly made with timber boards or a single course of bricks to raise the garden above footpath level. Footpath gardens like this are quite common and are usually spontaneous DIY constructions by people living adjacent. Sometimes, councils receive complaints about gardens like this.

There may also be another difficulty. A raised garden, even one raised a few centimetres above ground level by a low edge, may constitute a construction on public land that in some local government areas could require planning permission.

The solution might be not to raise street verge gardens and leave them without an edge. This, however, leaves them open to grass invasion and the washing of mulch and erosion of soil into the stormwater drain during rainy periods. This could be seen happening in a verge garden adjacent to a block of apartments in a seaside suburb of Sydney where the bark chip mulch was washed over the footpath and into the stormwater drain by runoff.

How do footpath gardeners work around the issues of trip hazard and erosion of mulch and soil? One way is to make a raised garden a minimum 45-50cm high to raise it above trip hazard height, perhaps a container garden such as those on the footpath outside the Waterloo Community Centre in Sydney.

A different solution was developed with the Arthur Street gardeners in Surry Hills, who took over the road closure. Theirs' was a ground level garden and a low fence at the downslope end would have captured mulch and soil washed out by heavy rain, however the council thought that such a low, solid barrier would be a trip hazard. The solution we arrived at was the planting of a low, living barrier of tough shrubs strong enough to resist trampling but with enough flexibility not to trip someone colliding with them, unlikely that such an event would be.

Low shrubs pruned at a height to around 45cm or close-planted, stiff-leaved clumping grass like lemongrass, lomandra or vetiver grass would make an appropriate living fence.

Avoid planting tress, shrubs or taller vegetables that form solid barriers and that would block the view of the footpath from adjacent roads, footpaths and premises. Allow for two avenues of passive surveillance for public safety.

3. Design for access to and from vehicles and the street

One of the main criteria in designing footpath gardens is maintaining access to and from the street.

Householders need to move their wheelie bins out to the street for waste and recyclables collections and to get to and from their parked vehicles. Ours is an ageing population so we need to design for access to the street by less agile, aged people as well as those using walking aids and wheelchairs.

You can see along Myrtle Street in Chippendale how people have made informal paths through the gardens to the street and, in some cases, have made wider, paved paths. This is important because there is no on-premises car parking in this inner urban suburb built in the horse and buggy days. In the Wilga Avenue footpath gardens in Marrickville there is on-premises parking and driveways provide pedestrian access to and from the street.

Another design criteria is including a garden offset from the kerb so that people can open their car door and get in and out unimpeded by vegetation or having to trample the garden.

Allow sufficient space so that people can:

- access the street from the footpath
- open a car door and easily get into and out of their vehicle
- move their wheelie bins to and from the kerb; this requires a path around 0.5 metres wide.

This is accomplished by:

- leaving access to the street on at least one side of the garden or through its centre; this should be a flat, possibly paved strip a minimum of 1.2 metres in width to comply with the Australian Standard for access for disabled people
- providing access between the street side of your footpath garden and the kerb (the stormwater drain) for people opening vehicle doors and for ease of getting into or out of vehicles; this should be a minimum 0.45 metres wide and left unplanted, planted to lawn



or mulched with bark chip; bark chip is the minimum maintenance solution but care needs be taken to prevent it washing into the storm water drain during heavy rain—this can be done by excavating a shallow trench between the garden edge and the kerb, lining it with weed barrier such as cardboard or newspaper and filling to the height of the edge of the stormwater drain with bark chip; allowing this offset between garden and kerb might difficult in inner urban areas where footpaths are narrow.

4. Think before you dig

If you make a footpath garden above buried pipes or cables, what might happen when the utility company needs to service them? Your garden will go in the excavation of the trench to access the buried service.

Where there are buried services a solution might be, as previously noted, to make a container garden with a base and high enough to be above trip hazard height to, perhaps, a minimum 0.45-0.5m; designed well and sturdily built, these might be movable by a lifting vehicle so as the underground services can be accessed.

When planning a footpath garden, check to see if there are any underground services: Dial Before You Dig is a free, online information service to check for underground pipes and cables anywhere in Australia– http://www.1100.com.au Phone: 1100 during business hours.

5. Select species carefully

Herbs, vegetables and shrub fruits (such as berry fruits) are not the species in question here because of their low growth form and smaller root systems. Rather, it is trees that must be thoughtfully selected for kerbside planting, such as the fruits and nuts.

As well as horticultural considerations such as planting species that are suited to climate, the selection of edible fruit or nut trees should avoid those that:

- are known to have vigorous root systems that could lift up paved footpath and road surfaces and create irregularities that could pose a trip hazard
- are likely to grow tall enough to contact and damage overhead cables.

I was inspecting a footpath garden one day and noticed that a thorny citrus had been planted. As I stood there a man came out of the apartment building beside the garden and explained that he had planted the thorny citrus because the previous two non-thorny seedlings had been stolen. The thorns had deterred the thieves.

Despite their anti-theft value, thorny species are best avoided on the footpath because they could lead to complaints to council were someone to take objection to being pricked. This includes roses, thorny fruit trees and cacti. The same goes for trees and shrubs with toxic or irritant parts.



6. Prune plants so that their foliage does not overhang the footpath

Selecting appropriate small trees and shrubs and pruning them so that their branches and foliage so not protrude over the footpath at head height or below keeps the walkway clear. Trees branching higher overhead may be useful for casting shade onto the walkway in the heat of summer and this might be achieved by 'lifting' the canopy by pruning lower branches. Branches should not overhang footpaths below three metres.

Remember that parents push strollers carrying young children along the footpath and children ride scooters and bicycles along it. The last thing they want, quite reasonably, is for their children to be brushed in the face by overhanging foliage.

Overhanging and protruding foliage may also be a deterrent to aged people, especially those using walking aids.

7. Maintain and care for your plants

Gardeners of public land such as street verges have a duty of care to maintain their plantings so that they are safe, look good and do not become vectors for the spread of fruit, vegetable and other plant pests. Herbs and vegetables, fruits and nuts planted on the footpath need as much care as those grown in home gardens.

Care for kerbside planting includes:

- regular watering
- mulching, to reduce evaporative water loss from the soil so as to reduce water consumption; ensure the mulch you lay will not be washed into the stormwater drain where it could block drains and pipes
- the application of compost or other organic fertiliser to stimulate healthy growth; do not overapply as rain could wash excess nutrients into the stormwater drain
- monitoring and treatment of insect pest or plant disease infestation
- pruning of trees and shrubs to prevent their encroaching on pedestrian access.

A flattish parcel of otherwise unused public land has been repurposed as a small community footpath garden in a Sydney beachside suburb.

Maintaining a sense of garden aesthetics, the garden shows how, when people are allowed to take the initiative, creative community adaptation of the urban environment can produce imaginative landscapes characterised by their utility and productivity.

8. Think about aesthetics

Footpath gardens should look good. Gardens thought to look untidy are likely to generate complaints to council.

Concern about neatness and appearance, in some cases over-concern, is a social reality. It's true that people project their personal sense of aesthetics onto others, however this is something footpath gardeners have to live with. What is riskier is the likelihood that council, if it intervenes, will have no objective criteria to assess aesthetics.

9. Start small, grow incrementally

Where you have a large area of verge, do not attempt to plant the entire area unless you are confident you can keep the entire garden close planted and maintained.

Better to start small, consolidate the area you start in then move on in small steps, consolidating as you go. This way, through fully consolidating what you do in your small steps, you reduce maintenance needs because things have been done properly.

Taking a measured pace allows us to use observation to assess what is working or not working as we go and to make timely adjustments.



Edible rain gardens-any potential?

Local government constructs rain gardens to filter pollutants from urban runoff before the water flows through the stormwater system into streams or into the ocean.

Rain gardens are found on street verges. Because the plants established in the gardens have to endure periods of moisture without suffering damage as well as long periods of dry soil, hardy native species adapted to local climatic conditions are often planted.

Advice from local government staff is that fill is layered in rain gardens to effect the filtering process and planting deeper-rooted species could disrupt the layers and the filtering process itself.

Streetside rain gardens are less suited to plantings of edible species because of the hydrocarbon and other pollutants washed into them from the street.

Using the rain garden design principle

The design principles of rain gardens, however, might be adapted to verge gardens growing edible and other species.

An adaptation of the raingarden design principle is the footpath garden in Marrickville, built by local people, that intercepts roof water from adjacent houses and uses it for irrigation. The Myrtle Street gardens do similar. Downpipes from the roofs of the houses have been diverted by the addition of perforated, flexible agricultural pipe so that they deliver water to the footpath garden and take excess water to the drain.

What is important in the design of this type of garden is to provide an outlet to the stormwater drain from the garden so that excess water has somewhere to flow to and to avoid soil erosion. Also important is maintaining a downslope grade from the house downpipe through the footpath garden and into the drain so that water cannot backflow and damage buildings.

Rain gardens can be made as raised planters or be built in-ground. Depth is variable and is influenced by soil conditions, the space available, the presence of underground services and drainage of excess water into the storm water system.



Top: A young citrus tree underplanted with a selection of herbs on a suburban footpath provides a more diverse planting than the surrounding lawn grass and brings interest to the footpath.

The plantings are well cared for and do not impede passing pedestrians. As the citrus grows it can be pruned to keep branches clear of the footpath while casting the shade so welcome in hot summers.

Below: A young orange tree on an urban footpath with fruit bagged while it ripens.



THE FOOTPATH GARDEN START-UP

THE PROCESS of building a footpath garden will be as simple or as complicated as your crew, your neighbours and your council make it.

It's important to start with a clear idea of what you want to do and why. The four starting questions for any community-initiated footpath gardening project are these:

- 1. Why do we want a footpath garden?
- 2. What do we want to have in our footpath garden?
- 3. What do we as individuals and as a community group want from the footpath gardening experience?
- 4. How will our footpath garden contribute to making our city a better place?

Answering these questions will shape how you approach footpath gardening and might disclose the reality that the assumption that everyone agrees on what you want to do and why, without discussing it in detail, is sometimes false.

The importance of researching the experience of others who have made footpath gardens or who have tried to but failed should not be underestimated. There's lots to be learned from both successful and failed attempts and identifying the learnings of others saves your team having to discover those lessons for themselves and makes it possible to get started from a more advanced position than would otherwise be the situation.

The primary tool in finding a location—a strip of footpath or a piece of public park to make your garden on—is walking-around-and-looking. Take the time to informally discuss your idea with people you encounter. When selecting a site, consider the topics listed in the *Important Questions* table over the page.

When your ideas about the footpath garden are clarified, when you have discussed your team's needs and found one or more potential sites it's time to talk to neighbours. This is what we call the consultation phase and some councils might prefer to do this themselves.

Here, you are likely to discover that some people think your idea a little odd, others will be indifferent neither supporting or opposing—a few will oppose it and some will ask how they can be involved. Unless opposition is widespread it should not stop the footpath garden going ahead.

Curiously, opposition can come from existing footpath gardeners. In one case, a group of people who had put considerable effort into landscaping their street closure, and had done a good job with it, opposed a proposal for someone living nearby who wanted to build a small community garden in public open space adjoining their landscaped precinct.

Being mostly long term residents the opponents raised the valid question as to what would happen to the garden if the person moved on. But what lay beneath their opposition was a sense of ownership of the precinct even though, legally, it was public domain. I encountered this same attitude of a sense of projected ownership of public land when a proposal to build a community garden elsewhere was raised.

It is possible that residents might feel the same way about a footpath garden outside their's and their neighbour's properties. In this situation the wise move is not to build on the footpath outside their property. This applies to community managed footpath gardens.

Council approval

Your council might have a policy in favour of footpath gardens and, where this is so, there is likely to be a process for applying for permission to build.

Where there is no policy, strategy or plan then it's a good idea to sound out council staff on the likelihood of your being successful in applying to make a footpath garden.

Irrespective of advice offered, you might go on to produce a submission to council to build the community garden. In it you would detail your motivations, links to any relevant city plans such as environment, planting and social plans and go on to describe how you would build it, how you would deal with risks, consult locals and maintain the garden in good order.

If approved, the design phase follows, then construction and on into ongoing maintenance.



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Design guidelines for footpath gardens







MODEL GARDENS Randwick's barrett house footpath foragers' garden

THIS WAS AN INITIATIVE of the 3-Eastern Suburbs of Sydney councils–Woollahra, Waverley and Randwick–assisted by a number of people from a local community group. The garden is associated with the council's Barrett House sustainability education centre located adjacent.

An existing raised planter growing a crop of agapanthus was cleared then compost was added, a path of recycled, crushed terracotta tile constructed, seedlings established and the garden mulched.

The existing community compost bin—an Aerobin model—was replaced with the common Gedeye bin because it offers less opportunity for cockroach infestation than the Aerobin (cockroach infestation was also a difficulty with the community compost Aerobin installation in Peace Park, Chippendale). A garbage bin containing carbon-rich organic material is located next to the bin so that composters can add a couple handfuls to the food scraps they place in the compost bin to produce a compost with better carbon-nitrogen balance.

As the signs in the garden explain, this is a foragers' garden from which passers-by can take food. Maintenance is carried out by council sustainability staff, a contracted landscape architect (Sydney Organic Gardens) and by community PermaBee's.

Read more:

- http://pacific-edge.info/ footpathgardenbarretthouse/
- http://pacific-edge.info/barrett_house_ day-2/



The Barrett House Foragers' garden soon after completion.

The path is terracotta roofing tile aggregate held in place by recycled bricks cemented together, important in some areas to prevent their becoming projectiles but done here to make a sturdier path.

A young lemon tree can be seen beside the garden's project manager and around it are banana and pawpaw. Herbs, flowers and vegetables have been planted in the compost-enriched, mulched garden. Thorny or irritant species have been avoided as children often play in the garden. The community compost bin is seen against the hedge that separates the garden from the busy road.

THE WATERLOO COMMUNITY CENTRE GARDENS

COMBINING TAFE OUTREACH as instructor, Waterloo Community Centre and its clients as participants, HoboGro (http://www.hobogro. blogspot.com.au/) as mentors and the City of Sydney as landowner and funder, the community centre's gardens consist of raised planter boxes built by project participants off site then installed on the footpath outside the community centre as a public workshop. They were planted with vegetable and herb seedlings. The project rapid-prototyped the specifications in the then-draft City of Sydney *Footpath Gardening Policy.*

The planters are 1.2m in length, 0.6m wide and high. There is a base in the planters positioned 0.43m from the top. The purpose of this is so the planters can be moved out of the way if council or some other entity needs to dig up the footpath.

As a project that combined urban agriculture and social goals, food access and education with community development and a placemaking approach, the gardens will be maintained by the community centre clients.

Read more: http://pacific-edge.info/waterloogarden/



The community centre's raised, marine plywood footpath planters are container gardens planted to herbs and vegetables.

Below: Local resident-builders and the HoboGro team on the first construction day for the Waterloo Community Centre footpath garden.



THE WILGA AVENUE FOOTPATH GARDENS

THIS IS A COMMUNITY MANAGED footpath

garden producing a range of vegetables and herbs. Young citrus and olives will soon produce an edible yield.

Access to the road is provided by existing driveways. Irrigation is supplemented by the

channeling of rainwater from roof downpipes though the garden and excess is then discharged into the stormwater drain.

Gardeners have installed a small table and seating in the gardens to add social value to the project.



Above: Herbs, groundcovers, vegetables and a number of young citrus and olives have been planted in the footpath garden that extends the length of one side of the street.

No setback allowing easy opening of car doors has been made although only lowgrowing plants have been established on the kerb.

The potted plants at the end of the garden reduce the movement of mulch and soil downslope and into the stormwater drain and add a touch of informality to improve the ambience and visual diversity of the garden.

Right: A passer-by checks out a fruiting lemon tree established on the footpath over 15 years ago.





Above: A young olive tree shades vegetables growing in the mulched garden. The mulch reduces soil moisture loss during the warm season and protects the soil from the erosive force of heavy rain and of runoff moving down the footpath. Over time, it breaks down into fibrous organic matter that improves soil moisture holding capacity and is a nutrient for the plants growning there.

Right: Fruiting citrus trees underplanted to low growing species serve as edible street trees. Mesh has been attached to the power line pole to turn it into a trellis for passionfruit.



MICHELLE MARGOLIS' GARDEN, MARRICKVILLE

THE RAISED FOOTPATH GARDEN built by

Michelle Margolis outside her house in Marrickville demonstrates the value of thoughtful design.

The garden features recommended design criteria:

- dimensions—length 3.35m; width 1.2m; height 0.45m; the height lifts the garden above trip hazard
- constructed of recycled hardwood planks, a durable material
- a layer of geotextile was placed in the bottom of the garden to prevent root invasion by the eucalypts at either side
- level, 1.2 metre wide access to the street from either side of raised garden with a lawn groundcover

- offset from kerb to streetside edge of raised garden–0.8m; this allows access to vehicles and the unimpeded opening of vehicle doors; it was pointed out that it would not be possible to get a mower into this space, however the grass could be managed by whippersnipper or hand slashed
- herbs and vegetables are grown in the garden in a compost-enriched soil.

A wide footpath enabled construction of a garden with generous access to the street. Michelle manages the garden with organic gardening techniques and adds compost as fertiliser. The garden is mulched to reduce evaporative water loss.



A mixed, diverse food garden on a Marrickville street. The footpath is wide enough to easily accommodate the raised, hardwood garden and allow offsets for easy access to the road. An alternative treatment for the grassy strip between kerb and garden bed could have been to bark-mulch it. Michelle, the gardener, has won council's gardening award for her edible home garden.

THE CHIPPENDALE FOOTPATH GARDENS

THE CHIPPENDALE GARDENS occupy footpaths along Myrtle, Shepherd and parts of Pine streets.

There is a trellis of espaliered citrus in Peace Park on Myrtle Street. The community compost facility consisting of seven Aerobins was removed from Peace Park in early 2012 for cleaning after the compost bins were infested by a cockroach breeding colony. It would be reinstated once a group of local people has been established to maintain the system. Training and other support would be provided by the City of Sydney.

The Shepherd Street gardens take the form of raised timber planters to around 0.5m in height offset from the kerb around 0.45m and allowing the minimum 1.5m walkway between the planters and the property boundaries. There, the raised planters are associated with a number of Aerobin rapid composters the installation of which was the work of the local group.

A road blister has been planted on Shepherd Street as have those on Myrtle Street. Plantings consist of herbs, vegetables, citrus trees, edible weeds, ornamentals and some native plants.

The Myrtle Street and adjacent planting were assisted by the City of Sydney but those on Shepherd Street are the initiave of people associated with the Sustainable Chippendale group.

The footpath gardens would form a component of the proposed whole-of-precinct sustainability demonstration program the report in support of which was being considered by the City of Sydney in 2012.



Young citrus underplanted with herbs, edible weeds, vegetables and flowers in a mulched footpath garden. Both sides of the street have been planted and the plantings now extend part way along the adjoining Shepherd Street.



Raised container garden on the Shepherd Street footpath. The community compost bin was painted by local artist.



A Myrtle Street road blisters has been colonised by edible gardens. The fruiting pawpaw has already fed the gardeners. A young tamarillo grows by its side and a banana tree is seen nearby.

DARLINGHURST CONTAINER GARDENS

FUNDED THROUGH THE CITY OF SYDNEY'S

Matching Grants program, this is the work of a local group in a north-facing lane, ensuring the plants get plenty of sunlight—shading is a major constraint of growing in the inner city.

Located only a short distance from Hyde Park in the CBD, the garden consists of a number of plastic containers planted to vegetables, citrus and olive trees espaliered across a small trellis attached to the wall behind. The garden brings a welcome dash of living green to an otherwise grey, hard-paved area of the inner city.

It's a surprising find in high density Darlinghurst and demonstrates what can be done to improve the ambience of utilitarian spaces in the city..



An economical approach to footpath gardens that makes use of a narrow ledge, lifting the planters out of the way of vehicles.

ARTHUR STREET COMMUNITY VERGE GARDEN

THE INITIATIVE OF PEOPLE living on the Arthur Street road closure and nearby who asked the City of Sydney if they could take over the gardens in the road closure., the small gardens are partially shaded but are well maintained.

The City provided a Matching Grant to help the group get started so that they could buy gardening equipment and other needs. Herbs, vegetables, flowers and some Australian bush foods have been established.

The gardens are maintained by organic gardening methods—a condition of the City of Sydney to avoid environmental and gardener contamination. The gardens are mulched to reduce water consumption, protect and provide fibrous organic material to the soil as the mulch breaks down.



Trees in the Arthur Street road closure impose limitations on the site's growing potential but, despite this, local people who took over the small gardens have succeed in growing a range of edibles.



McELHONE PLACE GARDENS

McELHONE PLACE is a narrow street in Surry Hills, Sydney, where quite some years ago local people planted it to an extensive container garden.

The street is a sharedway for both pedestrians and slow, local traffic and is lined with turn-of-the-

Twentieth Centrury Victorian era terrace houses and some single level homes.

The garden has effectively reforested the street and consists of ornamental species with few edible plantings.



PADDINGTON PRECINCT GARDENS

THE PLANTINGS OCCUPY parts of Selwyn, Little Napier and Short streets in Paddington, Sydney, not far from busy Oxford Street.

The streets have been closed to vehicular traffic for some decades, creating a quiet and now wellplanted precinct lined with Victorian era terrace houses. in the soil and container gardens are found throughout the landscaped area, all the work of local people, most living along the street closures.



GOODWOODS GRAPES

A DIFFERENT APPROACH to footpath planting has been taken in Goodwood, Adelaide.

Here, grape vines have been planted into the footpath and trellised below the shopfront awnings.



WILGA AVENUE STREETSCAPE, MARRICKVILLE

INTEGRATING HOUSE, home garden and footpath garden as a single design unit.





Top left: Minimalist footpath garden, Redfern.

Centre: Civic beautification and DIY placemaking, Woollmooloo.

Below: Substantial DIY footpath garden, Chippendale..







Above: A raised footpath garden extends a considerable distance along the Perth City Farm footpath.

Right: Vehicles parked next to the Chippendale gardens risk being consumed by voracious pumpkin vines.

Below left: An informative sign in Chippendale explains to passers-by the purpose of the footpath gardens.

Below right: Digging, urinating dogs are a hazard to ground level footpath gardens.







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